



VALIDATION REPORT MAHINDRA & MAHINDRA LTD. FARM EQUIPMENT SECTOR

VALIDATION OF THE ENERGY EFFICIENCY THROUGH MICRO IRRIGATION SYSTEM - INDIA

REPORT No.BVC/INDIA-VD/556.49/2013

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BUREAU VERITAS CERTIFICATION

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VALIDATION REPORT

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Client: Mahindra & Mahindra Ltd., Farm Equipment sector	Client ref.: Mr. Ashok Sharma


Summary:

Bureau Veritas Certification has conducted the validation of "Energy Efficiency through Micro irrigation system - India", which is located in India, on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the programme design document, the PoA's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the programme design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification Requests, Corrective Actions Requests, and Forward Actions Requests (CLs, CARs and FARs), presented in Appendix A. Taking into account this output, the coordinating/managing entity revised its programme design document.

In summary, it is Bureau Veritas Certification's opinion that the proposed PoA correctly applies the baseline and monitoring methodology AMS-II.F, Version 10.0 and meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests the registration of the proposed PoA as a CDM programme of activities.

Report No.: BVC/Country-VD/556.49/2013	Subject Group: CDM
Project title: Energy Efficiency through Micro irrigation system - India	
Work carried out by: Mr. Hitesh Karandikar - Team Leader Mr. Vishwanath Sule - Team Member	
Internal Technical Review carried out by:  Mr. Sanjay Patankar	
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Matthieu Martini



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Abbreviations

BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CME	Coordinating/Managing Entity
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
CPA	Component Project Activity
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Green House Gas(es)
MoV	Means of Verification
MP	Monitoring Plan
PLF	Plant Load Factor
PoA	Programme of Activities
PP	Project Participant
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard



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1. INTRODUCTION

"Mahindra & Mahindra Ltd., Farm Equipment sector" has commissioned Bureau Veritas Certification to validate its CDM Programme of Activities Energy Efficiency through Micro irrigation system - India (hereafter called "the PoA") at India.

This report summarizes the findings of the validation of the PoA, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent PoA operations, monitoring and reporting.

1.1. Objective

The objective of a validation is to provide a through and independent third party assessment of the PoA design. In particular, the PoA's baseline, the monitoring plan, and the PoA's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the PoA design, as documented, is sound and reasonable, and meets the applicable CDM requirements and the identified criteria. Validation is a requirement for all CDM programme of activities and is seen as necessary to provide assurance to stakeholders of the quality of the PoA and its intended generation of certified emission reductions (CERs).

1.2. Scope

The validation scope is defined as an independent and objective review of the programme design document, the PoA's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board.

The validation is not meant to provide any consulting towards the coordinating/managing entity (CME)/project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA design.

1.3. Validation Team

The assessment team and internal technical reviewer team consist of the following personnel:

FUNCTION	NAME	TA 3.1	TASK PERFORMED*
Team Leader	Mr. Hitesh Karandikar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI <input type="checkbox"/> TR
Team Member (Trainee)	Mr. Vishwanath Sule	<input type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
Technical Specialist	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
Internal Technical	Mr. Sanjay Patankar	<input checked="" type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input checked="" type="checkbox"/> TR



Reviewer (ITR)			
Specialist supporting ITR	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR

*DR = Document Review; SV = Site Visit; RI = Report issuance; TR = Internal Technical Review

2. METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the PoA, according to the version 03.0 of the Clean Development Mechanism Validation and Verification Standard (Ref /B1/) and the version 02.1 of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Ref /B2/), issued by CDM Executive Board at its 70th meeting on 23/11/2012. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM programme of activities is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol is enclosed in Appendix A to this report.

2.1. Review of Documents

The Programme Design Document (PoA-DD) submitted by CCC Company and additional background documents related to the PoA design and baseline were reviewed.

Furthermore, cross checks were made between information provided in the PoA-DD and information from sources other than those used, like personal interview of the researcher/analyst (Dr. V. B. Gupta) who carried out the baseline survey. Details of the interview and justification on baseline report are described in the later section(s) of this report.

To address Bureau Veritas Certification corrective action and clarification requests, General Carbon Advisory Services Pvt. Ltd. revised the PoA-DD and resubmitted it in August 2013.



2.2. Follow-up Interviews

On 12/12/2012 to 14/12/2012, Bureau Veritas Certification performed a site visit and interview(s) with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Mahindra & Mahindra Ltd., Farm Equipment sector and General Carbon Advisory Services Pvt. Ltd. were interviewed (see References). The main topics of the interviews are summarized in Table 1. Table 1 Interview topics

Interviewed organization	Interview topics
Mahindra & Mahindra Ltd., Farm Equipment sector (the CME)	<ul style="list-style-type: none"> ➤ Chronological description of the programme activity along-with key steps of the implementation. ➤ Current status of programme design ➤ Technical details of the programme realization, ➤ programme feasibility, designing, operational life time, monitoring of the programme ➤ Host Country Approval ➤ Monitoring and measurement equipment and System (including monitoring of CPAs) ➤ Financial aspects (Additionality) ➤ Programme activity starting date ➤ Start date of CPA ➤ CER allocation / ownership ➤ Baseline study assumptions ➤ Sustainable development issues, Analysis of local stake holder consultation ➤ Roles & responsibilities of the project participants with respect to programme management, monitoring and reporting ➤ National Legislation
Local Stakeholder	<ul style="list-style-type: none"> ➤ Views and concerns about the Project Activity ➤ Confirmation of the local stakeholder meeting conducted by General Carbon Advisory Services Pvt. Ltd.
General Carbon Advisory Services Pvt. Ltd. (the Consultant)	<ul style="list-style-type: none"> ➤ Methodology application ➤ Baseline determination & emission factor ➤ Additionality ➤ Monitoring Plan ➤ GHG Calculations ➤ Supporting data, evidences and documentation ➤ Resolution of CAR's and CL's



2.3. Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to Bureau Veritas Certification's positive conclusion on the PoA design.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:

- The CME/project participants have made mistakes that will influence the ability of the PoA to achieve real, measurable, verifiable and additional emission reductions;

The applicable CDM requirements have not been met;

There is a risk that emission reductions cannot be monitored or calculated.

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A Forward Action Request (FAR) may also be raised during validation, to identify issues related to implementation of the PoA that require review during the first verification of the PoA.

To guarantee the transparency of the validation process, the issues raised, the responses provided by the CME/project participants, the means of validation of such responses and references to any resulting changes in the PoA-DD or supporting annexes are documented in the Validation Protocol in Appendix A.

2.4. Internal Technical Review

The validation report underwent an Internal Technical Review (ITR) before requesting registration of the PoA.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Team Leader provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

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- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the PoA which includes PoA design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the CME/project participant as well as the PoA, review of the stakeholder comments and responses, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the CME/PP(s), the finalized validation report is accepted for further processing such as uploading via the UNFCCC interface.

3. VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original programme design document and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the PoA resulted in 41 CAR(s), 5 CL(s). As the first real case CPA is not fully implemented a FAR (FAR 01) is raised in the first real case CPA DVR protocol. The same can be closed by the verification entity at the time of verification.

The CARs and CLs for the PoA DD were closed out based on adequate responses from the CME/PP(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section corresponds to the VVS paragraph.

3.1. Approval (43-44)

The letters of approval have been received and the following support documentation has been verified by Bureau Veritas Certification:

The DNA of India has issued a Letter of Approval (Ref. /5/) on 23/04/2013 letter reference no. 4/01/2013-CCC; authorizing Mahindra & Mahindra Ltd., Farm Equipment sector as the Coordinating/Managing Entity and confirms that the PoA contributes to India's Sustainable development.



Bureau Veritas Certification received these letters of approval from the CME and does not doubt the letters' authenticity.

In accordance with para. 39–42/VVS, Bureau Veritas Certification considers that:

- This letter confirms the Party is a Party to the Kyoto Protocol;
- This letter confirms the participation is voluntary;
- In the case of the host Party, the letter confirms that the proposed PoA contributes to the sustainable development of the country;
- The letter refers to the precise proposed PoA title in the PoA-DD being submitted for registration.
- The letter(s) of approval is unconditional with respect to the items above.
- The letter(s) of approval has been issued by the respective Party's DNA and is valid for the proposed PoA under validation.

3.2. Authorization (49)

The participation for each project participant has been authorized by a Party of the Kyoto Protocol and the CME obtained from each host Party a letter of authorization of its coordination of the proposed PoA.

The validation team concludes this by referring the original Host Country Approval issued by the Host Country i.e. India vide its reference no. 4/01/2013-CCC dated 23/04/2013 issued by Ministry of Environment and Forests.

3.3. Sustainable Development (52)

The host Party's DNA has confirmed the contribution of the PoA to the sustainable development of the host Party. This is reflected in Host Country Approval issued by Ministry of Environment and Forests, India vide its reference no. 4/01/2013-CCC dated 23/04/2013.

3.4. Modalities of Communications (58,61)

The validation team has performed due diligence on the MoC statement and validated the corporate identity of CME, all project participants and focal points included in the Modalities of Communication (MoC) statement (Ref /6/) as well as the personal identities, including specimen signatures (From the Income tax Permanent Account number (PAN) Card Ref /7/) and employment status (Letter from Mahindra and Mahindra Ref /8/), of their authorized signatories.



Bureau Veritas Certification confirms that the MoC statement complies with all relevant forms and requirements.

3.5. Programme Design Document (63)

Bureau Veritas Certification hereby confirms that the PoA-DD complies with the latest form and the guidance document for completion of PoA-DD.

3.6. Changes in the PoA (17)

During the site visit, following changes pertaining to the framework developed for the implementation of the PoA were observed as compared to details mentioned in the webhosted PoA-DD:

- (1) The PoA framework, PP's voluntary actions for implementation of PoA were correctly described as a result of CL 1 and CL 2 respectively.
- (2) The policy measures and Technology measures to be adopted in the PoA and subsequent CPAs were described transparently as a result of CAR 1 and CAR 3 respectively
- (3) Relation between technical measures & its applicability related to applied methodology was clearly described as a result of CAR 4.
- (4) Demonstration of additionality was clearly described and demonstrated as a result of CAR 7.
- (5) Eligibility criteria and its compliance for CPA inclusion to the present PoA was made clear and transparent as a result of CAR 8 to CAR 12.
- (6) Cross effects between technologies and measures were described as a result of CAR 14.
- (7) Baseline scenario identification was correctly described as a result of CAR 26.
- (8) In the PoA DD, key assumptions in the identification of Baseline were correctly introduced as a result of CAR 30.
- (9) Explanation on not considering leakage emission was correctly described as a result of CAR 33.
- (10) QA/QC procedures were correctly described as a result of CAR 39.
- (11) Monitoring procedure was correctly described as a result of CAR 40.

The major differences between the final version PoA-DD and the webhosted PoA-DD are listed in Table 2 below:



Table 2 Changes between the final PoA-DD and the webhosted PoA-DD

Item	PoA-DD version 1 (Webhosted)	PoA-DD version 5 (Final)	Validation Opinion
Demonstration of additionality	Clear demonstration on additionality was not available.	Demonstration of additionality is described by means of micro scale project activity guideline. The same is as per the Guidelines on demonstrating additionality of micro scale project activities, the energy savings of Micro irrigation system in each CPA will be less than or equal to 20 GWh in line with EB 68, Annex 26.	The validation team thoroughly reviewed the additionality demonstration. It was found that initially the additionality demonstration was not clear, however as a result of CAR 7, the PP revised the Section B.2 of the POA DD and has adopted approach of micro scale guidelines for PoA. In the proposed CPA, it will be checked if individual equipment (pump set) energy saving would not exceed 0.2 Gwh and total energy saving would not exceed 20 Gwh. This is in line with para 2 (b) (i) and (ii) of EB 68, Annex 26, hence acceptable. This approach would be adopted for all the CPAs to be included in the PoA. The same is also included as an 'eligibility criteria' for the inclusion of CPA to PoA.



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Baseline scenario	The baseline scenario identification was not correctly described in the web hosted PoA DD.	Subsequent to CAR 26 raised by the validation team, in the final PoA DD, the baseline identification is now correctly provided by the CME in line with the methodology	As the baseline identification was not clear in the web hosted PoA DD, CAR 26 was raised. Accordingly, PP corrected the PoA DD and explained that baseline identification is corrected in line with Para 4 of the methodology. After reviewing the same, the validation team accepted this.
Monitoring procedure	The monitoring procedure involved may inadequacies with regard to parameters to be monitored.	The PP/CME corrected the monitoring procedure for various parameters, identified the appropriate source of parameters and introduced correct QA/QC procedures in the revised PoA DD.	In the final PoA DD, the monitoring procedure now clearly describes the parameters to be monitored in line with methodology requirement. The sources of the parameters, description of measuring/monitoring devices, its calibration and source of data for the parameters is transparently described, hence, various CARs viz. CAR 30, CAR 34, CAR 37, CAR 39, CAR 40 were closed after review of the responses from PP and corrections with regard to these in the PoA DD.



3.7. Description of the PoA and generic CPAs (69/189)

The proposed PoA by M/s. Mahindra and Mahindra – Farm Equipment Sector (the CME) is for the increase in energy efficiency by means of installation of efficient irrigation system such as drip and sprinkler irrigation. This will replace the conventional flood method of irrigation. However, the pumps in the baseline would not change. Instead, method of irrigation is changed with the help of sprinkler pipe, bends, end caps, saddle with base, Tee, Nozzle, Riser Pipe etc. which reduces number of running hours for the pumps, hence, lesser use of electricity for the same quantity of land is required. The Programme is aimed in the Host Country i.e. India. As described in the PoA DD, the benefits of the proposed programme would be as listed below:

1. Uniform Distribution of water over the field according to crop need,
2. Storage of maximum fraction of water in the root zone for plant use,
3. No adverse effect on crop growth.
4. Soil transport or loss is negligible, and
5. Reduction in the consumption of electricity for pumping and delivering the water directly into the root zone of the plant,¹
6. Savings of (30-50%) water, labour (50%), fertilizers (30-40%) and increases yields (12-76%)²

Although, the programme is for minimizing usage of excess electricity for pumping of water for irrigating the agricultural fields and hence reduction of GHG emission into the atmosphere, there are other benefits as described above.

The validation team has carried out a site visit on 12/12/2012 to 14/12/2012. As described in the PoA DD, the existing practice followed in Indian agriculture (and as found at CPA site) is the conventional flood method of irrigation. The validation team accepts this as per its sectoral/local knowledge and based on the site visit performed. In the present agricultural scenario, the practice followed is Surface irrigation methods like broad strip methods, check basin irrigation, furrow irrigation etc. which is termed as flood irrigation method³. In these methods, water from an irrigation channel is allowed to reach a part or whole of the field and spread by the gravitational flow incidental to the slope of the land.

¹ Efficiency of irrigation a case of drip irrigation. Department of economic analysis and research. NABARD , Mumbai 2005 Chapter 4 - Water and energy saving

² <http://www.icar.org.in/en/natural-resource-management.htm> as referred under title "Water management" paragraph. This is a Government website. The The Indian Council of Agricultural Research (ICAR) is an autonomous organisation under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India. Hence, the data is accepted by the validation team..

³ <http://en.wikipedia.org/wiki/Irrigation#Surface>



Under conventional irrigation method in India, water pumps are used to irrigate the agricultural fields. It is estimated that between 30 to 50⁴ percent of water is lost in these systems due to run-off, evaporation, deep percolation and conveyance. Hence, the baseline scenario identified is the fuel/ electricity consumption for pumping irrigation water under conventional flood method of irrigation and the emission is determined based on the electricity (in kWh/ha) consumed by the equipment installed per hectare per tonne of produce.

The present surface irrigation methods require high electricity for pumping water out of wells, rivers, canal, ponds and to make land flooded with water against the use of 'micro irrigation system. Whereas, the project activity i.e. the micro irrigation methods is more convenient, less time consuming, less laborious and requires low pressure operative electrified pumps to irrigate the land. The micro irrigation method contributes in electricity conservation, water conservation and conservation of natural resources as well in aggregates. The purpose of the program is to demonstrate the emission reduction due to reduced use of electricity by means of usage of micro irrigation system.

Policy/measure or stated goal of the PoA

As described above, the goal of the PoA is to reduce the GHG emissions due to the excess use of electricity in irrigation systems in India by introducing Micro irrigation system (MIS) such as Drip and Sprinkler irrigation system.

The introduction of MIS will be facilitated by the CME. The CME will promote the installation of Micro irrigation system to the farmers in India and adopting efficient means of irrigation.

The CME has also assured by means of a letter (on 09/03/2013) to the NCDMA (Ref /9/) that the revenue earned out of CERs would be used for:

- 1) Training programs for awareness creation on micro irrigation systems
- 2) Assistance in raising loan/ financial aids for purchase of new irrigation systems
- 3) O&M services to beneficiaries of the CPA
- 4) Installation of monitoring systems required for the CDM monitoring plan
- 5) Expenditure on CDM consulting and validation/ verification services for realizing CER revenue
- 6) Any other work realized after consultation with the beneficiaries

⁴ Irrigation Theory and Practice by A. M. Michael, 5th Edition (2006)

**General Operating and Implementing Framework of PoA:**

Mahindra & Mahindra Ltd., Farm Equipment Sector (herein referred to as M&M FES) will be the Coordinating/Managing entity (hereafter referred to as CME) of the small scale Programme of Activities (SSC-PoA) and will support the CPA implementers in implementing the CDM Programme Activity (CPAs) in India.

Technology:

This PoA will include 'Micro irrigation systems (MIS)'.

The MIS comprises of following two types of technologies.

1) Drip irrigation

Drip irrigation system is an irrigation method which minimizes the use of water and fertilizer by allowing water to drip slowly to the roots of the plants either onto the soil surface or directly onto the root zone, through a network of valves, pipes, tubing, and emitters.

2) Sprinkler irrigation

In sprinkler irrigation, water is delivered through a pressurized pipe network to sprinklers nozzles or jets which spray the water into the air.

Each CPA under this PoA will comprise of micro irrigation systems such as drip or sprinkler irrigation system as described in section A.6. The implementation of the micro irrigation system will be facilitated by the CPA implementer in the fields where the conventional method of irrigation is being practiced. The farmers will be given training and awareness on the benefits of micro irrigation system in terms of water saving, electricity reduction and increase in yields. The documentation of the CPAs will be undertaken as required by the "Simplified modalities and procedures for small scale CDM project activities" prescribed by UNFCCC/CDM EB for generation of emission reductions (ERs). The data collected during the entire life time of PoA will be recorded in database and maintained by CME (till two years after the end of crediting period or last issuance whichever is later).

Distribution and awareness raising (extra campaigns):-

Framework for distribution of the micro irrigation system along with accessories through on-ground networks (like dealers and service engineers) and CME will provide a guidance document to CPA implementers that will aid successful implementation of CPA. It will describe awareness, capacity building programs, operation & maintenance and troubleshooting of the CPA region. Depending on the social expectations and sensitivities from state to state the guidance document will also provide information with regards infrastructure requirements such as distributor, retailer, mechanics, platform for installing primary and



secondary filters, fertigation and venturi system, creating enclosure for pump set (if required).

- The CME will provide guidance document for stakeholder engagement for positive influence on the user behaviour to encourage usage of the Improved irrigation technology.

Investment in the PoA:

As described in the PoA DD, the CME will allow other investors such as technology manufacturers/ irrigation companies/ agricultural entities etc. to promote the implementation of efficient irrigation system in the fields where conventional flood method of irrigation is followed. The CPA implementer will operate along with their dealers/manufacturing company to implement the micro irrigation system and provide training on operation/maintenance, awareness on the benefits of micro irrigation system compared to the conventional irrigation method. The cost of developing this PoA and maintaining various activities as described above is borne by the CME. There will not be any contribution received from the farmers, CPA implementers etc.

The CME and CPA implementer will use carbon revenue for the extra campaigns, trainings and O&M services to spread the use of MIS and installation of monitoring equipments as discussed above. The investment in the CPAs and CER revenue will be shared mutually between CME, CPA implementer, new investor/ technology supplier joining CPAs and end user farmers (in terms of discount in purchasing of equipments).

The CPA implementer of the first CPA has submitted a letter for the utilization of CDM fund. The letter provided by the “Executive Director and Chief Executive Officer, EPC Industrie Ltd, states that the CER revenue used by the CPA implementer for the first CPA would be used for “Training programs, assistance in raising loan/financial aids for purchase of new irrigation system, Expenditure on CDM consulting and validation/verification services in realizing CER revenue, installation of monitoring systems required for the CDM monitoring plan, any other work realized after consultation with the beneficiaries”.

The validation team further investigated whether in India the proposed Programme of Activity is mandatory to PP or investors as a part of Corporate Social Responsibility. This was done by reviewing the weblink, <http://www.thehindubusinessline.com/opinion/columns/b-s-raghavan/article3452595.ece> In the web link, it is described that “*The Corporate Affairs Minister, Mr Veerappa Moily, has given the solemn assurance that private corporate bodies need have no apprehension on this score (Corporate Social Responsibility), adding that “Compliance is not mandatory, (only) reporting is”.* The validation team hence confirms that the programme is a voluntary and in the host country i.e. in India, the



activities under Programme it is not part of any mandatory regulation to the CME or CPA implementer. Hence, validation team is of the opinion that the proposed Programme of Activity is not a mandatory but is voluntary activity.

CL 1 was raised as in the web hosted PoA DD, the framework developed by the CME for the implementation of PoA and inclusion of CPA implementers in the PoA was not clear. It was also not clearly described who will/can be the CPA implementer. There was also no clarity on "Investments" as it was described that "Subsidy scheme promoted by Central or State Government may be utilized by CPA implementer to implement the project". In response to this, the PP clarified the correct description of overall framework of CME in the revised PoA DD section A.2. It was also clarified that the CME is 'Mahindra & Mahindra Ltd, Farm Equipment Sector' and 'EPC Industrie Ltd.' is the CPA implementer for the first real case CPA. Also, the 'subsidy' related sentence is now removed from the PoA DD. Further it is also clarified that the subsidies are available and may be availed by the individual CPA users/ owners (i.e. farmers) and this will not have any financial benefit to the CME and the CPA implementer since these schemes are on-going from 2005. For the subsidy part, the PP has clarified that this is available to the beneficiary (i.e. farmers) only and not to the CME or the CPA implementer. This was verified from the document "attachment 'PoA CL 1 - NABARD micro irrigation subsidy description' page 1 (Ref /10/), which describes that as a policy to encourage use of such systems, the Govt. of India announced the centrally sponsored Micro Irrigation Scheme during 2005-06. The total cost of the scheme is being shared between Central Government, the State Government and the beneficiary either through his/her own resources or soft loan from financial institutions in the ratio of 40%, 10% and 50% respectively. Bankable schemes have to be formulated for availing bank loans." Having reviewed this, the validation team accepts that the subsidy is available to the individual farmers only and not to the CME or CPA implementer. Having reviewed this, and the corrections made in the revised POA DD, the validation team closed this CL.

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CAR 1 was raised as in the web hosted PoA DD, the policy/measure of the PoA was not clearly described in the section A.2. In response to this, the Policy/measure or stated goal of the PoA are now clearly described in the revised PoA DD. It now states that the goal of the PoA is to reduce the GHG emissions due to the excess use of electricity in irrigation systems in India by introducing Micro irrigation system (MIS) such as Drip and Sprinkler irrigation system. It is also stated that the introduction of MIS will be facilitated by the CME. The CME will promote the installation of Micro irrigation system to the farmers in India and adopting efficient means of irrigation. The CME would also devise financial mechanisms such as available at discounted cost and carbon finance to make the micro irrigation systems accessible to the farmers. Having reviewed this, the validation team closed the CAR.

