

VALIDATION REPORT

Carbon Protocol of SA

Title of PoA:


“Cogeneration and/or trigeneration at commercial sites”

Report No. CCL0008/CTCM/01062011

Revision No. 02

VALIDATION REPORT

CDM VALIDATION REPORT NO CCL0008/CTCM/01062011

| | | | | |
|---|---|---|------------------------------|---|
| PoA Title: Cogeneration and/or trigeneration at commercial sites | Country: Republic of South Africa | Estimated CERs (tCO₂e of the 1st CPA): 4742 (annual average) | | |
| GHG reducing measure/technology of the CPAs of the PoA: | This programme aims to reduce GHG emissions by developing a series of cogeneration and/or trigeneration projects at commercial facilities in South Africa. The GHG emission reductions can be attributed to the simultaneous production of electricity and cooling and/or heating, from a single fuel source. The energy savings caused by a single project activity will displace FF dominated grid electricity. A typical baseline of the CPA of the PoA as per the PoA DD shall be electricity(imported from grid) and cooling (e.g. cooling from electricity) and/or heating separately (e.g. hot water from electricity) and thus this energy saving leads reduction in GHG emissions. | | | |
| Client/CME: Carbon Protocol of SA ¹ | Client contact: Ms Hildegard Niehaus 150 West Street Sandton c/o Lloyd Christie-Edward Nathan Sonenberg Johannesburg, Gauteng, South Africa Telephone: +27 (0) 723481505 e-mail: info@carbonprotocol.org | | | |
| Report No.: CCL0008/CTCM/01062011 | Revision: 02 | Date of this report: 30/12/2012 | | |
| Technical Reviewer: Vikash Kumar Singh | | Date of approval: 31/12/2012 | | |
| Approved by (Final Report): Adam Simcock  | | Date of approval: 31/12/2012 | | |
| GPS coordinates of the geographical boundary of PoA: | | The verified /B07-5/ range of geographic coordinates of RSA: Latitude: 22 ^o S to 35 ^o S Longitude: 16 ^o E to 33 ^o E | | |
| Report Distribution: <input type="checkbox"/> Unrestricted Distribution <input type="checkbox"/> Limited Distribution <input checked="" type="checkbox"/> No Distribution (without permission from the Client or responsible organisational unit) | | | | |
| Organisational unit: Carbon Check (Pty) Ltd | | | | |
| Methodology | | | | |
| Number: AMS-II.K | Version: 01 | Title: Installation of co-generation or tri-generation systems supplying energy to commercial buildings. | Scale: Small Scale | SS(s): 3 TA: 3.1 |
| Carbon Check Pty Ltd., (CCL) is commissioned by Carbon Protocol of SA (the CME) to perform the validation of the Program of activities "Cogeneration and/or trigeneration at commercial sites", with regard to the relevant requirements for CDM programme of activities. | | | | |

¹ In the webhosted PoA DD, Promethium Carbon was listed as CME.

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Summary of the PoA Validation and Opinion:

The review of the project design documentation and the subsequent follow-up interviews have provided CCL with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. In our opinion, the PoA meets all relevant UNFCCC requirements for the CDM. Therefore, CCL recommends the PoA for registration by the CDM Executive Board.

The reviews of the project design documentation and the subsequent follow-up interviews have not provided CCL with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. Therefore, CCL will not recommend the PoA for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board of this decision.

| VALIDATION TEAM | | ROLE | | | | |
|--------------------|---|-------------|--------------|-----------------------|------------------|--------------------|
| Full Name | Appointed for Sectoral scopes (Technical Areas) | Team Leader | Local Expert | Team Member (Auditor) | Technical Expert | Technical Reviewer |
| Ravi Shankar | 1.2, 2.1, 2.2, 3.1, 13.1 | X | | | X | |
| Adam Simcock | -- | | X | | | |
| Anubhav Dimri | 1.2 | | | X | | |
| Vikash Kumar Singh | 1.2, 3.1,13.1 | | | | | X |

| VALIDATION PHASE | VALIDATION STATUS |
|--|---|
| <input checked="" type="checkbox"/> Desk Review | <input type="checkbox"/> Corrective Actions / Clarifications requested |
| <input checked="" type="checkbox"/> Follow up interviews | <input checked="" type="checkbox"/> Full approval and submission for registration |
| <input checked="" type="checkbox"/> Resolution of outstanding issues | <input type="checkbox"/> Rejected |

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Executive Summary – Validation Opinion

The validation team of Carbon Check (Pty) Ltd., performed the validation of the PoA titled “Cogeneration and/or trigeneration at commercial sites” in South Africa with regard to the relevant requirements for CDM activities.