CAR 3 was raised as the technology measures mentioned in the Section A.6 of the web hosted SSC-PoA-DD were not correctly described. In response to this, the CME has now correctly described the technology to be used in the project activity. The technology to be used in the project is "Micro irrigation". This consists of drip irrigation system and sprinkler irrigation system. The drip irrigation system consist of two types, 1) Surface drip irrigation system and 2) Sub surface drip irrigation system. The Sprinkler systems are classified into the two major types on the basis of the arrangement for spraying irrigation water. i.e. 1) Rotating head or revolving sprinkler system. 2) Perforated pipe system. Having reviewed the corrections in the PoA DD, and having made the site visit observations, the validation team closed this CAR.

The generic CPA-DD is in line with the PoA DD, which clearly states aim of the PoA i.e. encouraging energy efficiency through installation of efficient irrigation system such as drip and sprinkler irrigation replacing the conventional flood method of irrigation. In the Section A.2 of the final generic CPA DD it is also described that the programme will minimize usage of excess electricity for irrigating the agricultural fields which will lead to reduction of GHG emission into the atmosphere.

The CPAs will select a region for implementation and farmers/ organizations using conventional flood irrigation method of irrigation which will be supported by the CME and the CPA implementer for using the MIS.

The generic CPA-DD Section B.1 rightly provides the reference of the approved baseline and monitoring methodology(ies) selected, as described below:

Sectoral Scope 03	:	Energy demand
Project Type	:	Energy Efficiency Improvement Projects



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Title of the applied : “Energy efficiency and fuel switching
baseline methodology measures for agricultural facilities and
activities”

Reference : AMS-II.F, Version 10.0, EB 66

Tools referred by the : 1) “Tool to calculate the emission factor
methodology for an electricity system” (Version.
02.0.0, EB 70, Annex 22)

2) “Guidelines for demonstrating
additionality of microscale project
activities” (Version. 04.0, EB 68, Annex
26)

CAR 24 was raised as the generic CPA DD did not describe the Tools referred by the applied methodology. The PP corrected the same, hence the CAR is closed.

CAR 6 was raised as in the section A.7 of the webhosted SSC-PoA-DD it was mentioned that “The PoA will not receive any public funding from Parties included in Annex I” However, proof for the same was not provided in order to check this. In response to this, the CME provided an undertaking/declaration dated 06/08/2012, which ensures that it does not use any Official Development Assistance (ODA) and Public Funding from Annex 1 countries. Also, this has been set up as one of the ‘eligibility criteria’ for the inclusion of CPA to the PoA, hence the CAR was closed.

Bureau Veritas Certification hereby confirms that the description of the PoA and generic CPAs in the final PoA-DD is accurate and complete in all respects.

3.8. Management System (186)

The validation team has assessed the management system described in the PoA-DD in accordance with the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities”.

CAR 15 was raised as the CME did not provide the records of arrangements for training and capacity building for the PoA. CAR 16 was raised as in the PoA DD, the procedure for the technical review for CPA inclusion were not defined in the Section ‘C’ of webhosted SSC-PoA –DD.



In response to this, the CME provided a letter dated 17/05/2013 stating that for the training the CME/PP's consultant would make arrangement for the training and capacity building for the implementation of PoA as per the requirements of CDM Guidelines and monitoring of the CPAs thereafter. As the same consultant has prepared the documents for PoA, CPA DDs and has helped in development of PoA, validation team accepts that CME with the help of consultant would be able to impart training and would also support for capacity building for implementation of PoA, hence, CAR 15 was closed. The procedures for technical review for CPA inclusion are now correctly defined in the Section 'C' of webhosted SSC-PoA –DD, hence, CAR 16 were closed.

Bureau Veritas Certification from the above description, hereby confirms that the CME has developed and implemented a management system that includes required elements and thus has the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.

3.9. Eligibility criteria for inclusion of a CPA in the PoA (196)

The validation team has assessed the eligibility criteria for inclusion of a CPA in the PoA in accordance with the "Standard for the Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, EB 70 Annex 5" (Ref /B3/).

The CME has developed eligibility criteria for inclusion of CPAs in the PoA and included these criteria in the PoA-DD and demonstrated their usability to assess the inclusion of CPAs in the generic CPA-DD.

In accordance with the EB 55, Annex 38 (Ref /B4/) and as per guidance of EB 70, Annex 5 (Ref /5/) and EB 74, Annex 05, the PP has described the Eligibility Criteria for CPA to be included in PoA, which is validated by the validation team as under:

Sr. no.	Minimum eligibility criteria as per EB 70, Annex 5 and EB 55, Annex 38, and EB 74, Annex 05 (Ref /B4/)	Validation of eligibility criteria included in the PoA-DD for inclusion of the CPA
A)	The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA	<p>Eligibility Criteria: Each CPA will be located within the geographical boundary of India.</p> <p>Validation Justification: The physical boundary of the PoA is identified as entire Host country i.e. India. The micro irrigation system under each CPA will be</p>



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		distributed within India. The eligibility criteria mentioned above for geographical boundary is well justified and acceptable.
B)	Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)	<p>Eligibility Criteria: The micro-irrigation system to be installed in each CPA will be given following identification (in the database maintained by CME)</p> <ul style="list-style-type: none"> • Acronym/title of the programme • Unique identification number (CPA No. XX – District XX – Taluka XX – sub-project No. XX) • Farm holder Name • Location of CPA with geo coordinates • Type of MIS (drip and/or sprinkler) • Capacity of pumps <p>Further, an undertaking will be taken from the CPA implementer to confirm that any MIS system is not part of any other CDM project activity or PoA.</p> <p>Validation Justification: The PP has defined mechanism for unique identification number for each Micro Irrigation system by providing acronym, unique identification number by different ways as described in the PoA DD. Also, an undertaking from the CPA implementer would be obtained before inclusion of the CPA to the PoA.</p> <p>Also, there is a provision made to check through the data base</p>



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		of UNFCCC to confirm that the project activity does not generate offsets from more than once simultaneously. The validation team accepts this, and confirms that based on this, the double counting can be avoided.
c)	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications.	<p>Eligibility Criteria: The micro irrigation technology to be installed under the proposed SSC- PoA will follow the following or latest available/ applicable IS standards as applicable:</p> <ul style="list-style-type: none"> • Drip irrigation: e.g. Laterals – IS 12786: 1989⁵ Emitter – IS 13487: 1992⁶ Inline – IS 13488: 2008⁷ Filter – IS 12785: 1994⁸ • Sprinkler irrigation: e.g. IS 14151 (Part 2): 2008⁹ IS 14792 : 2000¹⁰ IS 12232 (Part 2) : 1995¹¹ <p>➔ If any new technology is invented, relevant IS standards will be used.</p> <p>Validation Justification: The validation team reviewed the requirements of the methodology and the guidance of EB 70, Annex 5 and finds that the PoA-DD describes that the</p>

⁵ <https://law.resource.org/pub/in/bis/is.12786.1989.pdf>⁶ <https://law.resource.org/pub/in/bis/is.13487.1992.pdf>⁷ <https://law.resource.org/pub/in/bis/is.13488.2008.pdf>⁸ <https://law.resource.org/pub/in/bis/is.12785.1994.pdf>⁹ <https://law.resource.org/pub/in/bis/is.14151.2.2008.html>¹⁰ <https://law.resource.org/pub/in/bis/is.14792.2000.html>¹¹ <https://law.resource.org/pub/in/bis/is.12232.2.1995.html>



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		<p>Micro Irrigation systems to be distributed in the CPA by CME will adhere to various Indian Standard or latest amendments if any as described above.</p> <p>For the first real case CPA, the CPA implementer intends to distribute the Micro irrigation system, which would be procured from “EPC Industrie Ltd.”, who provides the Micro Irrigation Systems as per the relevant Indian standards. The validation team observed from various other POs/documents that M/s. EPC Industrie Ltd. (Ref /11/) is capable of supplying the Micro Irrigation system which meets with the Indian Standards. Hence, procurement and use of the Micro Irrigation System as per Indian Standard is possible in the first real case CPA and also in subsequent CPAs. If the project equipments are procured from other manufacturer, the same should follow relevant IS standards as mentioned above or as applicable at that time.</p> <p>Having reviewed above, the, Validation team accepts this eligibility criteria for technology /measures to be adopted in CPAs under this Programme. Also, a FAR in line with the VVS Para 27, is raised in this regard in the CPA DD as this being implementation issue.</p>
D)	Conditions to check the start date of the CPA through documentary evidence.	<p>Eligibility Criteria: For each CPA:</p> <p>CPA has a project start date on or after start date of the PoA</p>



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		<p>which will be demonstrated with documentary evidences.</p> <ul style="list-style-type: none"> ➔ Sale/ purchase bill/invoice of MIS by farmer/ CPA implementer ➔ Any other commitment to implement project (in case there is no sale purchase bill/invoice is not available). <p>Validation Justification: The start date of CPA cannot be prior to the start date of PoA. The eligibility criteria requires checking of start date of each CPA with reference to start date of PoA i.e. 19/10/2012, which is the date of validation start date. This is in accordance with EB 55, Annex 38, para 7(d) (Ref /B4/). The start date of CPA will be cross checked with the documentary evidence i.e. purchase order of the Micro Irrigation System for the particular CPA or invoice raised by the dealer on the farmer, as end user being a farmer, (s)he can't raise a PO but invoice in his (her) name shows the real action. This will be done at the time of CPA addition/inclusion into PoA, hence, this is appropriate and well justified.</p>
E)	Conditions that ensure compliance with applicability and other requirements of single or multiple methodology/ies applied by CPAs	<p>Eligibility criteria: The CPA is applying methodology, AMS.II.F version 10. Each CPA will satisfy the following applicability criteria described in approved methodology AMS II.F "Energy efficiency and fuel switching measures for agricultural facilities and activities" version 10, EB 66 (Ref /B5/)</p>



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		<ul style="list-style-type: none"> • This category comprises any energy efficiency and/or fuel switching measure implemented in agricultural activities of or facilities or processes. This category covers project activities that encourage energy efficiency or involves fuel switching. Examples of energy-efficient practices include efficiency measures for specific agricultural processes (e.g. efficient irrigation such as micro irrigation less irrigation, etc.), and measures leading to a reduced requirement of farm power per unit area of land, reflected in less and smaller tractors, longer lifetime of tractors and less farm equipment. Further energy efficient measures would be reducing fuel use in agriculture, such as reduced machinery use through, e.g. the elimination of tillage operations, reduction of irrigation, use of lighter machinery, etc. • The measures may be a replacement on existing equipment or equipment being installed in a new facility. The aggregate energy savings of a single project may not exceed the equivalent of 20 GWh per year¹². <p>Validation Justification: The</p>
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¹² As per the Guidelines on demonstrating additionality of micro scale project activities, the energy savings of Micro irrigation system in each CPA will be less than or equal to 20 GWh.



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		validation team has validated the applicability conditions later in this report. The same applicability conditions of the applied methodology will also be validated during addition of each CPA, hence, this is acceptable.
F)	The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality.	<p>Eligibility Criteria: This PoA demonstrates additionality at the PoA level. Thus, each CPA will not be required to demonstrate the additionality as per the requirements of Guidelines on demonstrating additionality of micro scale project activities (Version 04.0), Annex 26, EB 68. (Ref /B6/)</p> <p>Validation Justification: The PoA-DD describes that additionality demonstration is at PoA level which is based on micro-scale guideline. Hence, it is determined that each CPA to be included in this PoA would have energy saving less than 20 GWh. Each CPA would be checked before its inclusion whether it is eligible to enter this PoA, in line with the Guidelines on demonstrating additionality of micro scale project activities (Version 04.0), Annex 26, EB 68 (Ref /B6/), hence, this is acceptable to validation team.</p>
G)	The PoA-specific requirements stipulated by the CMEs including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.	<p>Eligibility Criteria: Each CPA will undertake local stakeholder consultations as follows :</p> <ul style="list-style-type: none"> • Identification of local stakeholders (identified by CME and CPA implementer) • Invitation to local



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		<p>stakeholder consultation or meets</p> <ul style="list-style-type: none"> • Demonstration of the CPA project activity • Inviting comments from local stakeholders • Compilation of the comments and responding with corrective actions as required. <p>➔ The project activity does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India, 2006¹³. Hence, it is not required to be conducted for this programme.</p> <p>Validation Justification: As per the PoA-DD guidance, choice of the local stake holder consultation and environmental impact analysis has been justified in the PoA-DD. The PP has explained the same in relevant section F.1, F.2 and F.3 of the PoA-DD. The project participant has stipulated that since the programme of activity involves use of Micro Irrigation System, which will be used at CPA level, the effect on environment could be better judged at CPA level. Hence, local stake holder consultation would be better addressed at local/CPA level, hence, accepted.</p>
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¹³ <http://www.envfor.nic.in/legis/eia/so1533.pdf>



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		As per the Host Country rules, it does not mandate any requirement of Environmental impact analysis for the proposed Programme of Activity ¹⁴ . The validation team reviewed this and found this correct hence, accepted the same. This is also reported by the validation team later in this report.
H)	Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation)	<p>Eligibility Criteria: For each CPA the target beneficiaries will be the farmers currently practising flood method of irrigation consuming more electricity for pumping of water for irrigation compared to micro irrigation method. The CPA implementer will identify the target beneficiaries by the data collection from Government records, dealers contact list, area managers data sheets etc.</p> <p>Validation Justification: As the project is intended in the agricultural sector for the irrigation purpose the target group identified as 'farmers' is appropriate. Related documents as mentioned above are also correct to check that the end user is a 'farmer'.</p>
I)	Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys.	<p>Eligibility Criteria: Each CPA will conduct sampling and surveying as appropriate or applicable based on requirements of "Standard for sampling and surveys for CDM project activities and programme of activities", version 04.0, EB 74, Annex 6 (Ref /B7/), and "Guidelines for</p>

¹⁴ <http://www.envfor.nic.in/legis/eia/so1533.pdf>



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		<p>sampling and surveys for CDM project activities and programme of activities", version 02, EB 69 Annex 5. (Ref /B8/).</p> <p>Validation Justification: The sampling requirements for each CPA has been described in the PoA DD. This is in line with the "Standard for sampling and surveys for CDM project activities and programme of activities", version 04.0, Annex 6, EB 70 and "Guidelines for sampling and surveys for CDM project activities and programme of activities", version 02, Annex 5, EB 69</p> <p>An illustration of sampling is explained in detail in the PoA DD which is applicable to all the CPAs included in the PoA. Baseline survey would be carried out for each CPA to decide the energy consumption in the baseline and in the project, crop yield, area cultivated/to be cultivated and energy savings.</p> <p>Each CPA to be included in the PoA will follow the same sampling and surveying procedure mentioned in the revised PoA DD section hence, this criterion is accepted.</p>
J)	Where applicable, the conditions that ensure that CPA in aggregate meets the small-scale or micro-scale threshold criteria and remain within those thresholds throughout the crediting period of the CPA.	<p>Eligibility Criteria: Each CPA will meet the following small-scale threshold criteria as per EB 61, Annex 21, "General Guidelines to SSC CDM methodologies", version 17. Each CPA will deploy the Micro irrigation system with energy savings not exceeding the</p>



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		<p>equivalent of 60 GWh per year throughout the crediting period. However as per the Guidelines on demonstrating additionality of micro scale project activities, the energy savings of Micro irrigation system in each CPA will be less than or equal to 20 GWh.</p> <p>Validation Justification: The final PoA DD describes that this PoA will follow micro scale guide line, hence, any CPA to be included in this PoA would have energy saving less than or equal 20 GWh. Validation team accepts this criteria as appropriate. The energy saving would be shown for the specific CPAs at the time of inclusion of CPA. For the first real case CPA, the energy saving is 3.77 GWh which is less than 20 GWh, which is correct.</p>
K)	Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories (please refer to the latest approved version of the 'Guidelines on assessment of debundling for SSC project activities')	<p>Eligibility Criteria: Confirmation by CME, to ensure that the CPA is in accordance with the latest "Guidelines on assessment of de-bundling for SSC project activities", Annex 13, EB 54 (Ref /B9/)</p> <p>If each of the independent subsystems/measures (e.g., biogas digester, solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a de-bundled component of a large scale activity. The aggregate energy savings of a single project may</p>



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		<p>not exceed the equivalent of 60 GWh per year as per the Type II projects for Small Scale activity. 1 % of the small scale thresholds = 60 GWh × 1% = 0.6 GWh = 600 MWh = 600,000 kWh. There by these CDM project activities are exempted from performing a de-bundling check, i.e., considered as being not a de-bundled component of a large scale activity.</p> <p>Validation Justification: As explained by the PP in the final PoA DD, each CPA would demonstrate that individual system will follow the threshold of 200,000 kWh. Hence, this eligibility criteria is appropriate. In the first real case CPA, maximum energy saving for one equipment in the CPA works out as 0.0010 GWh, which is less than 0.2 GWh = 200,000 kWh. (1% of 20 GWh)</p>
L)	Conditions to provide an affirmation that funding from Annex I parties if any, does not result in a diversion of official development assistance.	<p>Eligibility Criteria: Each CPA will demonstrate that no Official Development Assistance (ODA) is being used. This may be evidenced through any of the following:</p> <ul style="list-style-type: none"> • Undertaking by CPA implementer to the CME • Certificate by CPA implementer's Chartered Accountant during the verification. <p>Validation Justification: The validation team observed that at present, only one invoice is raised in the CPA i.e. on 12/11/2012, which is a real</p>



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		<p>action in terms of CPA implementation, hence, considered as start date of the CPA. It has been found that the end user(s) i.e. farmer is the purchaser(s) in this CPA. Hence, invoice raised by the dealer in the name of farmer is considered as PO, and is treated as a real action as this being financial obligation on the part of the end user.</p> <p>It is also to be clarified that investment in the PoA would be made by organizations or companies / individual sponsors / government bodies/trusts /producer organizations or companies/ MFIs /technology suppliers individually or jointly. However, investment made can further be checked at the time of verification/inclusion of CPA(s) to the registered PoA. Since this is an implementation issue a FAR has been raised in this regard in the CPA DVR Protocol in line with VVS Para 27. (Ref /B1/)</p>
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- CAR 8 was raised as in the webhosted SSC-PoA-DD in the section B.2 “eligibility criteria” it does not describe ‘the condition to avoid double counting of emission reductions’, correctly.
- CAR 9 was raised as in the “eligibility criteria” checking the start date of the CPA was not clearly explained.
- CAR 10 was raised as in the eligibility criteria in the B.2 section of webhosted SSC-PoA-DD did not clearly mention applicability of “single” or “multiple” methodology
- CAR 11 was raised as in the eligibility criteria in the B.2 section of webhosted SSC-PoA-DD; the additionality for the combinations of technology measure and methodology were not described in the Section B.2 of webhosted SSC-PoA-DD correctly.

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- CAR 12 was raised as in the section B.2 of the webhosted SSC-PoA-DD; the de-bundling criteria was not correctly described in the eligibility condition mentioned, in accordance with para 14 of PoA standard.

The CME in response to the above CARs corrected the “Eligibility criteria” and explained now how to avoid double counting of emission reductions by means of providing unique identification to each Micro Irrigation System by means of providing acronym, unique identification number by different ways as explained in the PoA DD. For the checking of start date of the CPA, it is explained that the CPA start date can be checked by means of Sale/Purchase bill of MIS by farmer/CPA implement or any other commitment to implement project (in case there is no sale purchase bill/invoice is not available). The validation team observed that at present, only one invoice is raised in the CPA i.e. on 12/11/2012 (Ref /12/), which is a real action in terms of CPA implementation, hence, considered as start date of the CPA. It has been found that the end user(s) i.e. farmer is the purchaser(s) in this CPA. Hence, invoice raised by the dealer in the name of farmer is considered as PO, and is treated as a real action as this being financial obligation on the part of the end user.

In response to CAR 10, the CME explained that single methodology is applied in the PoA, i.e. AMS II F version 10. In response to CAR 11, the PP explained that, micro scale guidelines are used for the demonstration of additionality. The additionality demonstration is at the PoA level. Also, it is clarified that each CPA will not be required to demonstrate the additionality as this is in line with the Guidelines on demonstrating additionality of micro scale project activities (Version 04.0), Annex 26, EB 68 (Ref /B6/). However, it would be checked before inclusion of the CPA that the energy saving would not increase 20 GWh in the CPA, and each of the independent subsystems/measures in the project activity achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours; and End users of the subsystems or measures are farmers, hence, implementation of the CPA is at the agriculture sector. In response to CAR 12, the PP explained how ‘debundling’ criteria would be satisfied in accordance with the “Guidelines on assessment of debundling for SSC Project activities”. This is in line with the requirements of Guidelines on assessment of debundling, hence, this CAR is closed.

The validation team reviewed all the corrections in the revised PoA DD in the eligibility criteria as per the CARs raised above, and found that PoA DD is corrected appropriately, hence, it closed above CARs.

Bureau Veritas Certification hereby confirms that:

- The eligibility criteria cover all the required elements;



- The eligibility criteria are verifiable;
- The eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA;
- For PoA that include combinations of technologies/measures and/or methodologies, distinct eligibility criteria are developed per combination.

3.10. Baseline and Monitoring Methodology

3.10.1. Applicability of the selected Methodology (77/190)

The CPAs under the proposed PoA applies the approved baseline and monitoring methodology AMS-II.F, Version 10.0 – “Energy efficiency and fuel switching measures for agricultural facilities and activities” (Ref-/B5/).

The CME applies combinations of technologies/measures among CPAs of the proposed PoA in accordance with “Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Ref /B2/)”. The CME has listed in the PoA-DD various combinations of technologies/measures that will be implemented in the proposed PoA.

As described in the PoA-DD, the programme of activity is providing Micro Irrigation System to farmers for the agriculture purpose. The steps taken to assess the relevant information contained in the PoA-DD against each applicability condition and how it meets the requirement of the applicability condition are described below.

Applicability condition 1: *This category comprises any energy efficiency and/or fuel switching measure implemented in agricultural activities or facilities or processes. This category covers project activities that encourage energy efficiency or involves fuel switching. Examples of energy-efficient practices include efficiency measures for specific agricultural processes (e.g. efficient irrigation such as drip irrigation), and measures leading to a reduced requirement of farm power per unit area of land, reflected in less and smaller tractors, longer lifetime of tractors and less farm equipment. Further energy efficient measures would be reducing fuel use in agriculture, such as reduced machinery use through, e.g. the elimination of tillage operations, reduction of irrigation, use of lighter machinery, etc.*

Justification by the validation team: The validation team referred revised PoA-DD Section B.3 – “Application of methodologies” and confirms that the PP intends to use Micro Irrigation System (MIS) complying with the National Standard. The measures to be implemented in each CPA will comprise of efficient irrigation system such as drip, sprinkler etc. to be used for irrigating the crops. The CPA which would be implemented under this PoA would be in accordance with AMS II.F,



version 10. The validation team observed that the procurement for the first CPA would be from M/s. EPC Industrie, who is a manufacturer of Micro Irrigation System and follows relevant national IS. This was confirmed from the website of the EPC Industrie (<http://www.epcmahindra.com/OurQualityPromise.aspx>). The programme activity is meant to be implemented in India, hence, validation team confirms that the applicability condition is satisfied.

The validation team also confirms that the applicability condition for CPA is included correctly in the Section B.2 “Eligibility criteria for inclusion of a SSC-CPA in the PoA”. This is same as described in the approved methodology AMS II F version 10. Accordingly, for each CPA, during its inclusion to PoA, this will be checked and validated by the validation team and would be reported in each CPA validation report

Applicability condition 2: *The measures may be a replacement on existing equipment or equipment being installed in a new facility. The aggregate energy savings of a single project may not exceed the equivalent of 60 GWh per year.*

Justification by the Validation team: As described in the PoA-DD and in the generic CPA-DD; the proposed CPAs will include Micro Irrigation systems for agriculture activity. The project activity measures would replace existing ‘flood’ irrigation system.

At present, there are existing pumps which are running on grid electricity for irrigation purpose in the farms. The validation team, during its site visit of the first real case CPA found that the PP intends to use Micro Irrigation System where, same pumps would be used, only method of irrigation is different, where instead of open channels, drips or sprinklers would be used. Due to this Micro Irrigation System (Drip or Sprinkler) there would be lesser pumping hours would be used, hence there would be saving of electricity. This reduced electricity consumption in the project activity will save CO2 emission. As described in the PoA DD, the aggregate energy savings of single project would not exceed the equivalent of 20 GWh per year. This can be checked in the CPA(s). The first CPA i.e. real case CPA has maximum electricity saving of 3.77 Gwh which is less than 20 GWh. This is demonstrated in the emission reduction sheet (Ref /13/) of the real case CPA.

CAR 10 was raised as Applicability of single or multiple methodology were not clearly described in the eligibility criteria in the Section B.2 of webhosted SSC-PoA-DD. In response to this, the PP explained that the PoA applies only one methodology i.e. AMS II F version 10. This is now clearly described in the Section B.2 of the PoA DD, hence, the CAR is closed.



CAR 13 was raised as in Section B.3 of the SSC-PoA-DD; the technology measures were not referenced/described in accordance with the “Guidelines for completing the programme design document form for small-scale CDM programme of activities (version 02.0)” (Ref /B10/). In response to this, the PoA DD in the Section B.3 describes technology measures i.e. PoA constitutes technology of Micro Irrigation System under which drip irrigation and sprinkler irrigation is included. Having reviewed this, the CAR is closed.

The validation team hereby confirms that the selected baseline and monitoring methodology AMS II F version 10 (Ref /B5/), “Tool to calculate the emission factor for an electricity system” Version. 03.0.0, EB 70, Annex 22 (Ref /B11/) and “Guidelines for demonstrating additionality of microscale project activities” (Version. 04.0, EB 68, Annex 26) (Ref /B6/) are correctly applied in the PoA-DD. The applied methodology and Tools are previously approved by the CDM Executive Board, and is applicable to each CPA under the proposed PoA, which, complies with all the applicability conditions therein.

3.10.2. Boundary of PoA and generic CPAs (86-87/191-192)

The validation team has validated the boundary of PoA and generic CPAs by:

Assessing the relevant documents including Host Country Approval provided by the Host Country i.e. India (Boundary for the PoA in terms of geographical area is identified as; whole the Host country i.e. India. The applied methodology viz. AMS II F Version 10 describes under the paragraph title “boundary” as *“The physical, geographical location of the farming operations or measure (each agricultural practice) being implemented. Project activities might apply to single facilities (farms), or activities using similar processes on different farms may be bundled together, as long as the combined total energy savings do not exceed the equivalent of 60 GWh per year.”* Accordingly, the PoA boundary is covered as any farm where farming/agricultural activities are carried out.

The validation team validated the project boundary by assessing the PoA-DD, which describes that the distribution of the Micro Irrigation Systems would be in the entire host country i.e. India, where CPA can be in the farm communities (i.e. agriculture sector). The validation team confirms that the project boundary described under Section A.5 of the PoA-DD correctly represents the project boundary as mandated by the applied methodology. This was also confirmed by the Host Country Approval issued by the Host Country DNA i.e. India vide its reference no. 4/1/2013-CCC dated 23/04/2013 (Ref /5/).



The eligibility criteria of the CPA boundary is also described and validated above in Section 3.9 - "Eligibility criteria for inclusion of a CPA in the PoA" as per EB 70, Annex 5.

Bureau Veritas Certification confirms that in establishing the boundary of the PoA, the project participants have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary. The validation team has also carried out a site visit on date 12/12/2012 to 14/12/2012 for the geographical area of first real case CPA and confirmed that it lies within the boundary of the PoA.

Bureau Veritas Certification hereby confirms that in establishing the boundary of the PoA, the CME/PPs have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary.

Boundary of generic CPAs

The spatial extent of a generic CPA boundary is clearly defined in line with the methodology AMS II F Version 10, which describes project boundary as *"The physical, geographical location of the farming operations or measure (each agricultural practice) being implemented. Project activities might apply to single facilities (farms), or activities using similar processes on different farms may be bundled together, as long as the combined total energy savings do not exceed the equivalent of 60 GWh per year."* Accordingly, the generic CPA describes in Section B.5 as one of the eligibility criteria, which requires to be fulfilled while inclusion of the CPA into the PoA. Also, the generic CPA DD in the same section in Para 'k' requires that the CPA DD should meet with the small scale criteria (i.e. energy saving limitation of 60 GWh). As the proposed PoA is adopting micro scale guideline, here in this case it should be 20 GWh, which is also correctly described in the Generic CPA DD.

The greenhouse gases and emission sources included in a generic CPA boundary are also correct, as the saving would be in terms of electricity consumption and the electricity is from the grid power. The grid is supplying electricity which is generated by means of fossil fuel. Hence, inclusion of CO₂ gas as the green house gas is correctly described in the generic CPA DD in Section B.3.

Bureau Veritas Certification hereby confirms that the identified boundary and the selected sources and gases are justified for the genetic CPA. The validation team did not identify any emission sources that will be affected by the implementation of the CPAs under the proposed PoA and which are expected to contribute more than 1% of the overall expected average annual emissions reductions, and are not addressed by the selected approved methodology.



3.10.3. Baseline Identification (94-95)

The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied.

The steps taken to assess the requirement given in paragraph 94 and 95 of the VVS are described below:

In the baseline the electricity is used for pumping the water, which is 'flood irrigation system'. The electricity is supplied to the pumps by means of grid connected power stations, where fossil fuel power plants are predominant. In the present PoA, there is no pumping system to be selected, which runs on other fuel. Hence, the baseline scenario is the use of electricity which is supplied by fossil fuel run power plants.

In the project activity, the Micro Irrigation System instead of 'flood irrigation system' would be used. The same is used in the agriculture sector/community.

As per the methodology AMS II F version 10, para 4-

The energy baseline consists of the energy use of:

(a) The existing activity that is reduced in the case of retrofit measures;

Or

(b) The facility that would otherwise be installed in the case of a new facility.

In the Section A.2, it is stated that there are no national policies which mandates the installation of such Micro Irrigation systems. As described earlier, the validation team investigated this and also from its local sectoral knowledge confirms that there are no national policies which mandate the installation of Micro Irrigation System to the PP or to the end user i.e. farmer.

De-bundling

The debundling is explained in accordance with the Annex 13 of EB 54 (Ref /B9/) in the PoA-DD. Accordingly, the same would be checked in each CPA while inclusion of the same in the PoA.

Accordingly, the requirements are:

As per Para 8:-

'For the purposes of registration of a Programme of Activities (PoA), a proposed small-scale CPA of a PoA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity, which satisfies both conditions (a) and (b) below:



- (a) *Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure, and;*
- (b) *The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.'*

As per Para 9:-

'If a proposed small-scale CPA of a PoA is deemed to be a debundled component in accordance with paragraph 2 above, but the total size of such a CPA combined with a registered small-scale CPA of a PoA or a registered CDM project activity does not exceed the limits for small-scale CDM and small-scale A/R project activities as set out in Annex II of the decision 4/CMP.18 and 5/CMP.1 respectively, the CPA of a PoA can qualify to use simplified modalities and procedures for small-scale CDM and small-scale A/R CDM project activities'

As per Para 10:-

'If each of the independent subsystems/measures (e.g. biogas digester, solar home system) included in the CPA of a PoA is no greater than 1% of the small scale thresholds defined¹⁵ by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check i.e. considered as being not a de-bundled component of a large scale activity'

It is described that Each CPA will perform debundling check while inclusion of the CPA to the PoA as explained above. The de-bundling has been validated in the CPA Validation report.

The validation team hereby confirms that the selected baseline and monitoring methodology, AMS II F Version 10 is previously approved by the CDM Executive Board, and is applicable to the project activity, which complies with all the applicability conditions therein. The small scale methodology AMS II F Version 10 is applied in conjunction with the latest version of General Guidance to SSC CDM methodologies.

Grid Emission Factor:

As described in the Generic CPA DD, in Part II, Section B.6.1, the project activity displaces grid electricity, hence the baseline for the project activity is the amount of electricity displaced or removed from the grid, which shall be calculated as net energy avoided from the grid multiplied by an emission factor of the grid as per CEA database version 7 (Ref /14/),

¹⁵ This is based on the clarification from "Guidelines on assessment of debundling for SSC project activities, v03 (EB 54, Annex 13, par. 10) for determining the occurrence of debundling under a Programme of Activities (PoA)", if each of the independent subsystem/measures included in the CPA of a PoA is no larger than 1% of the small scale threshold defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity.



which was published January 2012. This was available to the PP at the time of webhosting (19/10/2012).

As per paragraph 12 of AMS I.D. v17 the emission factor can be calculated as following:

- a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system'.

Or

- b) The weighted average emissions (in kg CO₂e/kWh) of the current generation mix. The data of the year in which project generation occurs must be used. Calculations must be based on data from an official source (where available) and made publicly available.

Here, following step wise calculation is done, where there are two grids (viz. (1) NEWNE and (2) Southern Grid) are identified by the PP. This is correct as the PoA is nationwide, and the country India has two grids as described above. Further the calculations are described in the PoA DD Part II, in line with AMS I D.

Based on the calculations provided by the Central Electricity Authority, who published the grid related data and is the only authentic organization in India, following figures have arrived.

Year	Grid	2008-09	2009-10	2010-11	Average
OM (tCO ₂ /MWh)	NEWNE	1.01	0.98	0.97	0.98
OM (tCO ₂ /MWh)	Southern	0.97	0.94	0.94	0.95

From the above, build margin (BM) emission factor for both the grid is calculated as follows:

In terms of vintage of data, project participant has chosen Option 1 – ex-ante emission factor. As per the CEA report, the BM of both the grids are as follows :

NEWNE grid = 0.86 tCO₂/MWh
 South grid = 0.73 tCO₂/MWh

Based on above, the combined margin emissions factor is calculated as follows:

The Option (a) Weighted average CM is chosen and calculated as below

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$$EF_{\text{grid,CM},y} = EF_{\text{grid,OM},y} \times W_{\text{OM}} + EF_{\text{grid,BM},y} \times W_{\text{BM}}$$

Where:

$EF_{\text{grid,BM},y}$	= Build margin CO ₂ emission factor in year y (tCO ₂ /MWh)
$EF_{\text{grid,OM},y}$	= Operating margin CO ₂ emission factor in year y (tCO ₂ /MWh)
W_{OM}	= Weighting of operating margin emissions factor (%)
W_{BM}	= Weighting of build margin emissions factor (%)

Where, weighted factors are

$W_{\text{OM}} = 0.5$ and $W_{\text{BM}} = 0.5$.

Hence, emission factor is worked out as:

NENWNE grid	=	0.92 tCO ₂ /MWh
South grid	=	0.84 tCO ₂ /MWh

The validation team checked that the CEA data version 7 was published in January 2012 and was latest available to the PP at the time of web hosting (19/10/2012 to 17/11/2012) of the PoA DD, hence, this is acceptable. This data is used for the emission reduction calculation for the first real case CPA. However, would be monitored for each subsequent CPA at the time of its inclusion to the PoA.

Based on the above assessment, the validation team hereby confirms that:

- All the assumptions and data used by the CME/PPs are listed in the PoA-DD, including their references and sources;
- All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD;
- Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD;
- The approved baseline methodology has been correctly applied to identify the most plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed PoA.

3.10.4. Algorithms and/or Formulae used to determine Emission Reductions (99-100)

The steps taken and the equations and parameters applied in the PoA-DD to calculate project emissions, baseline emissions, leakage and emission



reductions comply with the requirements of the selected methodology including applicable tool(s).

As described in the Generic CPA DD i.e. PoA DD- Part II in Section B.6, the PP has applied methodology “AMS.II.F Energy efficiency and fuel switching measures for agricultural facilities and activities”, version 10 EB 66.

As per para 4 of AMS II.F the energy baseline consists of the energy use of:

- (a) The existing activity that is reduced in the case of retrofit measures;
or
- (b) The facility that would otherwise be installed in the case of a new facility.

As described in para 5 of AMS II. F, if the energy displaced is a fossil fuel, the energy baseline is the existing fuel consumption or the amount of fuel that would be used by the practice that would have been implemented otherwise, i.e. total fuel consumption in the project area per year for field operations and average fuel consumption per unit area (ha), crop yield and year.

As per para 7 of AMS II. F, each energy form in the baseline/project is multiplied by an emission coefficient (in kg CO₂e/kWh) in order to derive the baseline and project emissions. For the electricity displaced, the emission coefficient is calculated in accordance with provisions under category I.D. For fossil fuels, the IPCC default values for emission coefficients may be used.

Hence, following formulae are used by the PP for the emission reduction calculations:

The formulae used below are not crop specific, hence these are applicable to all crops under the PoA.

Baseline Emission (BE_y):

The baseline emissions are calculated as the product of total electricity consumption of all the pumps of the sample area selected for conventional method of irrigation and emission factor of respective grid.

$$BE_y = EC_b * A_b * EF$$

Where,

BE_y = Baseline emission in year y

EC_b = Specific Energy consumption in the baseline

A_b = Area cultivated in the baseline

➔ For a single crop:

Specific energy consumption per unit area cultivated 'XXXX' crop in the baseline area with FMI is given by using the formula:

$$EC_{i,FM,y} \Big|_{i=1}^n = \sum_{j=1}^n EC_{j,FM,y} / A_{j,FM}$$

Where,

$EC_{i,FM,y}$ = Specific Energy consumption of a crop in the baseline area

$EC_{j,FM,y}$ = Total Energy consumption of a crop in the baseline in year y

$A_{j,FM,y}$ = Area cultivated for the crop in year y

Specific Energy Consumption ($EC_{i,FM,y}$)
= XXXX kWh /ha/y

Total electricity Consumption in the Baseline scenario for crop XXXX is arrived at by applying the following formula:

$$EC_{b,y} = EC_{i,FM,y} * A_b$$

$$= XXXX * XXXX$$

Hence for a XXXX:

$$BE_y = XXX (EC_{by}) * XXXX (EF) / 1000$$

$$EF = \begin{array}{ll} \text{For NEWNE grid} & = 0.9215 \\ \text{For Southern grid} & = 0.8426 \end{array}$$

Total Baseline Emission = XXX tCO₂

➔ In multiple crop scenario, the formula will be repeated as per the number of crops.

Project Emission (PEy):

The project emissions are calculated as the product of total electricity consumption of all the pumps of the sample area selected for micro irrigation method and emission factor of respective grid.

➔ For a single crop: $EC_p * A_p * E$

Specific energy consumption per unit area cultivated of 'XXXX' crop in the baseline area with XXMI is given by using the formula:

☐ For Drip Irrigation

$$EC_{i,DMI,y} = \sum_{j=1}^n EC_{j,DMI,y} / A_{j,DMI}$$

Where,

$EC_{i,DMI,y}$ = Specific Energy consumption of a crop in the project (drip)

$EC_{j,DMI,y}$ = Total Energy consumption of a crop in the project in year y (drip)

$A_{j,DMI,y}$ = Area cultivated for the crop in year y (drip)

☐ For Sprinkler Irrigation

$$EC_{i,SMI,y} = \sum_{j=1}^n EC_{j,SMI,y} / A_{j,SMI}$$

Where,

$EC_{i,SMI,y}$ = Specific Energy consumption of a crop in the project (Sprinkler)

$EC_{j,SMI,y}$ = Total Energy consumption of a crop in the project in year y (Sprinkler)

$A_{j,SMI,y}$ = Area cultivated for the crop in year y (Sprinkler)

Specific Energy Consumption $EC_{i,XMI,y}$ = XXXX
= XXXX kWh /ha/y

Total electricity Consumption in the Project scenario for crop 'XXXX' is arrived at by applying the following formula:

X = D for DMI and

X = S for SMI

$$EC_{by} = EC_{i,XMI,y} * A_p$$

$$= XXXX * XXXX$$

Hence for a XXXX crop: $PE_y = XXX (EC_{Py}) * XXX (EF) / 1000$

Total Project Emission = XXX tCO₂

➔ In multiple crop scenario, the formula will be repeated as per the number of crops.

$$\begin{aligned}
 EF &= \text{For NEWNE grid} &= 0.9215 \\
 &= \text{For Southern grid} &= 0.8426
 \end{aligned}$$

$$PE_{y(\text{Total})} = PE_{y(\text{crop A})} + PE_{y(\text{crop B})} + \dots + PE_{y(\text{crop N})}$$

$$\text{Total project emission} = \text{XXX tCO}_2$$

➔ If both the irrigation systems are used in the CPA, then project emission will be determined as follows:

$$\text{➔ } PE_{y(\text{Total})} = PE_{y(\text{Total of DMI})} + PE_{y(\text{Total of SMI})} + PE_{y(\text{MIS})}$$

Leakage, (LEy):

Since there is no transfer of equipment from outside leakage is considered to be zero. Hence,
 $Ly = 0$

The para 12 of the SSC meth states that 'fuel extraction, processing, liquefaction, transportation, regasification and distribution of fossil fuels outside of the project boundary'. The PoA will use only water pumps that use electricity. Thus, leakage as per para 12 is not applicable here.

Emission Reduction (ERy)

$$ERy = BEy - PEy - LEy$$

$$ERy = \text{XXX (BEy)} - \text{XXX (PEy)} - \text{XXX (LEy)}$$

$$\text{Total Emission Reduction} = \text{XXX tCO}_{2e}$$

Here, following parameters are monitored ex ante:

Data Parameter /	Unit	Description	Source of data
EC_b	kWh/ha	Electricity consumption for the pumping of water for irrigation in the baseline	Baseline survey report



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EF_{OM,y}	tCO ₂ /MWh	Operating margin CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector, version 07. For the first real case CPA – → For NEWNE grid = 0.98 → For Southern grid = 0.95
EF_{BM,y}	tCO ₂ /MWh	Build margin CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector, version 07
EF_y	tCO ₂ /MWh	is the CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector For the first real case CPA → For NEWNE grid = 0.92 → For Southern grid = 0.84
A_b	Hectares	Total baseline area selected in the CPA	The record maintained by the CPA implementer

Bureau Veritas Certification hereby confirms that:

- All assumptions and data used by the CME/PPs are listed in the PoA-DD, including their references and sources;
- All documentation used by CME/PPs as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD;
- All values used in the PoA-DD are considered reasonable in the context of the proposed PoA;
- The baseline methodology and corresponding tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.



3.11. Additionality (193-195)¹⁶

3.11.1. Prior consideration of the CDM (193-194)

The validation team is able to verify that the CME has determined the start date of the proposed PoA as follows:

The date of publication of the PoA-DD for global stakeholder consultation is 19/10/2012 to 17/11/2012, which is prior to the 'start date' of the CPA; hence, as per CDM-EB 70-A02 Project Standard: Clean development mechanism project standard Version 02.1 (Ref /B13/), Prior Consideration for the PoA is not required. Also Para 29 of this document states that "The requirements in paragraphs 26–28 above do not apply to CDM PoAs." (Refer Clause 6.3 -Demonstration of prior consideration of the clean development), hence, it is confirmed that for the PoA there is no prior consideration required.

The validation team confirmed that the start date of first real case CPA to be registered along with PoA DD has a start date as 12/11/2012 (as explained earlier), which is after the start date of PoA (19/10/2012). It is also confirmed in the PoA-DD eligibility condition that any CPA to be added would be checked before inclusion of the CPA for its start date which should be after PoA start date.

The duration of the proposed PoA is 28 years 00 months 00 days

Bureau Veritas Certification hereby confirms that the proposed PoA complies with the requirements related to the prior consideration of the CDM.

3.11.2. Additionality of PoA (195)

The validation team has assessed the additionality of the proposed PoA in accordance with the "Guidelines for Demonstrating Additionality of Microscale Project Activities version 04.0, EB 68, Annex 26". (Ref /B7/)

Historical Information on project timeline:

There is no historical information on the project activity timeline on CDM validation except baseline survey getting conducted by the outside party by the CME for the first real case CPA. The baseline survey details and its validation is described in the validation report of the first real case CPA.

Identification of alternatives (113-116)

The methodology AMS II F version 10 in the Para 4 prescribes:-

"The energy baseline consists of the energy use of:

¹⁶ The validation team has also referred latest publication i.e. "Amendment to version 03.0 of the CDM validation and verification standard Version 01.0"



(a) The existing activity that is reduced in the case of retrofit measures;
or
(b) The facility that would otherwise be installed in the case of a new facility.”. *Here in the proposed PoA it was identified that there is already an existing network of Flood Irrigation System in the agricultural activities. Hence, above (a) is applicable, since there would be replacement of earlier system by new Micro Irrigation System. Based on the description provided by the methodology as described above, the validation team finds that no more alternatives are required to be identified for baseline.’s alternatives, as per para 115 of the VVS version 3.0.*

Start date of the PoA (193)

As described above the start date of the PoA is 19/10/2012, which is the date when the PoA DD was web hosted by the DOE.

The eligibility criteria of the start date for inclusion of CPA has been set as following:

For each CPA:

The CPA has a project start date on or after start date of the PoA with documentary evidences as described below.

- ➔ Sale/ purchase bill/invoice of MIS by farmer/ CPA implementer
- ➔ Any other commitment to implement project (in case there is no sale purchase bill/invoice is not available).

This will be checked before inclusion of each CPA, into this PoA.

Bureau Veritas Certification confirms that the start date of any CPA is not prior to the commencement of the validation of the PoA, which is the date of the CDM-PoA-DD is first published for global stakeholder consultation.

Demonstration of additionality at the PoA level:-

The proposed CDM PoA has demonstrated additionality in line with micro scale Programme of Activities. Accordingly, in line with EB 68, Annex 26, Para 4, the emission reduction in each individual CPA would be less than 20 ktCO₂ per year. Also, as per para 4 (b) it would be demonstrated in the CPA that, each of the independent subsystems/measures in the project annually saves ≤600 tons and end users of the subsystems or measures are households/ communities/SME. (Energy saving of individual equipment can be demonstrated in each CPA to check if each of the independent subsystems/measures in the project annually saves ≤600 tons. This is demonstrated for the first real case CPA. Also, in the proposed PoA, the agricultural activities are in the farms only hence, are considered as community). This is also described in the applicability condition of the the PoA-DD and is included as one of the condition to be



satisfied in the “eligibility criteria” in Section B.2 of the PoA DD. The additionality can be demonstrated at the PoA. This is correct as per the paragraph 04, Annex 26 of the EB 60 meeting report (Ref /B12/) which states “full additionality assessment is not required in the context of component project activities (CPA), rather the confirmation of additionality for CPAs should be conducted by means of the eligibility criteria. Hence, the validation team accepts the demonstration of additionality at a PoA level. Also it confirms that at each CPA level additionality demonstration is not required. However, the CPA whenever added to the PoA should satisfy all the ‘eligibility criteria’ as designed in the PoA DD.

In the first real case CPA, the PP has demonstrated additionality by means of micro-scale guideline as per EB 68, Annex 26 and by satisfying all the eligibility criteria. This is validated in CPA validation report.

Sensitivity Analysis:

Since the additionality demonstration at PoA level is based on micro scale guideline, sensitivity analysis is not required to be carried out.

Common practice analysis (121)

Common practice analysis has not been used to demonstrate additionality, as this being a micro scale programme of activity.

CAR 7 was raised for as inadequacies were found in the description in the additionality demonstration. The same is as described below:

Points raised by validation team	Response provided by the PP/CME
CAR 7 point (1) was raised as Section B.1 of the PoA DD, described only three barriers by referring “Guidance on the demonstration of additionality of small-scale project activities”, version 09, EB 68. It was not clear if the PP wanted to demonstrate additionality with all the three barriers.	The PP has adopted the “Guidelines for demonstrating additionality of Micro scale project activities” hence, all the barriers for small scale are now removed from the PoA DD, Having reviewed this correction, the validation team closed this point.
CAR 7 Point (2) was raised as under the title “investments” it was described that “The investors under this programme will provide the micro irrigation system to the beneficiaries in subsidized cost. There is no return from investment	The PP clarified that under the title “investments” the matter that the investors under this programme would provide the equipments at subsidized cost was wrongly quoted, which is now deleted from the CME. Having reviewed this



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<p>in micro irrigation system and hence the investors are dependent on other financial mechanisms such as carbon revenues to meet their investment cost". However, during the site visit with the local stake holders and with the dealers of the Mahindra & Mahindra EPC company, the validation team observed that there is no subsidized equipment provided by CME, neither it is freely distributed.</p>	<p>correction, the validation team closed this point.</p>
<p>CAR 7 Point (3) was raised as in the same section it was described that "Very high working capital requirements causing higher interest cost, the net profit margin of this business remains under check for the manufacturing industry". The validation team asked the CME/PP to explain this.</p>	<p>The CME/PP has removed the statement "Very high working capital requirements causing higher interest cost, the net profit margin of this business remains under check for the manufacturing industry", which was wrongly described in the PoA DD, hence, this point is closed.</p>
<p>CAR 7 Point (4) was raised as under the title "Technological barriers" it was described that "though remarkable growth has been achieved over the last 15 years in adopting micro irrigation, its share to the gross irrigated area of the country is only negligible". The validation team asked to provide the evidences for the same.</p>	<p>The CME/PP explained that for the additionality demonstration the PP has now followed "micro scale guideline" hence, small scale guidelines steps for demonstration of additionality are removed, hence, the description under "Technological Barriers" is also removed from the PoA DD, which is correct, hence, this point is closed.</p>
<p>CAR 7 Point (5) was raised as from the description of the barrier analysis in the PoA it was not clear whether CME wants to prove the additionality with one or all the barriers.</p>	<p>It is explained by the PP/CME that for proving additionality, it has adopted the "Guidelines for demonstrating additionality of Micro scale project activities". As per para (c) of the guideline each CPA implementer has to fulfill both (i) & (ii) condition of the condition 'b'. Hence, the CME has now deleted the additionality guidance used in the small scale project activity. Having reviewed this, the validation team closed this point.</p>
<p>CAR 7 Point (6) was raised as it</p>	<p>In response to this point, the PP</p>



<p>was not clear from the description that “If the CME is taking “charges for the project equipment”, why CDM benefit is required” from the additionality demonstration. The validation team asked the PP to explain “How why this can’t be treated is not business as usual scenario’.</p>	<p>explained that, the PP has followed microscale guideline for the demonstration of additionality. Also, PP has provided undertakings from the farmers (4 nos. as a sample), which demonstrates that the “ER benefits” are transferred in the name of EPC industrie i.e. first real case CPA implementer. Also, the PP has provided a ‘note on benefit sharing with stakeholders” which describes that certified emission reduction’s revenue would be used for training programs, purchasing new irrigation system, O & M services, installation of monitoring system, other expenditures etc. having reviewed this, the validation team accepts that the revenue from the certified emission reductions would be for promotion of PoAs, addition of CPAs, hence, validation team closed this point.</p>
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From the above description and the CAR raised, Bureau Veritas Certification confirms that none of the implemented CPA would occur in the absence of CDM. Hence, in conclusion, the additionality of PoA has been demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur.

3.11.3. Additionality of generic CPA

The proposed PoA consist of microscale projects as CPAs, the eligibility criteria derived from all the relevant requirements of the “Guidelines for demonstrating additionality of microscale project activities” have been included in the PoA-DD.

Bureau Veritas Certification hereby confirms that the compliance with the additionality-related eligibility criteria set in the generic PoA-DD will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.

3.12. Monitoring Plan (198)

The CPAs under the proposed PoA applies the approved consolidated monitoring methodology AMS-II.F, Version 10.0.

Applicability of this methodology is justified in the Section B.3 of the PoA-DD stating that the measures to be implemented in each CPA will



comprise of efficient irrigation system such as drip, sprinkler etc. used for irrigating the crops and the energy savings of each individual CPA will not exceed the equivalent of 20 GWh per year. Referring to the discussions on the applicability of the methodology in section 3.10.1 above, the validation team considers that the selected monitoring methodology is applicable to the CPAs under the proposed PoA.

Data and Parameters Monitored:

The applied methodology AMS II F version 10.0, under the title “monitoring” in para 9 requires:- In the case of retrofit measures (includes fuel switch measures), monitoring shall consist of:

Para 9 (b):

Metering the energy use of the agricultural facility, processes or the equipment affected by the project activity (individually or on sample basis with a confidence/precision level of 90/10, applying the .Standard for sampling and surveys for CDM project activities and programme of activities.

Para 10 requires:-

10. In the case of a new facility, monitoring shall consist of:

(a) Metering the energy use of the equipment installed (individually or on sample basis with a confidence/precision level of 90/10, applying the .Standard for sampling and surveys for CDM project activities and programme of activities.);

Para 11 requires:-

11. Monitoring will also involve the scale (e.g. number of ha cultivated, crop yield) of agricultural activities, in order to ensure that reduced energy consumption is not due to downscaling of activities. Energy use must be for equivalent services.



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Accordingly, parameters available at the time of validation are as described hereunder:-

Data Parameter /	Unit	Description	Source of data
EC_b	kWh/ha	Electricity consumption for the pumping of water for irrigation in the baseline	Baseline survey report, carried out by independent third party.(Dr. V. B. Gupta's report as explained above)
EC_p	kWh/ha	Unit of electricity consumed for pumping of water for irrigation for varied crops in under micro irrigation method.	Baseline survey report, carried out by independent third party.(Dr. V. B. Gupta's report as explained above)
EF_{OM,y}	tCO ₂ /MWh	Operating margin CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector, version 07. For the first real case CPA - → For NEWNE grid = 0.98 → For Southern grid = 0.95
EF_{BM,y}	tCO ₂ /MWh	Build margin CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector, version 07



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EF_y	tCO ₂ /MWh	is the CO ₂ emission factor of grid, in which the project activity displaced the electricity during the year y	CEA CO ₂ Baseline Database for the Indian Power Sector For the first real case CPA → For NEWNE grid = 0.92 → For Southern grid = 0.84
A_b	Hectares	Total baseline area selected in the CPA	The record available with the CPA implementer for the CPA area
$A_{p,y}$	Hectares	Total project area selected in the CPA	The record available with the CPA implementer for the CPA area, at this moment it is understood that the project area is same as baseline area.

Data and parameters to be monitored Ex-post

Data Parameter /	Unit	Description	Source of data
$EC_{b,y}$	kWh/ha	Total electricity consumption of all pumps in the baseline region	On site measurements (from baseline survey report, where sampling as per UNFCCC guideline would be applied)



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Ap,y	Hectares	Total Crop area selected for CPA. This would be the actual area in a year where project agricultural activity may happen. This may vary as project might be implemented phase wise. Or even every year, crop area may differ based on agricultural activity carried out.	The record maintained by the CPA implementer: Summation of farm land data from official documents (any of the following) of programme signatory farmers/beneficiaries : <ul style="list-style-type: none"> • 7/12 extract • Form 8A certified by talati / certified by government officials • XXX (Any other authentic document)
EC_{p,y}	kWh/ha	Total electricity consumption of all pumps in the project region.	On-site measurements from sampled energy meters on farms
Y_{p,y}	Tons	Total crop yield achieved in the project area	As per sampling procedure, EB 74, Annex 6 for weight: measurements provided by crop purchaser/ traders at the time of crop purchase. for land area: land documents and records of crop distribution in land
ES	kWh/ha	Electricity savings by all pumps in the project area	Calculated

The validation team considers that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).

**Implementation of the Monitoring Plan**

The validation team considers that the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the CPAs under the proposed PoA can be reported ex post and verified.

Sampling plan

According to the “Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities” Version 04.0, Annex 6, EB 74 (“*Standard for sampling and surveys for CDM project activities and programme of activities*”) and “Guidelines for sampling & surveys for CDM project activities and programme of activities”, version 02.0, Annex 5, EB 69. A sampling plan has been elaborated in the PoA-DD Part II i.e. Generic CPA DD in Section B.7.2

The validation team has validated the sampling plan and confirms that it will provide parameter value estimates in an unbiased and reliable manner based on:

- (a) The proposed sample size and sampling method are adequate to achieve the 90/10 confidence/precision requirements;
- (b) The proposed sampling plan will ensure that samples are randomly selected and are representative of the population.

Target Population:

The target population is all the farms covered under the total area where micro irrigation system would be implemented in each CPA e.g. XXX¹⁷ ha. As per the baseline report of XXX CPA region, the average land holding would be XXX ha. This can be decided based on the authentic documents. E.g. in the first real case CPA the target population is total area under micro irrigation system i.e. 1,500 ha. As per the Agriculture Census 2010-11¹⁸, in Maharashtra, average land holding is 1.45 ha. Thus, average number of farmers/ land owners to be included in CPA is $1,500 / 1.45 = 1,034$.

Thus, average number of farmers/ land owners to be included in CPA is $XXX \text{ (ha)} / XXX \text{ (average land holding value in ha)} = XXX$. This gives the number for the population. The sampling would be done based on this number for the particular CPA, which is a total population.

¹⁷ As each CPA may have different land area in ha, region, crop etc. actual value may be different per CPA, hence is represented as ‘xxx’.

¹⁸ <http://agcensus.nic.in/document/agcensus2010/agcen2010rep.htm> go to Complete Report on Table-1 (pg. 85)

**Field measurements and data to be collected during sampling:-**

- 1) Electricity consumption of the equipment. This can be done by taking the readings of the 3 phase meters installed on the pump sets.
- 2) Energy savings can be determined by comparing the energy consumption of the project area with base line energy consumption.
- 3) Area under cultivation can be determined by the collecting 7/12 as well as 8A abstract¹⁹ of the farmer and the record maintained at the distributor.
- 4) Crop yields will be determined by the receipts of goods sold by the farmer to the middleman/APMC markets/ etc.

Sample Method:

As described in the PoA DD, the sampling and survey will be conducted based on the sampling procedure given by “Standard for sampling and surveys for CDM project activities and Programme of Activities”, version 04, Annex 6, EB 74 and “Guidelines for sampling & surveys for CDM project activities and programme of activities”, version 02.0, Annex 5, EB 69.

The sampling of land under each CPA will result in following information:

- Number of hectare cultivated in each year i.e. Area to be cultivated (In the baseline as well as in the project scenario)
- Crop yield every year ($=Y_{p,y}$)
- Energy consumption ($=EC_{p,y}$)
- Energy savings ($=ES$)

Due to sampling, it would also be monitored that the energy consumed by the micro irrigation is same for the agricultural activities and in any case the reduction in energy consumption is not due to the reduction in agricultural activities. The cross checking of the energy consumption will be done based on the energy meter reading in each CPA under Micro irrigation. The meter reading is recorded and the energy savings is calculated each year.

Sample Size:

The determination of sample size will be done either manually or using appropriate statistical software as described in EB 74, Annex 6.

As per “Guidelines for sampling & surveys for CDM project activities and programme of activities”, version 02.0, annex 5, EB 69, for sample size

¹⁹ It is a proof of total land holding of an individual farmer

calculation for small scale projects 90% confidence and margin of error of 10% is required.

The illustration of sample size calculation using the formula given in above guidelines is shown below:

$$n \geq \frac{1.645^2 NV}{(N-1) \times 0.1^2 + 1.645^2 V}$$

Where:

$$V = \frac{p(1-p)}{p^2}$$

Where:

N	=	Sample size
N	=	Total number of households
P	=	Our expected proportion (XXX)
1.645	=	Represents the 90% confidence required
0.1	=	Represents the 10% relative precision

This will give sample size = XXX farmers for 90/10 confidence level.

The PoA DD also described that if by chance 10% of the beneficiaries' do not respond, an approach of scale up will be used as follows.

No of sample after scale up = XXX/0.9 = XXX

Assessing the parameters:

- The parameter $EC_{p,y}$ will be assessed by installing the 3 phase meters at farmers' fields on randomly selected sample of equipments/ motors. The readings will be recorded once in month and aggregated annually. CPA implementer will confirm that the records are being maintained and are collected monthly and aggregated annually. Also the meters will be calibrated once in three years. CPA implementer will make sure that that data collection and calibration will be done by well trained staff. The CPA implementer will verify that the all the staff /third party appointed by the CPA implementer are sufficiently trained. The data will be maintained by CPA implementer and will be submitted to CME at the end of month. The record will be made available to the DOE during verification.
- The parameter ES is determined by comparing the energy consumption in baseline i.e. during flood method of irrigation and project i.e. during micro irrigation method.



- Number of area of hectare cultivated (A) in each year would be based on samples collected and based on authentic data which can be collected from 7/12 extract or Form 8A certified by talati / certified by government officials or from XXX (i.e. Any other authentic document)
- The crop yield every year ($Y_{p,y}$) would be collected from the sampled data which would be weighed by the calibrated weigh meters and the quantity will be cross checked with sale records/receipt provided by the purchaser for making the payment. The parameter will be monitored for the sample number of farmers.

Implementation: As described in the PoA DD; the Staff/ third party agency appointed by the CPA Implementer will conduct the sampling and determines the various monitoring parameters in individual CPAs. The monitoring report will be prepared by each CPA implementer every year based on the energy consumption data recorded by energy meter installed in the project activity.

CAR 38 was raised as in Part II B.7.1 section of webhosted SSC-PoA-DD the measurement methods and procedure for all the parameters were not described in accordance with AMS II F version 10. CAR 39 was raised as in Part II B.7.1 section of webhosted SSC-PoA-DD the “QA/QC procedures”: for all the parameters are not described in accordance with AMS II F version 10 and annex 30 EB 67 for calibration procedure and accuracy of meters. CAR 40 was raised as the monitoring plan was not accordance with the Methodology AMS II F version 10, Also, the data uncertainty and data archiving procedures are not mentioned. In response to this, the PP/CME corrected the monitoring plan, calibration procedures, accuracy of meters, sources of different parameters, QA/QC procedures, data uncertainty, data archiving etc. having reviewed this, the validation team closed these CARs.

Bureau Veritas Certification hereby confirms that the monitoring plan complies with the requirements of the methodology including applicable tool(s), the monitoring arrangements described in the monitoring plan are feasible within the programme design and the CME/PPs are able to implement the described monitoring plan.

3.13. Environmental Impacts (199)

As described in the PoA DD in Section E.1, the project activity does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India, 2006²⁰. Hence, EIA is not required to be conducted at either PoA or CPA level by the CPA Implementer.

²⁰ <http://www.envfor.nic.in/legis/eia/so1533.pdf>



Bureau Veritas Certification hereby confirms that an analysis of environmental impacts and an environmental impact assessment is not required which is in accordance with procedures as required by the host Party.

3.14. Local Stakeholder Consultation (201)

The local stakeholder consultation process is performed at the CPA level, the choice has been justified by the CME. The CME has described in the PoA DD that since the local stakeholder concerns will vary for every CPA included in the PoA and specific to the socio-economic and environmental conditions of the location, it is appropriate to undertake local stakeholder consultation at CPA level. The validation team agrees to this, as the project activity implementation would be at CPA level.

The PoA DD has described that the time, date and location for the same will be pre-determined and identified stakeholders will be contacted.

The procedure for local stakeholders invitation, stakeholders foreseen and meeting agenda has been correctly described in the PoA DD. It also ensures that a summary of comments including the name of a person who has commented as well as the responses given to that particular comment will be prepared and mentioned for each CPA. Also action would be taken as required on the comments.

For the first real case CPA, the PP has described the stakeholder consultation process in the CPA DD in line with the description provided in the PoA DD.

Bureau Veritas Certification hereby confirms that the stakeholder consultation process at the CPA level is appropriate and description of the stakeholder process is correctly described in the PoA DD.

4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PoA-DD using methodology AMS-II.F, Version 10.0 was webhosted on the UNFCCC for global stakeholders comments as per CDM requirements. The proposed PoA was webhosted from 19/10/2012 to 17/11/2012.

No comments were received during this period.



5. VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Energy Efficiency through Micro irrigation system - India, which is located in PoA boundary. The validation was performed on the basis of UNFCCC criteria for the CDM, and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) desk review of the programme design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

The CPAs under the proposed PoA correctly apply the approved consolidated baseline and monitoring methodology AMS-II.F, Version 10.0 and uses the latest tool and guidelines for demonstration of the additionality.

By installing the micro irrigation system, the proposed PoA is likely to result in reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change. The eligibility criteria established for CPA inclusion will ensure that the CPAs under the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA.

The review of the programme design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the proposed PoA meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of the proposed PoA as a CDM programme of activities.

Mr. Sanjay Patankar
Internal Technical Reviewer
21/08/2013

Mr. Hitesh Karandikar
Team Leader
15/08/2013

6. REFERENCES

Category 1 Documents:

Documents provided by CME/PPs that relate directly to the GHG components of the PoA.

Sr. no.	Details of the reference
/1/	Web hosted PoA DD version 1 dated 20/06/2012
/2/	Web Hosted CPA DD version 1 dated 20/06/2012
/3/	Final PoA DD version 6 dated 10/08/2013
/4/	Final CPA DD version 6 dated 10/08/2013
/5/	Host Country Approval Letter reference no. 4/01/2013-CCC 23/04/2013
/6/	Modalities of Communication (MoC) statement provided by the CME
/7/	Income tax Permanent Account number (Pan) Card for the authorized signatory
/8/	Employment status (Letter from Mahindra and Mahindra), of their authorized signatories.
/9/	The CME's assurance letter dated 09/03/2013 to the NCDMA (Ref /xx/)s that the revenue earned out of CERs would be used for different activities related to PoA Development
/10/	NABARD Micro Irrigation Subsidy Description document
/11/	Webpage showing that EPC Industrie is able to manufacture project equipment as per relevant Indian Standards (IS)
/12/	Invoice raised by the Dealer of the EPC Industrie, This is the earliest real action in order to demonstrate the start date of the CPA. As 12/11/2012. Dealer: Maharashtra Agro Sales, Malkapur Invoice no. 195 dated 12/11/2012. Purchaser/enduser : Pratibha Prakash Chaudhari, Narwel
/13/	Emission reduction Sheet for the first real case CPA
/14/	CEA database version 7 published in January 2012

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents used for cross-check.

Sr. no.	Details
/B1/	Clean Development Mechanism Validation and Verification Standard version 03.0 (EB 70 Annex 3) and Amendment to version 03.0 of the CDM validation and verification standard



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	Version 01.0
/B2/	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities version 02.1
/B3/	"Standard for the Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, EB 70 Annex 5"
/ B4/	PROCEDURES FOR REGISTRATION OF A PROGRAMME OF ACTIVITIES AS A SINGLE CDM PROJECT ACTIVITY AND ISSUANCE OF CERTIFIED EMISSION REDUCTIONS FOR A PROGRAMME OF ACTIVITIES EB 55, Annex 38
/B5/	Approved methodology AMS II.F "Energy efficiency and fuel switching measures for agricultural facilities and activities" version 10, EB 66
/B6/	Guidelines on demonstrating additionality of micro scale project activities (Version 04.0), EB 68, Annex 26
/B7/	"Standard for sampling and surveys for CDM project activities and programme of activities", version 03.0, EB 69, Annex 4 and version 04.0, EB 74, Annex 6
/ B8/	"Guidelines for sampling and surveys for CDM project activities and programme of activities", version 02, EB 69 Annex 5
/ B9/	"Guidelines on assessment of de-bundling for SSC project activities", Annex 13, EB 54
/ B10/	"Guidelines for completing the programme design document form for small-scale CDM programme of activities", EB 66, Annex 13 and EB 74, Annex 08
/B11/	"Tool to calculate the emission factor for an electricity system" (Version. 03.0.0, EB 70, Annex 22)
/B12/	EB 60 meeting report - Annex 26
/B13/	CDM-EB 70-A02 Project Standard: Clean development mechanism project standard Version 02.1



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Persons interviewed:

Persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

Sr. no.	Name	Organization
1	Mahesh Dalvi	Manager, Mahindra & Mahindra
2	Hari Prasad	General Carbon, CDM analyst
3	Madhukar Sadashiv Nhavkar	EPC Industrie
4	Sagar Zoke	EPC Industrie
5	Shrikrushna Zambre	Local stake holder-Village Parambi
6	Bhagwan Ramkrushna Chaudhari	Local stake holder- Village Parambi
7	Durgadas Shankar	Local stake holder- Village Kuvha
8	Balarav Ganpat Hirole	Local stake holder- Village Kuvha
9	Babarav Hirole	Local stake holder- Village Kuvha
10	Vinod Kodalkar	Local stake holder- Village Kuvha
11	Bhavrav Rathod	Local stake holder- Village Kuvha
12	Shantaram Chopde	Local stake holder- Village Kakoda
13	Valmik Ganghadhar	Local stake holder- village Bodvad
14	Vishnu Narayan Navkar	Local stake holder- village Bodvad
15	Vilas	Local stake holder- village Kakoda
16	Manohar Trimbak Zite	Local stake holder- village Vadoda
17	Jyotiram Sadashiv Hatakar	Local stake holder- village Vadoda
18	Digambar Tade	Local stake holder- village Vadoda
19	Laxman Kshirsagar	Local stake holder - village Vadoda
20	Tukaram Mistry	Local stake holder- village Kakoda
21	Munnalal bansilal Manpure	Local stake holder- village Shelapur



7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Mr. Hitesh Karandikar	Bureau Veritas Certification, India	<p>Team Leader, Climate Change Lead Verifier</p> <p>Hitesh Karandikar is B.E. (Bachelor of Engineer) in Electrical Engineering. (1991 batch). He is an MBA in Marketing and Finance. He has worked in Gujarat Electricity Board of Gujarat state in various departments. He has worked at world renowned Hydro Power project viz. "Sardar Sarovar Narmada Nigam Limited". The power station has total capacity of 1450 MW generation capacity of which 250 MW from Canal Head Power House and 1200 MW from River Bed Power House. He has an experience of Designing switch Yard Structures, foundation for the 220 kv and 400 kv switchyard structures.</p> <p>He is a certified Energy Manger from Bureau of Energy Efficiency, and has vide experience of preliminary energy audit of more than 200 industries. He was also a team mate from Gujarat Electricity Board, in carrying out thermal power energy audit carried out by NPC, Hyderabad and ERDA, Vadodara. He has been faculty in many "Energy Conservation" seminars/conferences. His other professional qualification includes : He is a ISO 9001, 14001 and OHSAS 18001 Lead Auditor. (more than 200 manday audit expérience). He is also a certified Six Sigma Black Belt. He has successfully undergone training of CDM verifier organised by Bureau Veritas.</p>
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Mr. Vishwanath Sule	Bureau Veritas Certification, India	Team Member, Climate Change Verifier A Mechanical Engineering with four year work experience in climate change services India. He has previously worked carbon advisory firm in India on CDM project development, CDM project due diligence and Execution of CDM projects. He has undergone training on Clean Development Mechanism and involved in the Validation and verification of CDM/VCS projects.
Mr. Sanjay Patankar	Bureau Veritas Certification, India	Technical Reviewer, Climate Change Lead Verifier Educational qualifications: B.E. (Mech.) M.E. (Mech.) He has over 20 years of experience in engineering manufacturing industry covering various functions like enterprise management, product design, engineering, tool & die design, improvements in the production shop, quality assurance & control and systems planning and implementation, including ISO 9001 based quality management systems. Working for the last 4 ^{1/2} years in Bureau Veritas Certification (India) Private Ltd. as Lead Auditor for ISO 9001, 14001 and OHSAS 18001 standards/specifications. Has undergone training related to Clean Development Mechanism and is currently involved in validation and verification of CDM project activities

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APPENDIX A: CDM PROGRAMME OF ACTIVITIES VALIDATION PROTOCOL

Table 1: Validation requirements based on VVS version 03.0 (EB 70 Annex 3), PS version 2.1 (EB 70 Annex 2), PCP version 02.0 (EB 70 Annex 4), PoA Standard version 02.0 (EB 70 Annex 5) and Guidelines for completing the SSC-PoA-DD form version 03.0 (EB 70 Annex 6), Standard: Sampling and surveys for CDM project activities and programmes of activities Version 04.0 (EB 74, Annex 6), Completing the programme design document form for CDM programmes of activities (EB 74 Annex 7), Completing the programme design document form for small-scale CDM programmes of activities (EB 74, Annex 8), Amendment to version 03.2 of CDM project cycle procedure (EB 74, Annex 11)

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
Part I Programme of activities (PoA)					
A General description of PoA					
A.1 Title of the PoA					
A.1.1 Is the title of the proposed PoA provided?	DD PS	31	Yes the POA has been Titled as “Energy Efficiency through Micro irrigation system – India”	OK	OK
A.1.2 Is the current version number of the SSC-PoA-DD indicated?	DD		The current version of the SSC-POA-DD is mentioned as Version 01	OK	OK
A.1.3 Is the completion date of the SSC-PoA-DD provided in DD/MM/YYYY format?	DD		Yes the date of the SSC-PoA-DD completion is provided as 09/10/2012	OK	OK
A.2 Purpose and general description of the PoA					
A.2.1 Is policy/measure or stated goal that the PoA seeks to promote described?	DD PS	139	The policy/measure of the POA is not clearly described in the section A.2 of the webhosted SSC-PoA-DD.	CAR 01	--
A.2.2 Is a framework developed for the implementation of the proposed PoA and inclusion of CPAs under the PoA?	DD PS	138	The framework developed by the CME for the implementation of PoA and inclusion of CPA implementers in the PoA is not clear. It	CL 1	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			is not clearly described who will/can be the CPA implementer . It is also described in the PoA DD under title "Investments" that "Subsidy scheme promoted by Central or State Government may be utilized by CPA implementer to implement the project". PI. clarify what is the subsidy available while decision taken.		
A.2.3 Is it confirmed that the proposed PoA is a voluntary action by the coordinating/managing entity?	DD PS	140	The justification related to voluntary action of the Co-coordinating / Managing entity is not clearly described.	CL-2	--
A.2.4 Is it explained how the PoA will reduce GHG emissions or increase GHG removals?	PS	31	it is explained in the PoA DD that by reduction in use of electricity, there will be less emission of CO ₂ , hence, the GHG emission would reduce.	OK	OK
A.2.5 Are sectoral scope(s) and type of the PoA indicated?	PS	31	Yes		
A.2.6 Is the contribution of PoA to sustainable development explained?	DD PS	31	The contribution of sustainable development is described in accordance with the indicators stipulated by the host country (NCDMA and MoEF) India, however, the same is not correctly described. Ex. 1) In the "Economic well being" the saving of time is duplicated in point, also it describes about less water discharge out of ground water and hence water table will not go to	CL-3	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			deeper level. water table 2) In the technological well being it is described that "The CDM project activity will lead to transfer of environmentally safe and sound technologies that are comparable to best" pl. clarify above sentences.		
A.3 CMEs and participants of PoA					
A.3.1 Is CME of the PoA identified, as the entity which communicates with the Board?	DD PS	141	The " <i>Mahindra & Mahindra Ltd</i> Farm Equipment sector " has been identified as the CME for the PoA	OK	OK
A.3.2 Are project participants to the PoA indicated?	DD PS	141	The " <i>Mahindra & Mahindra Ltd</i> Farm Equipment sector " has been identified as the project participant for the PoA	OK	OK
A.4 Party(ies)					
A.4.1 Are Party(ies) and CMEs involved in the proposed PoA listed in the table?	DD PS	141	The CME identified in the section A.4 of webhosted SSC-PoA-DD is consistent with the appendix 1	OK	OK
A.4.2 Is contact information on entity/individual responsible for the PoA provided in Appendix 1?	DD		contact information on entity/individual responsible for the PoA provided in Appendix 1 are not filled in completely.	CAR 02	

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A.5 Physical/Geographical boundary of the PoA					
A.5.1 Are details of the defined boundary of the PoA provided, in terms of a geographical area(e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented?	DD PS	142	The boundary for the PoA has been defined as the host country India	OK	OK
A.5.2 In establishing the boundary, if the project participants have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary?	VVS PS	192 142	Yes it is mentioned in the A.5 section of SSC-PoA-DD that PoA will follow all the applicable national /sectoral policies and regulations of host country India	OK	OK
A.6 Technologies/measures					
A.6.1 Are the technologies and/or measures to be employed and/or implemented by the CPAs in the PoA described, to enable the identification of the project's scale and type, demonstration of additionality, application of the selected methodology and calculations of GHG emission reductions or net GHG removals?	DD PS	147	The technology measures mentioned in the Section A.6 of the SSC-PoA-DD are not correctly described.	CAR 03	
A.6.2 For the description, where relevant, are applicable provisions for application of selected baseline and monitoring methodology for small-scale project activities in the Project standard considered?	DD		The CME has not justified how the technology measures described in the A.6 of webhosted SSC-PoA-DD are applicable in accordance with the eligibility criteria	CAR 04	
A.6.3 Are the technologies to be employed by the CPAs in the PoA described including a description of how environmentally safe and sound technology(ies) applied in the CPAs and know-how to be used are	PS	31	The description how the applied technology is environmentally safe and sound is not provided in the Section A.6 of webhosted	CAR 05	

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
transferred to the host Party(ies)?			SSC-PoA-DD is		
A.7 Public funding of PoA					
A.7.1 Is it indicated whether the PoA receives public funding from Parties included in Annex I?	DD		In the section A.7 of webhosted SSC-PoA-DD it is mentioned that "The PoA will not receive any public funding from Parties included in Annex I" However, proof for the same is not provided in order to check this.	CAR 06	--
A.7.2 In case where public funding from Annex I Parties is involved, are followings provided? (a) Information on Parties providing public funding (b) Attached in Appendix 2: the affirmation obtained from such Parties that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those Parties	DD PS	34	Not applicable as no funding from annex 1 parties is involved, however refer above CAR 06	refer CAR 06	--
B Demonstration of additionality and development of eligibility criteria					
B.1 Demonstration of additionality for PoA					
B.1.1 Is it described that how in the absence of CDM, none of the implemented CPAs would occur?	DD PoA- Stand	7	Following inadequacies are identified in the Section B.1 related to Demonstratin of additionality of the PoA 1) Section B.1 describes only three barriers by referring "Guidance on the	CAR 07	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>demonstration of additionality of small-scale project activities”, version 09, EB 68. Pl. clarify.</p> <p>2) Under the title “investments” it is described that The investors under this programme will provide the micro irrigation system to the beneficiaries in subsidize cost. There is no return from investment in micro irrigation system and hence the investors are dependent on other financial mechanisms such as carbon revenues to meet their investment cost. However, during the site visit with the local stake holders and with the dealers of the Mahindra & Mahindra EPC company, the validation team observed that there is no subsidized equipment provided by CME, neither it is freely districuted. Pl. clarify.</p> <p>3) It is also written in the same section that “Very high working capital requirements causing higher interest cost, the net profit margin of this business remains under check for the manufaturing industry”. This is not clear Pl. explain.</p> <p>4) Under the title “Technological barriers” it</p>		

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			<p>is described that Though remarkable growth has been achieved over the last 15 years in adopting micro irrigation, its share to the gross irrigated area of the country is only negligible. Pl. provide the evidences for the same.</p> <p>5) From the description of the barrier analysis in the PoA it is not clear whether CME wants to prove the additionality with one or all the barriers.</p> <p>6) If the CME is taking charge for the project equipment, why CDM benefit is required is not clear from the additionality demonstration. How this is not 'business as usual scenario' pl. explain</p> <p>7) In the Section B.1 of webhosted SSC-PoA-DD it is not described how the CPA's would not be implemented without CDM benefits</p>		
B.2 Eligibility criteria for inclusion of a CPA in the PoA					
B.2.1 Do the eligibility criteria cover the geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA?	PoA- Stand	14(a)	The section B.2 of webhosted SSC-PoA-DD mentions that "Each CPA will be located within the geographical boundary of India."	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.2.2 Do the eligibility criteria cover conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)?	PoA- Stand	14(b)	The eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD does not describe 'the condition to avoid double counting of emission reductions', correctly	CAR 08	--
B.2.3 Do the eligibility criteria cover the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications?	PoA- Stand	14(c)	<p>The eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD does address the following</p> <ul style="list-style-type: none"> • The specifications of technology/measure. • Specifications for the level and type of service, performance • compliance with testing standards as per the host country standards 	OK	OK
B.2.4 Do the eligibility criteria cover conditions to check the start date of the CPA through documentary evidence?	PoA- Stand	14(d)	<p>In the eligibility criteria to check the start date of the CPA following is described.</p> <p>—> Date after the commencement of validation of PoA this is not clear. Pl. explain. .</p>	CAR 09	--
B.2.5 Do the eligibility criteria cover conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs?	PoA- Stand	14(e)	<p>The eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD does not clearly mention</p> <ul style="list-style-type: none"> • Applicability of single or multiple methodology 	CAR 10	--
B.2.6 Do the eligibility criteria cover the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified below:	PoA- Stand	14(f)			

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.2.6.1 PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of Guidelines on demonstration of additionality of small-scale project activities (Version 09.0), Annex 27, EB 68."	PoA- Stand	9	The B.2 section of webhosted SSC-PoA-DD mentions that Each CPA will demonstrate the additionality as per the requirements of Guidelines on demonstration of additionality of small-scale project activities (Version 09.0), Annex 27, EB 68.	OK	OK
B.2.6.2 The CME shall demonstrate that compliance with the additionality-related eligibility criteria set in the PoA design document will ensure that all the relevant additionality-related guidelines, tools or any requirements embedded in the methodologies are met.	PoA- Stand	11	Pl. refer the CAR 07 above for demonstration of additionality	Refer CAR 07	--
B.2.6.3 For PoAs involving combinations of technologies /measures and/or methodologies, the eligibility criteria relative to each of them shall be proposed to demonstrate additionality.	PoA- Stand	12	The additionality for the combinations of technology measure and methodology are not described in the Section B.2 of webhosted SSC-PoA-DD	CAR 11	--
B.2.7 Do the eligibility criteria cover the PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis?	EB 65 Ann3	14(g)	The local stakeholder consultation and environmental impact analysis are described in the section B.2 of webhosted SSC-PoA-DD	OK	--
B.2.8 Do the eligibility criteria cover conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance?	PoA- Stand	14(h)	Yes the eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD cover the conditions to provide an affirmation funding from Annex I is not involved in the CPA implementation	OK	OK
B.2.9 Do the eligibility criteria cover, where applicable,	PoA-	14(i)	The eligibility criteria mentioned in the B.2	CL-4	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation)?	Stand		section of webhosted SSC-PoA-DD describes the identification of target group and the distribution mechanisms in accordance with the para 14j of Annex 03 EB 65. However, pl. clarify what is 'small scale farmer'		
B.2.10 Do the eligibility criteria cover, where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys?	PoA- Stand	14(j)	<p>Yes the eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD covers sampling requirements.</p> <p>Each CPA will conduct sampling and surveying as appropriate or applicable based on requirements of</p> <ul style="list-style-type: none"> • Standard for sampling and surveys for CDM project activities and programme of activities", version 04.0, Annex 6, EB 74 and • "Guidelines for sampling and surveys for CDM project activities and programme of activities", version 02, Annex 5, EB 69 	OK	OK
B.2.11 Do the eligibility criteria cover, where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA?	PoA- Stand	14(k)	Yes the eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD covers the conditions to ensure that CPA will meet the small-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA	OK	OK
B.2.12 Do the eligibility criteria cover, where applicable,	PoA- Stand	14(l)	The de-bundling criteria is not correctly described in the eligibility condition	CAR 12	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the requirements for the de-bundling check, in case CPAs belong to small-scale (SSC) project categories?			mentioned in the section B.2 of webhosted SSC-PoA-DD, in accordance with para 14 of PoA standard		
B.2.13 Are the eligibility criteria verifiable?	PoA- Stand	15	No, Pl. refer various CARs and CLs referred above in this section B.2 "Eligibility criteria for inclusion of a CPA in the PoA"	Refer (CAR 9- 12) and CL-4	--
B.2.14 Are the eligibility criteria sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA?	PoA- Stand	16	No, Pl. refer various CARs and CLs referred above in this section B.2 "Eligibility criteria for inclusion of a CPA in the PoA"	Refer (CAR 9- 12) and CL-4	--
B.2.15 For PoAs that include combinations of technologies /measures and/or methodologies, are distinct eligibility criteria developed separately for each of the combinations?	PoA- Stand	20&27	No, Pl. refer various CARs and CLs referred above in this section B.2 "Eligibility criteria for inclusion of a CPA in the PoA"	Refer (CAR 9- 12) and CL-4	--
B.2.16 If a CPA uses technologies/measures from several methodologies, are the eligibility criteria derived from the requirements of all the methodologies?	PoA- Stand	27	No, Pl. refer various CARs and CLs referred above in this section B.2 "Eligibility criteria for inclusion of a CPA in the PoA"	Refer (CAR 9- 12) and CL-4	--
B.3 Application of methodologies					
B.3.1 Are the technology/measures described and is the methodology chosen indicated?	DD		The technology measures are not referenced/described correctly in the B.3 section webhosted SSC-PoA-DD in accordance with the Guidelines for completing the programme design document form for small-scale CDM programme of activities	CAR 13	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			(version 02.0)		
B.3.2 In cases where multiple technologies/measures or multiple methodologies are being applied, are all the combinations of technologies/measures and methodologies that will be used in the PoA listed?	DD PoA- Stand	26	Please refer CAR above	CAR 13	--
B.3.3 If applicable, is a description of the sampling plan provided and is it demonstrated how it meets applicable provisions in the "Standard for sampling and surveys for CDM project activities and programme of activities"?	DD		The section B.3 of the webhosted SSC-PoA-DD describe the sampling criteria for the PoA in accordance with the following <ul style="list-style-type: none"> AMS II.F: version 10 EB 74 Annex 4 and EB 69 annex 5 	OK	OK
B.3.4 Has CME defined, where applicable, sampling plans for each of the combinations separately in accordance with the guidelines in section III. B of PoA Standard as well as any approved guidelines/standard from the Board pertaining to sampling and surveys?	PoA- Stand	27	The section B.3 of the webhosted SSC-PoA-DD describe the sampling criteria for the PoA in accordance with the following <ul style="list-style-type: none"> AMS II.F: version 10 EB 74 Annex 6 and EB 69 Annex 5 	OK	OK
B.3.5 Where combinations of technologies/measures and/or methodologies are applied for a PoA, is it demonstrated that there are no cross effects between the technologies/measures applied?	PoA- Stand	28	The cross effects between the technologies/measures applied are not correctly described in the PoA DD.	CAR 14	--
B.3.6 Where such cross effects do exist, has the CME proposed methods to account for such cross effects using the "Procedures for requests to the executive board for deviation from an approved methodology" so as to ensure that the calculation of emission reductions is accurate?	PoA- Stand	28	Please refer CAR 14 above	Refer CAR 14	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.3.7 Does the proposed PoA belong to the following eligible situations for applying combinations of technologies/measures and/or methodologies?	PoA- Stand	29			
B.3.7.1 The same combination of technologies/measures under the same combination of methodologies applied consistently in each and every CPA of a PoA	PoA- Stand	29 (a)	The B.3 section of the webhosted SSC-PoA-DD clearly state the combination of methodology and technology measure applicable under the PoA applicable for each CPA. AMS II F is applicable for all the technology combinations for each CPA under the PoA	OK	OK
B.3.7.2 A single methodology is consistently applied in each CPA of a PoA but using multiple technologies/measures	PoA- Stand	29 (b)	The B.3 section of the webhosted SSC-PoA-DD clearly state the combination of methodology and technology measure applicable under the PoA applicable for each CPA. AMS II F is applicable for all the technology combinations for each CPA under the PoA	OK	OK
B.3.7.3 A principle technology/measure is applied consistently in each CPA using multiple combinations of methodologies	PoA- Stand	29 (c)	The B.3 section of the webhosted SSC-PoA-DD clearly state the combination of methodology and technology measure applicable under the PoA applicable for each CPA. AMS II F is applicable for all the technology combinations for each CPA under the PoA	OK	OK
B.3.7.4 Combinations of technologies/measures and methodologies vary across CPAs of a PoA.	PoA- Stand	29 (d)	The B.3 section of the webhosted SSC-PoA-DD clearly state the combination of methodology and technology measure	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			applicable under the PoA applicable for each CPA. AMS II F is applicable for all the technology combinations for each CPA under the PoA		
B.3.7.5 In case of (B.3.7.4) above, has the CME demonstrated that the implementation of the activities is integrated through the design of the programme?	PoA- Stand	29 (d)	Yes, in the Section B.3 the CME has demonstrated that the implementation CPAs is integrated through design of programme	OK	OK
B.3.7.6 In case of (B.3.7.4) above, is it confirmed that the intended sectoral scopes and the combinations of methodologies intended for implementation are known ex ante, and no revisions of PoA documentation are foreseen for the duration of one crediting period, i.e. seven or 10 years of PoA implementation?	PoA- Stand	29 (d)	Not applicable, as sectoral scope may not change due to change in the technology.	OK	OK
B.3.8 Has the CME optionally used the "Procedure for the submission and consideration of request for clarification on the application of approved small scale methodologies" (EB 34, annex 6) to seek clarifications on cross effects in the proposed combinations?	PoA- Stand	30	<i>In B.3 section of webhosted SSC-PoA-DD</i> , CME has described the procedure for seeking the clarification on the cross effects of combinations. In accordance with the para 30 of PoA standard. It is described that clarification is not required.	OK	OK
B.3.9 Is the compliance with the SSC threshold of a CPA met by following the "General Guidelines to SSC CDM methodologies"?	PoA- Stand	31	The compliance of SSC threshold for CPA in accordance with "General Guidelines to SSC CDM methodologies" is defined in the B.3 section of webhosted SSC-PoA-DD. The same is described as not exceeding 60 GWh.	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
C Management system					
C.1.1 Is a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies provided?	PoA- Stand	17(a)	The management system depicted in the C section of the webhosted SSC-PoA-DD defines that the CME would be involved in the process of CPA inclusion	OK	OK
C.1.2 Are records of arrangements for training and capacity development for personnel provided?	PoA- Stand	17(b)	CME has not provided the records of arrangements for training and capacity building for the PoA	CAR 15	--
C.1.3 Are procedures for technical review of inclusion of CPAs described?	PoA- Stand	17(c)	The procedure for the technical review for CPA inclusion is not defined in the C section of webhosted SSC-PoA -DD	CAR 16	--
C.1.4 Is a procedure to avoid double counting described?	PoA- Stand	17(d)	The Procedure to avoid double counting is defined in the section C of webhosted SSC-PoA -DD	OK	OK
C.1.5 Are records and documentation control process for each CPA under the PoA described?	PoA- Stand	17(e)	The documentation process for all the records for each CPA under the PoA is not described in the <i>section C of webhosted SSC-PoA -DD</i>	CAR 17	--
C.1.6 Are measures for continuous improvements of the PoA management system described?	PoA- Stand	17(f)	The measures for the continuous improvement of PoA management system are described in the <i>section C</i> of webhosted SSC-PoA -DD	OK	OK
C.1.7 Is there any other relevant elements indicated?	PoA- Stand	17(g)	No	OK	OK
D Duration of PoA					
D.1 Start date of PoA					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
D.1.1 Is there a description of how the start date was determined?	DD		In the D.1 section of webhosted SSC-PoA – DD the description for start date of the PoA is not correctly stated	CAR 18	--
D.2 Length of the PoA					
D.2.1 Is the length of the PoA stated with a maximum total length of 28 years?	DD VVS	197	Yes the length of PoA is stated as 28 years 0 months	OK	OK
E Environmental impacts					
E.1 Level at which environmental analysis is undertaken					
E.1.1 Is it indicated whether the environmental analysis is performed at the PoA and/or the CPA level?	DD VVS PS	199 165	The project activity does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India, 2006. Hence EIA is not required	OK	OK
E.1.2 Is the choice of level at which the environmental analysis is undertaken justified?	DD		The project activity does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India, 2006. Hence EIA is not required	OK	OK
E.2 Analysis of the environmental impacts					
E.2.1 Is a summary of the analysis of the environmental impacts and references to all related documentation in accordance with applicable provisions related to environmental impacts for	DD		The description provided in the E.2 section of webhosted SSC-PoA –DD is not explained correctly	CAR 19	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
PoAs in the Project Standard provided?					
F Local stakeholder comments					
F.1 Solicitation of comments from local stakeholders	VVS	201			
F.1.1 Is it indicated whether the local stakeholder consultation process is performed at the PoA and/or the CPA level?	DD PS	166	Yes the F.1 section of webhosted SSC-PoA-DD mentions that "Local stakeholder consultation is done at SSC-CPA level"	OK	OK
F.1.2 Is the choice of level at which the local stakeholder consultation is undertaken justified?	DD		The section F.1 of webhosted SSC-PoA-DD mentions that Local stakeholder consultation is done at SSC-CPA level	OK	OK
F.1.3 Is there a description of the process by which comments from local stakeholders were invited and compiled?	DD		The process by which the comments from local stake holders were invited is clearly described in the section F.1 of webhosted SSC-PoA-DD	OK	OK
F.2 Summary of comments received	VVS	201			
F.2.1 Are stakeholders that have made comments identified?	DD		In the section F.2 of webhosted SSC-PoA-DD the stakeholders that have made comments are not identified in accordance with the guidelines to complete the SSC-PoA-DD	CAR 20	--
F.2.2 Is a summary of these comments provided?	DD		Yes the summary of comments is provided in the F.2 of webhosted SSC-PoA-DD	OK	OK
F.3 Report on consideration of comments received	VVS	201			
F.3.1 Is information demonstrating that all comments received have been considered provided	DD		The comments mentioned in section F.3 of webhosted SSC-PoA-DD is not consistent	CAR 21	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			with the F.2 section		
G G. Approval and authorization					
G.1 General					
G.1.1 Is it indicated whether the letter(s) of approval from Party(ies) which wishes to be involved in the PoA, is available at the time of submitting the SSC-PoA-DD to the validating DOE?	DD		The G.1 section of the webhosted SSC-PoA-DD is not in accordance with the guidelines to complete the PoA DD CME has not provided the host country approval letter for validation.	CAR 22	--
G.2 Approval			COUNTRY A (India)	COUNTRY B (Not applicable)	
G.2.1 Has the coordinating/managing entity obtained a letter of approval from the DNA of each Party involved in the proposed PoA confirming that: (a) The Party is a Party of the Kyoto Protocol (b) Participation in the proposed PoA is voluntary (c) In case of the host Party, the proposed PoA assists the host Party in achieving sustainable development	VVS PS	39&51 169&170	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	N.A. (CAR 22)	
G.2.2 Is(are) the letter(s) of approval unconditional with respect to (G.2.1) above?	VVS	40	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	N.A. (CAR 22)	
G.2.3 Has(ve) the letter(s) of approval been issued by the respective Party's DNA? If there is doubt with	VVS	41,42	The CME has not provided the <i>host</i>	N.A. (CAR 22)	

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
respect to (G.2.1) above, was it verified with the DNA that the letter of approval is valid for the proposed PoA under validation?			<i>country</i> approval letter for validation. Please refer CAR 22		
G.3 Authorization			The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.1 Has each project participant been authorized by at least one Party involved in a letter of approval?	VVS PS	45 172	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.2 Is the information in tabular form in the SSC-PoA-DD consistent with the contact information for project participants provided?	VVS	46	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.3 Are any entities other than those approved as project participants included in the SSC-PoA-DD?	VVS	47	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.4 Has the approval of participation issued from the relevant DNA? And if in doubt, was it verified with the DNA that the approval of participation is valid for the proposed CDM project participants?	VVS	48	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.5 Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each host Party?	PS	171	The CME has not provided the <i>host country</i> approval letter for validation. Please refer CAR 22	Refer CAR 22	-
G.3.6 Is CDM project participation recorded only at the PoA level while the operators of individual CPAs	PS	173	The CME has not provided the <i>host country</i>	Refer CAR 22	-

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
are not required to be project participants?			approval letter for validation. Please refer CAR 22		
Part II. Generic component project activity (CPA)			Repeat all of Part II for each of the combination of technologies/measures and/or methodologies.		
A General description of a generic CPA					
A.1 Purpose and general description of generic CPAs					
A.1.1 Is a description of each generic CPA within the PoA provided?	DD		The description of generic CPA is not clearly described in the Part II A.1 section of webhosted SSC-PoA-DD	CAR 23	--
B Application of a baseline and monitoring methodology					
B.1 Reference of the approved baseline and monitoring methodology(ies) selected					
B.1.1 Is exact reference (number, title, version) of the selected methodology or multiple methodologies indicated?	DD VVS PS	74 37	Yes the Part II B.2 section of webhosted SSC-PoA-DD mentions "AMS II. F version 10:	OK	OK
B.1.2 Are there any tools and other methodologies to which the selected methodology refers?	DD VVS PS	74 37	The tools and other methodologies referred by the AMS II F version 10 are not mentioned in the Part II B.2 section of webhosted SSC-PoA-DD	CAR 24	--
B.1.3 Is it confirmed that the selected methodology (ies) is(are) approved for application to CPAs under PoA	DD		Yes the methodology was approved by EB in its 66 th meeting	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
s by the Board?					
B.2 Application of methodology(ies)					
B.2.1 Is the choice of the selected methodology (ies) justified by showing that each generic CPA meets each applicability condition of the methodology(ies)?	DD VVS PS	76 38	Refer to Table-2	--	--
B.2.2 If applicable, is a general description of the sampling plan provided?	DD		<p>The general description of sampling plan is provided in the <i>Part II B.2 section of webhosted SSC-PoA-DD</i></p> <ul style="list-style-type: none"> • “Standard for sampling and surveys for CDM project activities and programme of activities”, version 04.0, Annex 6, EB 74 and • “Guidelines for sampling & surveys for CDM project activities and programme of activities”, version 02.0, Annex 5, EB 69. 	OK	OK
B.2.3 Is it demonstrated that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard?	DD PS	81-84	the Part II B.2 section of webhosted SSC-PoA-DD does not demonstrate the qualification of CPA as Type I,II and /or III during every year of crediting period in accordance with applicable provisions for project activity eligibility in the Project standard (para 81 annex 5 EB 65 and annex 30 EB 67)	CAR 25	--
B.2.4 Is documentation that has been used as a basis of	DD				

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
justification explained or include in Appendix 3? Are references provided?					
B.3 Sources and GHGs					
B.3.1 Are the sources and GHGs included in each generic CPA boundary described?	DD VVS PS	82 39	Yes the Part II B.3 section of webhosted SSC-PoA-DD tabulates the sources and GHG`s included in the CPA boundary	OK	OK
B.3.2 In cases where the selected methodology(ies) allows project participants to choose whether a source or gas is to be included in the CPA boundary, is the choice explained and justified?	VVS PS	84 40	The selected methodology does not provide the options for selection of GHG`s	OK	OK
B.3.3 Where possible, is a flow diagram physically delineating each generic CPA presented?	DD		The flow diagram is provided in section B.3 “	OK	OK
B.3.4 Are all the equipment, systems and flows of mass and energy included in the flow diagram?	DD		Yes	OK	OK
B.3.5 Are emissions sources and GHGs which included in the project boundary and the data and parameters to be monitored indicated in the diagram?	DD		The flow diagram depicted in Part II B.3 section of webhosted SSC-PoA-DD include emissions sources and GHGs which are included in the project boundary and the data and parameters to be monitored, in accordance with annex 30 of EB 67	OK	OK
B.4 Description of baseline scenario					
B.4.1 Is it described how the baseline scenario is identified for each generic CPA?	DD		The Part II B.4 section of webhosted SSC-PoA-DD does not clearly describe the identification of baseline scenario in accordance with the annex 30 of EB 67	CAR 26	--
B.4.2 Is it explained how the baseline scenario is	DD		The Part II B.4 section of webhosted SSC-	CAR 27	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
established in accordance with the selected methodology(ies) and applicable provisions for establishment and description of baseline scenarios in the Project standard?	VVS PS	88 41	PoA-DD does not clearly describe identification of baseline in accordance with applied methodology AMS II F version 10		
B.4.3 Do the project participants follow the “Guidelines on the consideration of suppressed demand in CDM methodologies” when establishing the baseline scenario, where future anthropogenic emissions by sources are projected to rise above current levels due to the specific circumstances of the host Party?	PS	42	The CME has not followed the the “Guidelines on the consideration of suppressed demand in CDM methodologies” while establishing the baseline scenario. CME has not justified the selection of baseline scenario in accordance with annex 2 of EB 68 in Part II B.4 section of webhosted SSC-PoA-DD	CAR 28	--
B.4.4 Do the project participants take into account national and/or sectoral policies including E+/E-policies when establishing the baseline scenario?	VVS PS	93 43-45	The CME has not considered the national and/or sectoral policies including E+/E-policies when establishing the baseline Scenario in Part II B.4 section of webhosted SSC-PoA-DD	CAR 29	--
B.4.5 Where the procedure in the selected methodology (ies) involves several steps, is it described how each step is applied and is the outcome of each step transparently documented?	DD		The applied methodology AMS II F version 10 does not refer to any tool or several steps for the identification of baseline scenario	OK	OK
B.4.6 Are key assumptions and rationales explained and justified?	DD		The key assumptions and the rationale used for determining the baseline scenarios are not justified in the Part II B.4 section of webhosted SSC-PoA-DD	CAR 30	--
B.4.7 Are all data used to establish the baseline scenario (variables, parameters, data sources, etc.)	DD		Variables, parameters, data sources for establishment of baseline scenario is not	CAR 31	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
provided and explained?			described and explained in the Part II B.4 section of webhosted SSC-PoA-DD		
B.4.8 Are all relevant documentation and/or references provided?	DD		Please refer CAR 37 above	(CAR 31)	--
B.4.9 Is a transparent description of the baseline scenario provided?	DD VVS PS	92 46	The description of the technology of the baseline scenario is provided in the Part II B.4 section of webhosted SSC-PoA-DD	OK	OK
B.5 Demonstration of eligibility for a generic CPA					
B.5.1 Is it demonstrated how each generic CPA meets the eligibility criteria of the PoA including confirmation of additionality of the generic CPA for its inclusion into the PoA?	DD		The eligibility criterion mentioned in the Part II B.5 section of webhosted SSC-PoA-DD are not consistent with the eligibility conditions mentioned in the section B.2 of part I	CAR 32	--
B.6 Estimation of emission reductions of a generic CPA					
B.6.1 Explanation of methodological choices					
B.6.1.1 Is it explained how the methods or methodological steps, in the selected methodology, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to each generic CPA?	DD VVS PS	97 51	The Part II section B.6.1 of webhosted SSC-PoA-DD <ul style="list-style-type: none"> calculations for leakage emissions are not in accordance with the AMS II F version 10. Emission reduction for fossil fuel usage not mentioned 	CAR 33	--
B.6.1.2 Is it clearly stated which equations will be used in calculating emission reductions?	DD VVS	97	The equations used for the calculating emission reductions are not cross	CAR 34	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	PS	50-51	referenced with the methodology in the Part II B.6.1 section of webhosted SSC-PoA-DD		
B.6.2 Data and parameters that are to be reported ex-ante					
B.6.2.1 Is a compilation of information on the data and parameters that are not monitored during the crediting period but are determined before the validation and remain fixed throughout the crediting period included?	DD VVS PS	98 52	In Part II section B.6.2 of webhosted SSC-PoA-DD the data parameters not monitored during the crediting period are not in accordance with AMS II F version 10	CAR 35	--
B.6.2.2 Is it ensured that data that become available only after the registration/inclusion of the CPAs in the PoA (e.g. measurements after the implementation of the CPAs in the PoA) should not be included here but in the table in section B.7?	DD		Please refer CAR 35 above	(CAR 35)	--
B.6.2.3 The compilation of information may include data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.), is the compilation in compliance with this?	DD		Please refer CAR 35 above	(CAR 35)	--
B.6.2.4 Data that are calculated with equations provided in the selected methodology(ies) or default values specified in the methodology(ies) should not be included in the compilation, is the compilation in compliance	DD		Please refer CAR 35 above	(CAR 35)	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
with this?					
B.6.2.5 For each piece of data or parameter, is the table in SSC-PoA-DD completed, following these instructions below:					
B.6.2.5.1 "Value(s) applied": Provide the value applied. Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 4. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used	DD		Yes the value applied for the parameters are presented in the tabular form	OK	OK
B.6.2.5.2 "Choice of data": Indicate and justify the choice of data source. Provide clear and valid references and, where applicable, additional documentation in Appendix 4	DD		Yes the choice of data is indicated with justification for the ex-ante fixed parameters	OK	OK
B.6.2.5.3 "Measurement methods and procedures": Where values are based on measurement, include a description of the measurement methods and procedures applied (e.g. which standards have been used), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information can be provided in Appendix 4	DD		Yes the default values from IPCC have been used	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.6.2.5.4 "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage	DD		Yes the purpose of data is mentioned in the table for each parameter	OK	OK
B.6.3 Ex-ante calculations of emission reductions					
B.6.3.1 Is a transparent ex ante calculation of project emissions, baseline emissions(or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the selected methodology provided?	DD		Not applicable. The sample ex-ante calculations for the first real case CPA are provided in the generic CPA format. The same should be applied for the each CPA separately with different values used therein. However, equations used for baseline and project emissions are for single crop only, however for multiple crops how it would be used is not clear.	CAR 36	--
B.6.3.2 For data or parameters available before validation, are values contained in the table in section B.6.2 of SSC-PoA-DD used?	DD		Not applicable.	Refer CAR 36	--
B.6.3.3 For data/parameters not available before validation and monitored during the crediting period, are estimates for parameters contained in the table in section B.7.1 of SSC-PoA-DD used?	DD		Not applicable.	Refer CAR 36	--
B.6.3.4 If any of these estimates has been determined by a sampling approach, is a description of the sampling efforts provided in accordance with the "Standard for sampling and surveys for	DD		Not applicable.	Refer CAR 36	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM project activities and programme of activities"?					
B.6.3.5 Is it documented how each equation is applied, in a manner that enables the reader to reproduce the calculation?	DD		Not applicable.	Refer CAR 36	--
B.6.3.6 Where relevant, are additional background information and/or data in Appendix 4, including relevant electronic spreadsheets provided?	DD		Not applicable.	Refer CAR 36	--
B.6.3.7 Is a sample calculation for each equation used provided, substituting the values used in the equations?	DD		Not applicable.	Refer CAR 36	--
B.7 Application of the monitoring methodology and description of the monitoring plan					
B.7.1 Data and parameters to be monitored by each generic CPA					
B.7.1.1 Is specific information on how the data and parameters that need to be monitored would actually be collected during monitoring included?	DD		Yes the information on how the data and parameters that need to be monitored would actually be collected during monitoring are included	OK	OK
B.7.1.2 In case of data that are determined only once for the crediting period but that will become available only after registration/inclusion of the CPAs in the PoA, are they included here?	DD		Not applicable	OK	OK
B.7.1.3 For each piece of data or parameter, is the	DD				

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
table in SSC-PoA-DD completed, following these instructions below:					
B.7.1.3.1 "Source of data": Indicate the source(s) of data that will be used for the CPAs in the PoA (e.g. which exact national statistics). Where several sources may be used, justify which data sources should be preferred	DD		<p>In Part II B.7.1 section of webhosted SSC-PoA-DD, Source of data mentioned for the following parameters is not in accordance with the AMS II F version 10</p> <ul style="list-style-type: none"> • Yp • ECp • ECb 	CAR 37	--
B.7.1.3.2 "Value(s) applied": The value applied is an estimate of the data/parameter that will be monitored during the crediting period, but is used for the purpose of calculating estimated emission reductions. To report multiple values referring to the same data or parameter, use one table. If necessary, reference(s) to electronic spreadsheets may be used	DD		The actual values will be mentioned in the CPA DD. However, why values are mentioned in the generic CPA DD is not clear.	CL-5	--
B.7.1.3.3 "Measurement methods and procedures": Where data or parameters are to be monitored, specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals	DD		In Part II B.7.1 section of webhosted SSC-PoA-DD the measurement methods and procedure for all the parameters are not described in accordance with AMS II F version 10	CAR 38	--

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.7.1.3.4 "QA/QC procedures": Describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable	DD		In Part II B.7.1 section of webhosted SSC-PoA-DD the "QA/QC procedures": for all the parameters are not described in accordance with AMS II F version 10 and annex 30 EB 67 for calibration procedure and accuracy of meters.	CAR 39	--
B.7.1.3.5 "Purpose of data": Choose one of the following: (i) Calculation of baseline emissions; (ii) Calculation of project emissions; (iii) Calculation of leakage.	DD		In Part II B.7.1 section of webhosted SSC-PoA-DD the "Purpose of data" for all the parameters are described in accordance with AMS II F version 10 and annex 30 EB 67	OK	OK
B.7.1.4 Is there any relevant further background documentation provided in Appendix 5?	DD		No information is provided in the appendix 5	OK	OK
B.7.2 Description of the monitoring plan for a generic CPA					
B.7.2.1 Is the monitoring plan for a generic CPA developed in accordance with the approved monitoring methodology(ies), including applicable tool(s)?	DD VVS PS	198 156	.	CAR 40	
B.7.2.2 If data and parameters monitored in section B.7.1 of the SSC-PoA-DD are determined by a sampling approach, is a description of the sampling plan provided in accordance with the recommended outline for a sampling plan in the "Standard for sampling and surveys for	DD PS	53	Yes, sampling is described in line with EB 74 Annex 6	OK	OK

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM project activities and programme of activities”?					
B.7.2.3 Is there any relevant further background information provided in Appendix 5?	DD		No information is provided in the Appendix 5	OK	OK
Part III Others					
A Appendix					
A.1 Appendix 1: Contact information on entity/individual responsible for the PoA					
A.1.1 For each organization listed in section A.4 of the SSC-PoA-DD, is the table in SSC-PoA-DD completed, with the following mandatory fields: Organization, Street/P.O. Box, City, Postcode, Country, Telephone, Fax and E-mail, and Name of contact person?	DD		Yes the appendix 1 contains the details as of all the organizations listed in section A.4 of webhosted SSC-PoA-DD. However, all the details are not filled in. Pl. refer CAR 02	refer CAR 02	--
A.2 Appendix 2: Affirmation regarding public funding					
A.2.1 If applicable, is the affirmation obtained from Parties included in Annex I providing public funding to the PoA attached?	DD		No public funding is involved in the PoA. Refer CAR 06	refer CAR -6	--
A.3 Appendix 3: Application of methodology(ies)					
A.3.1 Is there any further background information on the applicability of the selected methodology(ies) provided?	DD		No background information on the applicability of methodologies is provided in the appendix 3 of webhosted SSC-PoA-DD	OK	OK
A.4 Appendix 4: Further background information on					

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ex ante calculation of emission reductions					
A.4.1 Is there any further background information on the ex-ante calculation of emission reductions provided? This may include data, measurement results, data sources, etc.	DD		No background information on the ex-ante calculation of emission reductions is provided in the appendix 4 of webhosted SSC-PoA-DD	OK	OK
A.5 Appendix 5: Further background information on the monitoring plan					
A.5.1 Is there any further background information used in the development of the monitoring plan? This may include tables with time series data, additional documentation of measurement equipment, procedures etc.	DD		No background information on the development of the monitoring plan is provided in the appendix 5 of webhosted SSC-PoA-DD	OK	OK
B Global Stakeholder Consultation					
B.1.1 Is there any comment on the SSC-PoA-DD of the proposed project activity received during Global Stakeholder Consultation process?	VVS	34	No comments received from global stakeholders. During the webhosted period of 19 Oct 12 - 17 Nov 12	OK	OK
B.1.2 If yes, have all comments been taken into account during the validation of the proposed project activity?	VVS	35	Not applicable, No comments received from global stakeholders. During the webhosted period of 19 Oct 12 - 17 Nov 12	OK	OK
B.1.3 If comments indicate that the proposed project activity does not comply with the CDM requirements and are not substantiated, is there any further clarification from the entity providing the comment?	VVS	36	Not applicable, No comments received from global stakeholders. During the webhosted period of 19 Oct 12 - 17 Nov 12	OK	OK
B.1.4 If yes, how comments received have been taken	VVS	36	Not applicable, No comments received from	OK	OK

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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
due account?			global stakeholders. During the webhosted period of 19 Oct 12 - 17 Nov 12		
B.1.5 If no, are the comments as originally provided proceeded to assess?	VVS	36	Not applicable, No comments received from global stakeholders. During the webhosted period of 19 Oct 12 - 17 Nov 12	OK	OK
C Modalities of Communications (MoC)					
C.1.1 Has the corporate identity of all project participants and focal points included in MoC statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories been validated by:	VVS	53	The Modalities of Communications (MoC) is not submitted for validation by the CME.	CAR 41	--
C.1.1.1 Directly checking evidence for corporate, personal identity and other relevant documentation; or	VVS	54(a)	Please refer CAR 41	(CAR 41)	--
C.1.1.2 Notarized documentation; or	VVS	54(b)	Please refer CAR 41	(CAR 41)	--
C.1.1.3 Written confirmation from the project participant or the coordinating/managing entity that all corporate and personal details, including specimen signatures, are valid and accurate.	VVS	54(c)	Please refer CAR 41	(CAR 41)	--
C.1.2 If (C.1.1.3) above was chosen, is it ensured that the MoC statement is received from the Coordinating/ managing entity?	VVS	55	Please refer CAR 41	(CAR 41)	--
C.1.3 If (C.1.1.3) above was chosen, is it ensured that	VVS	56	Please refer CAR 41	(CAR	--

VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant?				41)	
C.1.4 If it is unable to validate the requirements by applying C.1.1.1 to C.1.1.3 above, are any further validation activities performed?	VVS	57	Please refer CAR 41	(CAR 41)	--
C.1.5 Has the latest version of the form "Modalities of Communication statement" (F-CDM-MOC) been used?	VVS PS	60(a) 72	Please refer CAR 41	(CAR 41)	--
C.1.6 Is the information required as per F-CDM-MOC, including its annex 1, correctly completed?	VVS PS	60(b) 72	Please refer CAR 41	(CAR 41)	--
C.1.7 Do the project participant's authorized signatories signing the F-CDM-MOC correspond to the project participant's authorized signatories included in F-CDM-MOC, annex 1?	VVS PS	60(c) 174	Please refer CAR 41	(CAR 41)	--
C.1.8 Is it confirmed that the CME is either the sole or a joint focal point for each scope of authority?	PCP	29	Please refer CAR 41	(CAR 41)	--
C.1.9 Is it confirmed that the number of joint focal points is limited to five, or equal to the number of host parties if greater than five?	PCP	29	Please refer CAR 41	(CAR 41)	--

Table 2 Methodology Protocol

{Not applicable – Already covered in the above table}

Table 2-1 Tools Protocol

{ Not applicable – Already covered in the above table }

Table 2-2 Guidelines Protocol

{ Not applicable – Already covered in the above table }

VALIDATION REPORT

Table 3 Resolution of Corrective Action /Clarification / Forward Action Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>CL-1</p> <p>The framework developed by the CME for the implementation of PoA and inclusion of CPA implementers in the PoA is not clear. It is not clearly described who will/can be the CPA implementer . It is also described in the PoA DD under title “Investments” that “Subsidy scheme promoted by Central or State Government may be utilized by CPA implementer to implement the project”. Pl. clarify what is the subsidy available while decision taken.</p>	A.2.2	<p>The description of overall framework of CME is now clearly described under PoA DD section A.2. The CME (Mahindra & Mahindra Ltd, Farm Equipment Sector) and ‘EPC Industrie Ltd.’ is the CPA implementer and this is now clarified in the Section A.2 of the PoA-DD.</p> <p>The particular referred sentence has been deleted now. There is no subsidy scheme promoted by central or state government which will be utilized by CPA implementer to implement the project. The subsidies are available and may be availed by the individual CPA users/ owners of MIS instruments i.e. farmers. This does not have any financial benefit to the CME and the CPA implementer since these schemes are on-going from 2005. Please refer attachment ‘PoA CL 1 - NABARD micro irrigation subsidy description’.</p>	<p>As clarified by the PP, the description of overall framework of CME is now clearly described under PoA DD section A.2. it is also clarified that the CME is Mahindra & Mahindra Ltd, (Farm Equipment Sector) and ‘EPC Industrie Ltd.’ is the CPA implementer. This is now clearly described in the Section A.2 of the PoA-DD.</p> <p>Also, the ‘subsidy’ related sentence is now removed from the PoA DD. It is also clarified that the subsidies are available and may be availed by the individual CPA users/ owners and this does not have any financial benefit to the CME and the CPA implementer since these schemes are on-going</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>from 2005. For the subsidy part, the PP has clarified that this is available to the beneficiary only not to the CME or the CPA implementer. This was verified from the document "attachment 'PoA CL 1 - NABARD micro irrigation subsidy description' page 1, which describes that as a policy to encourage use of such systems, the Govt. of India announced the Centrally sponsored Micro Irrigation Scheme during 2005-06. The total cost of the scheme is being shared between Central Government, the State Government and the beneficiary either through his/her own resources or soft loan from financial institutions in the ratio of 40%, 10% and 50%</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
			respectively. Bankable schemes have to be formulated for availing bank loans. Having reviewed this, the validation team accepts that the subsidy is available to the individual farmers not to the CME or CPA implementer. Having reviewed this, and the corrections in the revised POA DD, the validation team closed this CL.
CL-2 The justification related to voluntary action of the Co-coordinating / Managing entity is not clearly described.		PP has now given the proper justification voluntary action of the Co-coordinating / Managing entity in the PoA DD section A.2. The proof for the same has now been submitted to the DOE in Attachment 1.	It is clarified by the PP in the section A. 2 of the revised PoA DD, that there is no mandatory requirement in India to enforce the deployment of micro irrigation system (MIS) for the purpose of crop/farm irrigation. Lack of skilled man power, material and know-how for proper running of the system hampers in adoption of MIS. Poor extension and training

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>facilities to farmers is another major reason that use of MIS did not spread in India. Also. The CME has provided an undertaking in this regard to the validation team.</p> <p>It is also clarified that the share of area under MIS from the total cultivated area is less than 1% in India in 2012. The PP has provided data from a paid web site www.indiastat.com and refers to Loaksabha question answer. Having reviewed this, the validation team finds this correct, hence, closed the CL.</p>
CL-3 The contribution of sustainable development is described in accordance with the indicators stipulated by the host country (NCDMA and MoEF) India, however, the same is not correctly described. Ex. 1) In the "Economic well being" the saving of time is duplicated in point,	A.2.6	<p>The correction has been made in the description of sustainable development. Please refer revised PoA-DD section A.2 for both the identified points.</p> <p>1) The duplicated point is removed from the contribution to Economic well being.</p>	<p>1) In the revised PoA DD, in Section A.2, the duplicated point is</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>also it describes about less water discharge out of ground water and hence water table will not go to deeper level. water table</p> <p>2) In the technological well being it is described that "The CDM project activity will lead to transfer of environmentally safe and sound technologies that are comparable to best" pl. clarify above sentences.</p>		<p>2) It is clarified that PoA leads to implementation of environmentally safe and sound technologies. The micro irrigation technology used is comparable with the other standard products in the market and complies with the applicable standards (e.g. Plain Laterals comply with the requirements of IS:12786 *****).</p> <p>Response 2: One example is given to show that where applicable, the manufactured components of</p>	<p>removed from the contribution to economic well being, hence, this point is closed.</p> <p>2) in the revised PoA DD it is clarified that the PoA leads to implementation of environmentally safe and sound technologies. However, how The micro irrigation technology used is comparable with the other standard products in the market and complies with the applicable standards (e.g. Plain Laterals comply with the requirements of IS:12786), is not clear, please clarify. This point is not closed. CL-4 is not closed.</p>

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VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		MIS planned to be used in this PoA (from the first real case CPA implementer) comply with national standards. This is to demonstrate evidence to statement under technological wellbeing that 'technology is comparable to best' available other products in market that comply with national standards. A footnote is also given here in above response where web link from CPA implementer's web page shows information as referred here.	DOE response 2: The PP has clarified that the manufactured components of MIS are planned to be used in this PoA, which will comply with the National Standard, hence, this point is closed. All the points of CL are closed, hence, this CL is closed.
CL-5 It is written that, the actual values will be mentioned in the CPA DD. However, why values are mentioned in the generic CPA DD is not clear.	B.7.1.3.2	Actual values will be mentioned only in the CPA DD. PP has now removed the values from generic DD.	The revised PoA DD is corrected and now it does not describe values. The same is to be described in the actual real cased CPA DD. Having reviewed the corrections, validation team closed the CL.
CAR-1 The policy/measure of the POA is not clearly described in the section A.2 of the webhosted SSC-PoA-DD.	A.2.1	Policy measures or stated goal of PoA including the description of programme activity and pre-project scenario has been now mentioned in the section A.2 of the revised PoA-DD.	In the revised POA DD in Section A.2, the <i>Policy/measure or stated goal of the PoA</i> are now clearly described. <i>This states that the goal of the</i>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>PoA is to reduce the GHG emissions due to the excess use of electricity in irrigation systems in India by introducing Micro irrigation system (MIS) such as Drip and Sprinkler irrigation system. It is also stated that the introduction of MIS will be facilitated by the CME. The CME will promote the installation of Micro irrigation system to the farmers in India and adopting efficient means of irrigation. CME would devise financial mechanisms such as available at discounted cost and carbon finance to make the micro irrigation systems accessible to the farmers. Having reviewed this, the validation team has closed the CAR.</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
CAR-2 The CME identified in the section A.4 of webhosted SSC-PoA-DD is consistent with the appendix 1, however, contact information on entity/individual responsible for the PoA provided in Appendix 1 are not filled in completely.	A.4.1	The contact information on entity/individual responsible for the PoA provided in Appendix 1 is now filled completely.	In the revised PoA DD, the name of the CME Mahindra & Mahindra Ltd Farm Equipment sector (private entity) is now consistent with the Appendix 1's detail along with its contact details, hence, this CAR is closed.
CAR-3 The technology measures mentioned in the Section A.6 of the SSC-PoA-DD are not correctly described.	A.6.1	CME has now mentioned technology used in baseline scenario and project scenario separately. PP has also mentioned the components used in drip as well as in sprinkler irrigation. Please refer section A.6 of the PoA-DD.	The CME has now described the technology to be used in the project activity. The same is Micro irrigation activity. This consists of drip irrigation system. The same is mainly of two types, 3) Surface drip irrigation system and 4) Sub surface drip irrigation system. and 2) Sprinkler irrigation system. The Sprinkler systems are classified into the two major types on the basis of the arrangement for spraying irrigation water. 1. Rotating head or revolving

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			sprinkler system. 2. Perforated pipe system. Having reviewed the corrections/revision in the PoA DD, the validation team closed this CAR.
CAR-4 The CME has not justified how the technology measures described in the A.6 of webhosted SSC-PoA-DD are applicable in accordance with the eligibility criteria.	A.6.2	<p>The SSC-PoA-DD is now updated to discuss required information in line with the 'Guidelines for completing the programme design document form for small-scale CDM programmes of activities'.</p> <p>Response 2:</p> <p>The PoA-DD, Section A.6 is updated for following the referred guidance.</p>	<p>In the revised PoA DD, the PP has not followed the PoA Completeness guideline EB 67, Annex 30 for "for application of selected baseline and monitoring methodology for small-scale project activities in the Project standard", hence, this CAR is not closed.</p> <p>DOE Response 2:</p> <p>In the revised PoA DD in Section A.6, the PP has now explained the technologies to be used in the PoA. The same is as follows :</p> <p>1) Drip Irrigation: Drip irrigation system is</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>mainly of two types,</p> <ul style="list-style-type: none"> a) Surface drip irrigation system and b) Sub surface drip irrigation system. <p>2) Sprinkler Irrigation: Sprinkler systems are classified into the following two major types on the basis of the arrangement for spraying irrigation water.</p> <ul style="list-style-type: none"> a) Rotating head or revolving sprinkler system. b) Perforated pipe system. <p>Having reviewed this, the validation team closed the CAR.</p>
CAR-5 The description how the applied technology is environmentally safe and sound is not provided in the Section A.6 of webhosted SSC-PoA-DD is	A.6.3	CME has now provided the description of how environmentally safe and sound technology is applied in the revised PoA-DD, section A.6.	In the revised PoA DD under the title "Environmentally safe and sound technology" it is explained that the Micro-irrigation System means an environmentally safe system for the conveyance and distribution of water,

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			chemicals and fertilizer to agricultural fields for crop production +++++. The implementation of this technology does not have any adverse impact on the environment (like direct air/liquid discharge) and saves electricity, it is considered as environmentally safe and sound. The validation team reviewed this and finds that in the project activity with the use of micro irrigation system, the electricity usage would be reduced for the pumping system. Since the pumps are run on grid connections which is fossil fuel dominant, this is correct, hence, the CAR is closed.
CAR-6 In the section A.7 of webhosted SSC-PoA-	A.7.1	CME has now submitted the proof which states that the PoA will not receive any public funding from parties included in Annex 1. Please refer	The CME has provided undertaking/declaration dated 06/08/2012, which

+++++ http://www.ncagr.gov/SWC/costshareprograms/AgWRAP/documents/AgWRAP_micro_irrigation_system_aug2012.pdf

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
DD it is mentioned that "The PoA will not receive any public funding from Parties included in Annex I" However, proof for the same is not provided in order to check this.		Attachment 2.	ensures that it does not use any Official Development Assistance (ODA) and Public Funding from Annex 1 countries. Also, this has been set up as one of the 'eligibility criteria' for the inclusion of CPA to the PoA, having reviewed this, the validation team closed the CAR.
<p>CAR 7</p> <p>Following inadequacies are identified in the Section B.1 related to Demonstration of additionality of the PoA</p> <p>1) Section B.1 describes only three barriers by referring "Guidance on the demonstration of additionality of small-scale project activities", version 09, EB 68. Pl. clarify.</p> <p>2) Under the title "investments" it is described that The investors under this programme will provide the micro</p>	B.1.1	<p>1) CME has now referred to the "Guidelines for demonstrating additionality of Micro scale project activities" also deleted the steps as per "Guidance on the demonstration of additionality of small-scale project activities". Please refer section B.1 of the revised PoA DD.</p> <p>2) The section was mistakenly quoted in the PoA-DD. As the validation team observed that there is no subsidized equipment provided by CME nor it will</p>	<p>1) The PP has adopted the "Guidelines for demonstrating additionality of Micro scale project activities" hence, all the barriers for small scale are now removed from the PoA DD, hence, this point is closed.</p> <p>2) It is now clarified by the PP that under the title "investments" the matter that the investors under</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>irrigation system to the beneficiaries in subsidize cost. There is no return from investment in micro irrigation system and hence the investors are dependent on other financial mechanisms such as carbon revenues to meet their investment cost. However, during the site visit with the local stake holders and with the dealers of the Mahindra & Mahindra EPC company, the validation team observed that there is no subsidized equipment provided by CME, neither it is freely distributed. PI. clarify.</p> <p>3) It is also written in the same section that “Very high working capital requirements causing higher interest cost, the net profit margin of this business remains under check for the manufacturing industry”. This is not clear PI. explain.</p>		<p>be freely distributed to the farmers. The statement is now deleted from the PoA-DD.</p> <p>3) The statement is now deleted from the PoA DD.</p> <p>4) CME has now referred to the “Guidelines for demonstrating additionality of Micro scale project activities” also deleted the</p>	<p>this programme would provide the equipments at subsidized cost was wrongly quoted, which is now deleted from the CME. Having reviewed this correction, the validation team has closed this point.</p> <p>3) The CME/PP has removed the statement ““Very high working capital requirements causing higher interest cost, the net profit margin of this business remains under check for the manufacturing industry”, which was wrongly described in the PoA DD, hence, this point is</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>4) Under the title “Technological barriers” it is described that “though remarkable growth has been achieved over the last 15 years in adopting micro irrigation, its share to the gross irrigated area of the country is only negligible”. Pl. provide the evidences for the same.</p> <p>5) From the description of the barrier analysis in the PoA it is not clear whether CME wants to prove the additionality with one or all the barriers.</p>		<p>steps as per “Guidance on the demonstration of additionality of small-scale project activities” which includes the technology barriers. Please refer section B.1 of the PoA DD</p> <p>5) CME has now given the description of “Guidelines for demonstrating additionality of Micro scale project activities”. As per para (c) of the guideline each CPA implementer has to fulfil both (i) & (ii) condition of the condion ‘b’. CME has now deleted the</p>	<p>closed.</p> <p>4) As explained by the CME/PP, for the additionality demonstration it has followed “micro scale guideline” hence, small scale guidelines steps for demonstration of additionality are removed, hence, the description under “Technological Barriers” is also removed from the PoA DD, which is correct, hence, this point is closed.</p> <p>5) It is explained by the PP/CME that for proving additionality, it has adopted the “Guidelines for demonstrating additionality of Micro scale project activities”.</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>6) If the CME is taking “charges for the project equipment”, why CDM benefit is required is not clear from the additionality demonstration. How this is not ‘business as usual scenario’ pl. explain</p>		<p>additionality guidance used in the small scale project activity.</p> <p>6) The CME and CPA implementer will use carbon revenue for the extra campaigns, trainings and O&M services to spread the use of MIS.</p> <p>Response 2:</p>	<p>As per para (c) of the guideline each CPA implementer has to fulfil both (i) & (ii) condition of the condition ‘b’. Hence, the CME has now deleted the additionality guidance used in the small scale project activity. Having reviewed this, the validation team closed this point.</p> <p>6) The explanation is not clear. It is not clearly explained why the activity; which PP/CME wants to do with the carbon funds should not be treated as marketing/business campaign and hence, “business as usual scenario” Pl. explain. This point is not closed.</p> <p>DOE response 2: As explained by the</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>The additionality demonstration is already presented using 'Guidelines on demonstrating additionality of micro scale project activities'. There is no separate guideline that requires PP to further explain use of carbon funds after additionality demonstration. The utilization of carbon funds as further discussed with the NCDMA is being submitted for reference (please refer folder - CAR 7.6).</p>	<p>PP, the PP has followed microscale guideline for the demonstration of additionality. Also, PP has provided undertakings from the farmers (4 nos. as a sample), which demonstrates that the "ER benefits" are transferred in the name of EPC industrie i.e. first real case CPA implementer. Also, the PP has provided a 'note on benefit sharing with stakeholders' which describes that certified emission reduction's revenue would be used for training programs, purchasing new irrigation system, O & M services, installation of monitoring system, other expenditures etc. having reviewed this, the validation team accepts that the revenue from the</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>7) In the Section B.1 of webhosted SSC-PoA-DD it is not described how the CPA's would not be implemented without CDM benefits.</p>		<p>7) The share of area under MIS from the total cultivated area is less than 1% in India in 2012 (Refer data shared in Folder CAR 7.7). This is in spite of the competitive market, Government initiatives etc. Thus, CME feels there is need for different approach and to help this technology percolate further. The plan for the use of CDM revenue to assist this objective is discussed in the PoA-DD.</p> <p>Response 2: The folder for CAR 7.7 is submitted to DOE now.</p>	<p>certified emission reductions would be for promotion of PoAs, addition of CPAs, hence, closed this point.</p> <p>7) Pl. submit the folder CAR7.7 as described. This point is not closed.</p> <p>DOE Response 2:</p> <p>As explained by the PP, the total area covered under micro irrigation scheme till January 2012 is less than 1% (= {micro irrigation area/ total area} x 100 = 449528.56 ha /14,91,65,000</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>ha = 0.3%). This is sourced from the weblink^{####}, which has sourced the data from the Loksabha (Indian Parliament) unstarred question, hence found authentic. As explained by the PP, that this much area is covered in spite of the competitive market, Government initiatives etc. hence, the CME considers that there is need for different approach for this technology to percolate further. The validation team agrees to this based on the data, hence, closed this point.</p> <p>Conclusion : Point 6 and 7 are not closed, hence, this CAR is not closed.</p>

<http://www.indiastat.com/table/agriculture/2/irrigation/145/625156/data.aspx>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
			DOE Conclusion 2 : Since all the points of CAR are closed, this CAR is closed.
CAR-8 The eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD does not describe 'the condition to avoid double counting of emission reductions', correctly	B.2.2.	CME has now given all the possible naming system in section B.2 which will help the CME to avoid double counting. Also in section C the procedure to avoid the double counting is properly mentioned. CME will also take the written confirmation from CPA implementer that the CPA activity is not a part of any other Programme of Activity or CDM project activity. Also, as the individual MIS system included in the CPA of a PoA is no greater than 1% of the small scale thresholds defined in the methodology (para 10 of "Guidance on Assessment of Debundling for SSC project activities," version 03.1, Annex 13 EB 54), this situation will never arise.	As explained by the CME/PP, the procedure/condition to avoid double counting is now clearly described in the PoA DD in Section B.2. The validation team reviewed the revised PoA DD and finds this as appropriate, hence, closed the CAR.
CAR-9 In the eligibility criteria to check the start date of the CPA following is described. →Date after the commencement of validation of PoA this is not clear. Pl. explain. .	B.2.4	CME has now given the proper justification for the start date of CPA. Each CPA will have the project start date on or after start date of the PoA with documentary evidences. For this the necessary authentic documents will be provided to the CME. Also each installation records will be maintained by CPA implementer.	It is explained by the PP that each CPA will have the project start date on or after start date of the PoA with documentary evidences. For this the necessary authentic documents will be provided to the CME. Also each

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			installation records will be maintained by CPA implementer, hence, the CAR is closed.
CAR 10 The eligibility criteria mentioned in the B.2 section of webhosted SSC-PoA-DD does not clearly mention Applicability of single or multiple methodology	B.2.5	CME has now clearly described that the single methodology will be used by each CPA which is AMS II.F and the applicability criteria for the same is mentioned in the PoA-DD section B.2	In the revised PoA DD, the CME has now clearly described that the single methodology will be used by each CPA which is AMS II.F and the applicability criteria for the same is also now clearly mentioned in the PoA-DD section B.2, hence, this CAR is closed.
CAR 11 The additionality for the combinations of technology measure and methodology are not described in the Section B.2 of webhosted SSC-PoA-DD	B.2.6.3	<p>PP has now included the description in the PoA DD section B.2. Within a given land parcel, there will be only one technology (drip or sprinkler) applied and hence combination of technology measure does not arise here.</p> <p>Response 2: The 'land parcel' means a specific area/ piece of land belonging to one particular farmer and under one particular crop in any CPA. Please note that the choice of drip or sprinkler is decided by the type of crop. So, each CPA will have sub-projects one for land parcels using</p>	<p>Pl. clarify if the 'land parcel' as addressed by the PP means a CPA? This CAR is not closed.</p> <p>DOE Response 2: As explained by the PP, the 'land parcel' means a specific area/ piece of land belonging to one particular farmer and under one particular crop in any CPA.</p>

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		sprinklers and another for that using drip MIS. This statement is mentioned in the Section A.6 of the PoA-DD.	The choice of drip or sprinkler is decided by the type of crop. So, each CPA will have sub-projects i.e. one for land parcels using sprinklers and another for that using drip MIS. This is also explained in the Section A.6 of the PoA-DD having reviewed this, the validation team closed the CAR.
CAR 12 The de-bundling criteria is not correctly described in the eligibility condition mentioned in the section B.2 of webhosted SSC-PoA-DD, in accordance with para 14 of PoA standard.	B.2.12	As mentioned in EB 70, annex 5, para 16 (I) CME has used the latest guideline on assessment of debundling for SSC project activities. A relevant calculation is also presented now in Section.	As explained by the CME, it has used the latest guideline on assessment of debundling as per EB 54, Annex 13, this is in line with EB 70, Annex 5, Para 16(I), hence, the CAR is closed.
CAR 13 The technology measures are not referenced/described correctly in the B.3 section webhosted SSC-PoA-DD in accordance with the Guidelines for completing the programme design document form for small-scale CDM programme of activities (version 02.0)	B.3.1	CME has now modified the section B.3 which is accordance with the "Guidelines for completing the programme design document form for small-scale CDM programme of activities" (version 02.0). Please refer revised PoA-DD.	In the revised PoA DD, it is described that The PoA has adopted application of micro irrigation system in agriculture. The same is evident in the applicability criteria justification provided. However, it is also described

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		<p>Response 2:</p> <p>The PoA-DD is updated to make 20 GWh limit consistent throughout the document.</p>	<p>in the applicability criteria that <i>"The energy savings of each individual CPA will not exceed the equivalent of 60 GWh per year."</i> This is not consistent with other parts of the PoA DD, as it states that PP has adopted micro-scale guidelins, which has limit of estimated emission reduction as 20 GWh per year. Pl. explain. This CAR is not closed.</p> <p>DOE response 2:</p> <p>The CME has corrected the PoA DD according to micro-scale guidelins, this is corrected as 20 GWh per year, which is in line with the micro scale guidelines, having reviewed this, the CAR is closed.</p>
CAR 14 The cross effects between the technologies/measures applied are not correctly described in the PoA DD.	B.3.5	There is no cross effect of technology or methodology as only single methodology i.e. AMS II. F and single technology MIS have been used in the PoA. Even within a given land	Although the PP has explained that only single methodology is applied which is AMS II. F, however,

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		<p>parcel, there will be only one technology (drip or sprinkler) applied and hence there are no cross effects envisaged between technology measures.</p> <p>Response 2: The technology used in the PoA is micro irrigation system. The drip and sprinkler are only the types of equipment under MIS used depending on the crop type. Thus, the technology used is not combination of technologies. Also, as discussed above in 2nd response to CAR 11, the CPAs will separate sub-projects using these different equipment types.</p>	<p>as per the requirement of “EB 65, annex 3, para 28” cross effect if any exists due to the application of multiple small scale technologies i.e. “Combinations of technologies/measures and/or methodologies for a PoA” it is required to demonstrate that there are no cross effects between the technologies/measures applied. Pl. explain this in line with technology also. This CAR is not closed.</p> <p>DOE response 2: As explained by the CME, the technology used in the PoA is a micro irrigation system. There is no combination of technology. Only one technology i.e. Micro irrigation system is used, which includes drip and sprinkler system. Having reviewed the correction, the</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			validation team closed the CAR.
CAR -15 CME has not provided the records of arrangements for training and capacity building for the PoA	C.1.2	An arrangement is in place for the training and capacity building for the implementation of PoA and monitoring of CPAs. An undertaking of this effect is provided to the DOE now. Please refer to file 'Training and capacity building arrangement'.	In response to this, the CME provided a letter dated 17/05/2013 stating that for the training the CME/PP's consultant would make arrangement for the training and capacity building for the implementation of PoA as per the requirements of CDM Guidelines and monitoring of the CPAs thereafter. As the same consultant has prepared the documents for PoA, CPA DDs and has helped in development of PoA, validation team accepts that CME with the help of consultant would be able to impart training and would also support for capacity building for implementation of PoA, hence, the CAR is closed.
CAR-16	C.1.3	The detailed procedure for a technical review	In the revised PoA-DD, the

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The procedure for the technical review for CPA inclusion is not defined in the Section 'C' of webhosted SSC-PoA -DD		has been mentioned in the section C of PoA DD.	PP/CME has now incorporated the procedure for technical review for CPA inclusion in line with the para 17 (c) of EB 65, Annex 3, Procedures for technical review of inclusion of CPA into PoA. Accordingly, The CME will designate appropriately trained technical staff to review the inclusion of CPAs. All CPAs are managed by the CME. The validation team reviewed the procedure and finds this as appropriate, hence, closed the CAR.
CAR 19 The description provided in the E.2 section of webhosted SSC-PoA -DD is not explained correctly.	E.2.1	Proper description is now provided in the PoA section E.2. Response 2: The EIA notification states '2. Requirements of prior Environmental Clearance (EC):- The	PL. mention exact location/page of the notification, where it is described that EIA is not required. This CAR is not closed. DOE response 2: As explained by the PP, the EIA notification page 10, the

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>following projects or activities shall require prior environmental clearance ...</p> <p>i) All new projects or activities listed in the Schedule to this notification ...'</p> <p>Thus, the project not listed in the Schedule "List of projects or activities requiring prior environmental clearance" to the EIA notification are not required to conduct environmental impact analysis. Please refer EIA notification pg. 10.</p>	<p>proposed project activity does not require EIA notification, having reviewed this and the proposed project activity, the validation team has closed the CAR.</p>
<p>CAR 20</p> <p>In the section F.2 of webhosted SSC-PoA-DD the stakeholders that have made comments are not identified in accordance with the guidelines to complete the SSC-PoA-DD</p>	F.2.1	<p>Section F.2 of the PoA DD is now in accordance with the guidelines to complete the SSC-PoA-DD. Proper summary table of the comments (including the name of a person) with the responses will be mention for each CPA.</p>	<p>As explained by the PP in the PoA DD, comments will be invited from various stakeholders and will be addressed. A summary of comments including the name of a person who has commented as well as the responses given to that particular comments will be prepared and mentioned for each CPA. This will be in accordance with the guidelines to complete the SSC-PoA-DD. It is also explained in the Section F.3 that Local stake holder</p>

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			consultation will be done in each CPA, having reviewed this, the CAR is closed.
CAR 21 The comments mentioned in section F.3 of webhosted SSC-PoA-DD is not consistent with the F.2 section	F.3.1	Section F.3 is now in accordance with section F.2 of the PoA DD.	In the revised PoA DD, the PP has clarified that "Local stakeholder consultation will be held at CPA level. Comments received during the consultation will be addressed and reported in each CPA DD. Having reviewed this, the validation team closed the CAR.
CAR 22 The section G.1 of the webhosted SSC-PoA-DD is not in accordance with the guidelines to complete the PoA DD CME has not provided the host country approval letter for validation.	G.1.1	<p>CME has applied for the Host Country Approval on 30/11/2011. The same will be shared with DOE as soon as it will be received. It has now been mentioned in the section G.1 of PoA DD.</p> <p>Response 2:</p> <p>1) Application for HCA dt. 02/08/2012 is submitted to DOE now. 2) The HCA is still awaited and will be submitted as it will be awarded from NCDMA.</p> <p>Response 3:</p>	<p>1) Pl. provide the application letter dated 30/11/2011 for the HCA as mentioned 2) Pl. provide the Host Country Approval. CAR is not closed.</p> <p>DOE response 2: The PP has not provided the HCA, hence, this CAR is not closed.</p>

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		The HCA awarded to the PoA on 23/04/2013 is submitted to DOE now.	DOE response 3: The PP has now provided the Host country approval vide letter reference no. 4/01/2013-CCC 23/04/2013 issued by Ministry of Environment and Forest, Government of India, hence, the CAR is closed.
CAR 23 The description of generic CPA is not clearly described in the Part II A.1 section of webhosted SSC-PoA-DD	Part II A.1.1	CME has now given the proper description of generic CPA in section A.1 of SSC-PoA-DD.	In the Section A.1 of the Part II, i.e. in Generic CPA DD, the methodology, its reference, applied Tools and additionality demonstration guideline is now correctly described hence, the CAR is closed.
CAR 24 The tools and other methodologies referred by the AMS II F version 10 are not mentioned in the Part II B.2 section of webhosted SSC-PoA-DD	Part II B.1.2	Tools which have been referred by the AMS II. F version 10 is now mentioned in PoA-DD section B.1.	(1) In the part II, Section B.2, the Tool is referred as "Tool to calculate the emission factor for an electricity system" (Version. 02.0.0, EB 70, Annex 22)" having reviewed this, the CAR is closed.

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
CAR 25 the Part II B.2 section of webhosted SSC-PoA-DD does not demonstrate the qualification of CPA as Type I,II and /or III during every year of crediting period in accordance with applicable provisions for project activity eligibility in the Project standard (para 81 annex 5 EB 65 and annex 30 EB 67)	Part II B.2.3	<p>The same is now included in the part II B.2 section of SSC-PoA-DD. A condition is added to establish that 'any CPA will have to demonstrate that the total annual energy savings do not exceed 60 GWh in any year during verification'.</p> <p>Response 2:</p> <p>The PoA-DD is updated to make 20 GWh limit consistent throughout the document.</p>	<p>In the Part II, Section B.2, it is described that the proposed small scale CDM project activity is of Type II: Energy efficiency improvement project activities that reduce energy consumption, on the supply and/or demand side, with a maximum output of 60 GWh per year (or an appropriate equivalent) in any year of the crediting period. The justification for the same is also provided. However, if it is following micro-scale guideline, then rational of 60 MWh is not correct. This CAR is not closed.</p> <p>DOE response 2: The PP has corrected the microscale limit as 20 Gwh in the revised PDD, hence, this CAR is closed.</p>
CAR 26 The Part II B.4 section of webhosted SSC-	B.4.1	The identification of baseline scenario is now in accordance with the annex 30 of EB 67. CME	Although the identification of baseline scenario is in

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<p>PoA-DD does not clearly describe the identification of baseline scenario in accordance with the annex 30 of EB 67</p>		<p>has now included all the necessary parameters require for the identification of baseline scenario.</p> <p>Response 2: The PP is on opinion that the applied SSC methodology (AMS II.F./Version 10.0, para 4) gives energy baseline directly and need not be identified by any separate analysis.</p> <p>Response 3: The identification of baseline is demonstrated in line with the referred guidance now.</p>	<p>accordance with the EB 67, Annex 30, the PP is requested to clearly explain/demonstrate baseline identification individual paragraph wise with justification/evidence. CAR is not closed.</p> <p>DOE response 2: The PP is requested to provide the baseline scenario in accordance with EB 67, Annex 30.</p> <p>DOE response 3: The PP has now correctly described the baseline scenario in line with the requirement of EB 67, annex 30, hence the CAR is closed.</p>
<p>CAR 27</p> <p>The Part II B.4 section of webhosted SSC-PoA-DD does not clearly describe identification of baseline in accordance with</p>	B.4.2	<p>The same is now included in the Part II of B.4 section of PoA-DD.</p>	<p>Although the identification of baseline scenario is in accordance with the EB 67, Annex 30, the PP is requested to clearly</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>applied methodology AMS II F version 10</p>		<p>Response 2:</p> <p>The PP is on opinion that the applied SSC methodology (AMS II.F./Version 10.0, para 4) gives energy baseline directly and need not be identified by any separate analysis.</p> <p>Response 3:</p> <p>The identification of baseline is demonstrated in line with the referred guidance now.</p>	<p>explain/demonstrate baseline identification individual paragraph wise with justification/evidence. CAR is not closed.</p> <p>DOE response 2:</p> <p>The PP is requested to provide the baseline scenario in accordance with EB 67, Annex 30.</p> <p>DOE response 3:</p> <p>The identification of baseline is now correctly demonstrated in line with the referred guidance, hence, this CAR is closed.</p>
<p>CAR 28 Suppressed Demand</p> <p>The CME has not followed the “Guidelines on the consideration of suppressed demand in CDM methodologies” while establishing the baseline scenario. CME has not justified the selection of baseline scenario in accordance with annex 2 of EB 68 in Part II</p>	B.4.3	<p>The host country government through various measures is taking efforts to improve the agricultural practices. Thus, any situation where ‘future emissions by sources may rise above current levels’ is unlikely. Thus, the Guidelines on the consideration of suppressed demand in CDM methodologies (Version 02.0, EB 68, Annex 2,) is not applied here.</p>	<p>It is explained by the PP that, the Host Country government through various measures is taking efforts to improve the agricultural practices. Thus, any situation where ‘future emissions by sources may</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
B.4 section of webhosted SSC-PoA-DD		<p>This is also clarified in the PoA-DD.</p> <p>Response 2: Please refer attachment CAR 28 – a web page from Ministry of Power, Govt. of India where demand side energy conservation management efforts are discussed.</p>	<p>rise above current levels' is unlikely. Pl. provide the evidence/document which describes that the efforts by the Host Country Govt. to improve the agricultural practices. The CAR is not closed.</p> <p>DOE Response 2: The PP has provided a document from the weblink \$\$\$\$\$\$ of Government of India. This is a power ministry, India's website. This link describes that Bureau of energy efficiency (BEE) initiated Agriculture Demand Side Management (Ag DSM) scheme in the XI five year plan period as a key strategy to address the existing inefficiencies in the</p>

\$\$\$\$\$\$ http://powermin.nic.in/acts_notification/energy_conservation_act/introduction.htm

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			<p>end use segments of agriculture sector. The objective of the programme was to create appropriate framework for market based interventions in agricultural pumping sector by facilitating conducive policy environment. Pump set efficiency up gradation through PPP mode was one the key aspects of this scheme. The replacement of existing inefficient pump sets with energy efficient (BEE star labelled) pump sets would unlock the market for large scale investments in this area. A recent study estimates a total saving potential of 27.79 billion Kwh in Indian agricultural pumping sector. This accounts for 37% of the overall energy saving potential and about 40% of the overall energy deficit</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
			reported during 2007-08. Having reviewed this, the validation team accepts that the 'future emissions by sources may rise above current levels' is unlikely' hence, closed the CAR.
CAR 29 The CME has not considered the national and/or sectoral policies including E+/E- policies when establishing the baseline Scenario in Part II B.4 section of webhosted SSC-PoA-DD	B.4.4	Response 2: There are no policies that give relative advantage to emission intensive (either more emission intensive or less emission intensive) technologies in the irrigation sector (as evident from the removal of subsidies on diesel (http://articles.timesofindia.indiatimes.com/2013-01-18/india/36414647_1_diesel-price-subsidized-cylinder-litre)). Thus, the consideration of E+/E- policies was not used here. This is clarified in the PoA-DD, Section B.4 now. Response 3:	The PP is requested to provide the response for the CAR. The CAR is not closed. DOE Response 2: The response is not clear, as CME has provided data only about diesel. However, how it is related to overall national E+/- policies is not clear. The CAR is not closed. DOE Response 3: The

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		There are no other applicable national policies that have impact on the PoA.	validation team finds that there are no other applicable national policies available for agricultural sector from its sectoral knowledge, hence, this CAR is closed.
CAR 30 The key assumptions and the rationale used for determining the baseline scenarios are not justified in the Part II B.4 section of webhosted SSC-PoA-DD	B.4.6	<p>The key assumptions and the rationale used for determining the baseline scenarios are now justified in the PoA-DD section B.4</p> <p>Response 2: The CAR 28 and CAR 29 are provided new repose 2.</p> <p>Response 3: The CAR 29 is responded above.</p>	<p>This CAR can be closed once satisfactory reply to CAR 29 is provided by the PP. This CAR is not closed.</p> <p>DOE response 2: The CAR 28 and 29 are open, hence, this can't be closed.</p> <p>DOE response 3: The key assumption and rationale used for baseline scenarios are now justified in the PoA DD, hence, the CAR is closed.</p>
CAR 31 Variables, parameters, data sources for establishment of baseline scenario is not described and explained in the Part II B.4 section of webhosted SSC-PoA-DD	B.4.7	<p>Variables, parameters, data sources for establishment of baseline scenario is now described and explained in the Part II B.4</p> <p>Response 2: The CAR 28 and CAR 29 are provided new repose 2.</p>	<p>This CAR can be closed once satisfactory reply to CAR 29 is provided by the PP. This CAR is not closed.</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		Response 3: The CAR 29 is responded above.	DOE response 2: The CAR 28 and 29 are open, hence, this can't be closed. DOE response 3: The Variables, parameters, data sources for establishment of baseline scenario is now correctly described and explained in the Part II B.4 section of webhosted SSC-PoA-DD hence, the CAR is closed.
CAR 32 The eligibility criterion mentioned in the Part II B.5 section of webhosted SSC-PoA-DD are not consistent with the eligibility conditions mentioned in the section B.2 of part I	B.5.1	The eligibility criterion mentioned in the part II of B.5 section is now consistent with the eligibility conditions mentioned in the section B.2 of part I.	1) For the first Criteria the justification 'The proposed SSC-CPA is located in XXX district of XXX.' does not ensure the CPA lies in India. 2) Pl. provide complete details of IS standards with its name, year of publication, parts if any. 3) In the eligibility criteria it is described that 'the aggregate energy savings

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>Response 2:</p> <p>1) The condition on location is updated to ensure location is within India.</p> <p>2) The complete details of IS standards and a copy of the full standard is provided to the DOE now.</p> <p>3) The criteria is updated to limit capacity to 20 GWh.</p>	<p>of a single project may not exceed the equivalent of 60 GWh per year.'. This is not correct if PP is following micro-scale guidelines.</p> <p>The CAR is not closed.</p> <p>DOE Response 2: In the eligibility criteria of the PoA following corrections are made by the CME/PP.</p> <p>1) The condition on location is updated to ensure location is within India.</p> <p>2) The complete details of IS standards are described in the PoA DD, also a copy of the Indian standards is provided to the validation team.</p> <p>3) The correction for the microscale project activity limit capacity to 20 GWh is</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
			<p>now revised in the PoA DD.</p> <p>Having reviewed above revisions, the validation team closed the CAR.</p>
<p>CAR 33</p> <p>The Part II section B.6.1 of webhosted SSC-PoA-DD</p> <ul style="list-style-type: none"> calculations for leakage emissions are not in accordance with the AMS II F version 10. <p>Emission reduction for fossil fuel usage not mentioned</p>	B.6.1	<p>As mentioned in the PoA DD under leakage section that there will be no change in pump also there will be no transfer of equipment from the project boundary to the project activity and hence the leakage emission will not be considered.</p> <p>Response 2:</p> <p>1) The PoA will include MIS equipment that are connected to grid connected pumps/ motors only. Thus, uses of any fossil fuels in these pumps are not possible. Hence, the para 12 of the methodology is not applicable here.</p> <p>2) As explained above, the grid connected pumps/ motors will not have any fuel consumption provision. Diesel based pumps are possible (and are rarely used after subsidy</p>	<p>1) The PP is requested to explain why para 12 of the methodology is not considered.</p> <p>2) Also, the emission reduction due to fossil fuel usage if any at site is not considered/ explained.</p> <p>The CAR is not closed.</p> <p>DOE Response 2:</p> <p>As per the requirement of the methodology AMS IIF version 10, Para 12, Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		removal on diesel), but CMAE will not include such farmers in the PoA.	outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009 .Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas.. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero. As explained by PP in the response, The PoA will include MIS equipment that are connected to grid connected pumps/ motors only. Thus, uses of any fossil fuels in these pumps are not possible. Hence, the para 12 of the methodology is not applicable here. Also, as explained above, the grid connected pumps/ motors

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
			will not have any fuel consumption provision. Diesel based pumps are possible (and are rarely used after subsidy removal on diesel), but CMAE will not include such farmers in the PoA. Since, there is no DG sets/diesel used and only grid connected pumps would be used in the PoA, paragraph 12 is not applicable, hence, leakage would be zero, having reviewed this, the validation team closed the CAR.
CAR 34 The equations used for the calculating emission reductions are not cross referenced with the methodology in the Part II B.6.1 section of webhosted SSC-PoA-DD	B.6.1.2	The cross reference of the methodology has now been given in the Part II of B.6.1.	The equations used for the calculating emission reductions are cross referenced with the methodology in the Part II B.6.1 section of webhosted SSC-PoA-DD, hence, the CAR is closed.
CAR 35 In Part II section B.6.2 of webhosted SSC-PoA-DD the data parameters not monitored	B.6.2.1	Response 2: The PoA-DD is updated to make parameters to	PP is requested to provide the response for the CAR raised. CAR is not closed.

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
during the crediting period are not in accordance with AMS II F version 10		be monitored in line with the applicable SSC methodology.	DOE Response 2: In the revised PoA-DD the required parameters to be monitored in line with the applicable SSC methodology are updated, hence, the CAR is closed.
CAR 36 The sample ex-ante calculations for the first real case CPA are provided in the generic CPA format. The same should be applied for the each CPA separately with different values used therein. However, equations used for baseline and project emissions are for single crop only, however for multiple crops how it would be used is not clear.	B.6.3.1	CME has now removed all the values which are to be mentioned in specific CPA DD from the generic CPA DD. CME has also given the description of baseline and project emission for a single as well as for multiple crops.	The PP/CME has now revised the generic CPA DD. The same is now providing the description of the baseline and project emission for a single as well as multiple crops, which is correct, hence, this CAR is closed.
CAR 37 In Part II B.7.1 section of webhosted SSC-PoA-DD, Source of data mentioned for the following parameters is not in accordance with the AMS II F version 10 <ul style="list-style-type: none"> • Yp • ECp • Ecb 	B.7.1.3.1	CME has now given the proper source of data mentioned for the given parameters which is as per AMS II F, version 10.	1) The source of data for different value considered can be provided to the validation team as a sample basis for validation of correct source if available. 2) It is not clear from the description in the

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
		<p>Response 2:</p> <p>1) The values of parameters given are from the baseline survey / study report. The copy of updated report is submitted to the DOE now.</p> <p>2) The pumps using fossil fuels will not be included in the PoA.</p>	<p>monitoring plan section B.7.1 and B.7.2 if in the CPAs if the pumps using other fossil fuels then the grid electricity are included or not. If yes, the same is not described with calculation and monitoring procedure of such fuel.</p> <p>This CAR is not closed.</p> <p>DOE Response 2 :</p> <p>1) The PP/CME is requested to provide the revised/corrected baseline report, after the validation team's interview with the person who carried out baseline survey. This point is not closed.</p> <p>2) It is now clarified by the PP/CME that pumps using fossil fuels will not</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>Response 3:</p> <p>1) The copy of updated report is submitted to the DOE now.</p> <p>2) The pumps using fossil fuels will not be included in the PoA. Revision is made in the PoA DD.</p>	<p>be included in the PoA. However, in the revised PoA DD at many places pumps using fuels would be used is reflected. Pl. clarify. This point is not closed.</p> <p>DOE conclusion 2: This CAR is not closed.</p> <p>DOE Response 3 :</p> <p>1) The PP has now provided revised baseline survey report, hence, this point is closed.</p> <p>2) There is no pump to be used on fossil fuel. This is now corrected in the PoA DD, hence, this point is closed.</p> <p>All the points of the CAR are closed, hence, this CAR is closed.</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
<p>CAR 38</p> <p>In Part II B.7.1 section of webhosted SSC-PoA-DD the measurement methods and procedure for all the parameters are not described in accordance with AMS II F version 10</p>	B.7.1.3.4	<p>Response 2:</p> <p>1) Each of the new CPAs will have to do a baseline survey report for the applicable region and crops.</p>	<p>1) For the parameter ECp,y the source described is "As per the baseline survey study by School of future studies and planning Devi Ahilya University, Indore. November 2012" The PP/CME has provided the survey report, which is only for first real case CPA DD. PL. explain how this report is valid for all the CPAs apart from first real case CPA which might be included in future?</p> <p>DOE response 2:</p> <p>1) As explained by the PP, for each CPA, there will be baseline study report. This being appropriate, validation team closed this point.</p>



Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>2) The monitoring frequency is now updated as 'Continuous monitoring with monthly recording'.</p> <p>3) The description of the parameter is updated to specify that this is 'crop wise' area. The form 8A will give this from the Authentic records.</p>	<p>2.) As explained by the PP, the monitoring frequency is updated for the following parameters in the revised PoA DD as 'Continuous monitoring with monthly recording'. The parameters are : EC_{by}, (Total electricity consumption of all pumps in the baseline region), EC_{py} (Electricity consumption by all pumps in the project area), ES (Electricity savings by all pumps in the project area) the validation team finds this as appropriate, hence, this point is closed.</p> <p>3) The Parameter identified as 'A' i.e. Total area selected for under project activity does not ensure crop wise area, hence, this is</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		4) The accuracy class of the meter is now	<p>not appropriate. Pl. explain.</p> <p>DOE response 2:</p> <p>3.) As explained by the PP, The description of the parameter is updated to specify that this is 'crop wise' area. The form 8A will give this from the Authentic records. Since form '8A' is provided from local village authority, this being appropriate source, validation team closed this point.</p> <p>4) The accuracy class of meters, its calibration responsibility, emergency preparedness plan is not described for 'electricity monitoring/measuring meters'</p>

VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		<p>specified as 1.0. The emergency plan is covered by monitoring more samples than that required as per the sampling guidance. The faulty/ data where there is doubt will be discarded.</p> <p>5) The monitoring parameters are equipment independent and will not vary for the drip or sprinkler. Both these equipment are treated as the MIS units.</p>	<p>DOE response 2:</p> <p>4.) The PP/CME has explained that there will be accuracy class '1.0' meter would be used. Also, emergency plan is covered by the PP/CME in the PoA DD. Also, it is explained that monitoring more samples than required as per the sampling guidance would be taken in the CPAs. However, explanation on responsibility of calibration is not clearly replied, hence this point is not closed.</p> <p>5) Monitoring of parameters of sprinkler irrigation is not described in the Monitoring Section B.7.1/B.7.2.</p> <p>DOE response 2:</p> <p>5.) As explained by the PP/CME, the monitoring</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
		<p>Response 3:</p> <p>4) The responsibility of calibration is now clarified and assigned to 'CPA implementer'.</p>	<p>parameters for the sprinkler system are same as 'Drip irrigation' system. The validation team accepts this and hence, closed this point.</p> <p>DOE Conclusion 2: Point 4 of the CAR is not closed, hence, the CAR is not closed.</p> <p>DOE response 3:</p> <p>4) The responsibility of calibration is now clarified as 'CPA implementer', hence, this point is closed.</p> <p>All the points of CAR are closed, hence, this CAR is closed.</p>
<p>CAR 39</p> <p>In Part II B.7.1 section of webhosted SSC-PoA-DD the "QA/QC procedures": for all the parameters are not described in accordance with AMS II F version 10 and annex 30 EB 67 for calibration procedure and accuracy of</p>	<p>B.7.1.3.5</p>		<p>PP/CME is requested to provide the response to the CAR raised by the validation team.</p> <p>This CAR is not closed.</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
meters.		<p>Response 2: The discussion on parameters to be monitored is updated to give QA/QC procedures. Further, CME will conduct desk review and also get it validated/ verified by the DOE/s.</p> <p>Response 3: The desk review is done by DOE as per the monitoring plan of the PoA-DD. The above statement was meant to clarify the initial check new CPAs to be added and monitoring reports will be checked by the CME before submitting documents to DOE.</p>	<p>DOE response 2: Pl. explain the sentence "Further, CME will conduct desk review and also get it validated/ verified by the DOE/s." The CAR is not closed.</p> <p>DOE response 2: As explained by the PP, the QA/QC procedures are updated. Also, desk review is for the monitoring plan for the checks by DOE for inclusions of new CPA, hence, having reviewed the revised PoA DD, validation team closed the CAR.</p>
<p>CAR 40</p> <p>The monitoring plan is in not accordance with the Methodology AMS II F version 10, Also, the data uncertainty and data archiving procedures are not mentioned</p>	B.7.2.1	<p>Response 2: The monitoring plan is updated to give data uncertainty and data archiving procedures.</p>	<p>PP/CME is requested to provide the response to the CAR raised by the validation team.</p> <p>This CAR is not closed.</p> <p>DOE response 2: The monitoring plan is updated, however, this CAR</p>

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Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation team conclusion
		<p>Response 3: The above CARs are responded now.</p>	<p>can be closed only after closure of various CARs like CAR 38, 39.</p> <p>DOE response 3: Based on the satisfactory closures of CAR 38 and 39 and having reviewed the revised PoA DD for data uncertainty and data archiving procedures, validation team closed the CAR.</p>
<p>CAR 41 The Modalities of Communications (MoC) is not submitted for validation by the CME.</p>		<p>MoC has now been submitted to the DOE.</p> <p>Response 2: Signed MoC is now submitted to the DOE.</p> <p>Response 3:</p>	<p>The Modalities of Communications (MoC) is not submitted for validation by the CME. The CAR is not closed.</p> <p>DOE response 2: The CME has submitted the signed MoC, however, CME has is requested to provide the documents as per para 53 and 54 of VVS Ver.03 for validating MoC. This CAR is not closed.</p>



 VALIDATION REPORT

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion team
		A letter from the CME is provided for the confirmation of the details given in the MoC. Please refer file 'M&M FES MIS PoA - confirmation of MoC'.	DOE response 3: The PP has now provided employment details of the authorized signatory person alongwith its identification related documents like Income tax permanent account number , employee identity card, the documents submitted are as per the requirement of para 53 and 54 of VVS, hence, this CAR is closed.



APPENDIX B: COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The details of the comments received, responses by the coordinating/management entity/project participants and the explanation of how due account of these is taken by the validation team are described below:

There were no Global stakeholder comments for the PoA.