Standard auditing techniques have been used for the validation of the PoA. An analysis, as provided by the applied methodology, demonstrates that the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the PoA (eligible CPAs of the PoA) are additional to any that would occur in the absence of the proposed eligible CPAs. Given that the PoA is implemented as designed, the CPAs are likely to achieve the emission reductions.

The validation is based on the information made available to Carbon Check (Pty) Ltd., as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements.

The validation was executed in the following steps so far:

- Receipt of PoA-DD (version 01, dated 08/07/2011) CPA DD (generic) and real case CPA DD (version 01, dated 08/07/2011) for global stakeholder comments.
- Global stakeholder comment process (12/07/2011 to 10/08/2011)
- On-site visit with stakeholder interviews (06/09/2011)
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report and protocol
- Desk review of revised DDs applying AMS-II.K (version 1)
- Review of responses for CARs/CLs
- Issue of the final validation report and protocol

During the course of validation a total of 14(Fourteen) Corrective Action Requests (CARs) and 08 Clarification Requests (CLs) were identified on webhosted PoA-DD/01/. Upon evaluation of responses provided by the Project Participant (CME) all the identified issues were closed successfully. No Forward action Request (FAR) has been raised during the course of validation.

The single purpose of this report is its use during the registration process as part of the CDM project cycle. In the opinion of Carbon Check (Pty) Ltd., the PoA meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. Carbon Check (Pty) Ltd. thus recommends the PoA to be registered with the UNFCCC.

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| | |
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| Abbreviations | Baseline Emissions |
| BE | |
| CAR | Corrective Action Request |
| CC | Cross Check |
| CCL | Carbon Check (Pty) Ltd |
| CDM | Clean Development Mechanism |
| CDM M&P | Modalities and Procedures CDM |
| CER(s) | Certified Emission Reduction(s) |
| CH ₄ | Methane |
| CL | Clarification Request |
| CO ₂ | Carbon dioxide |
| CO ₂ e | Carbon dioxide equivalent |
| CME | Coordinating/managing entity and participants of PoA |
| CPA | Component project activity |
| CPA-DD | Component project Activity design document |
| DR | Document Review |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| EB | Executive Board |
| EIA | Environmental Impact assessment |
| ER | Emission Reductions |
| FAR | Forward Action Request |
| GHG(s) | Greenhouse gas(es) |
| GWP | Global Warming Potential |
| I | Interview or any follow up action |
| IPCC | Intergovernmental Panel on Climate Change |
| LoA | Letter of Approval |
| MoV | Means of Verification |
| MP | Monitoring Plan |
| MR | Monitoring Report |
| MTN | Mobile Telephone Network (Pty) Ltd |
| NGO | Non-governmental Organization |
| ODA | Official Development Assistance |
| PE | Project Emission |
| PoA | Programme of Activities |
| PoA-DD | Programme of Activities design document |
| PP(s) | Project Participant(s) |
| Ref. | Document Reference |
| RSA | Republic of South Africa |
| SD | Sustainable Development |
| SS(s) | Sectoral Scope(s) |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VVM | Validation and Verification Manual |

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Appendix A: Validation Protocol

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1. INTRODUCTION

Carbon Protocol of SA (hereafter referred as “CME”) has commissioned the DOE Carbon Check (Pty) Ltd to perform validation of the proposed CDM Programme of Activities (PoA) “Cogeneration and/or trigeneration at commercial sites” in South Africa (hereafter called “the PoA”). This report summarizes the findings of the validation of the PoA identified in the PoA Design Document (PoA-DD); the CDM Programme Activity Design Document (CPA-DD) template with generic information relevant to all CDM Program Activities (CPAs) to be included in the PoA; and the associated real case CPA-DD. The validation was performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, , simplified modalities and procedures for small-scale project activities and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

1.1 Objective

The purpose of a validation is to have an independent third party assess the PoA-DD, CPA-DD template and the associated real case CPA-DD (also known as specific CPA DD). In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme’s baseline determination, monitoring plan, and the programme’s compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme 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 PoA-DD, CPA-DD template and the real case CPA-DD. The PoA-DD, CPA-DD template and the real case CPA-DD were reviewed against the criteria stated in Article 12 of the Kyoto Protocol, simplified modalities and procedures for small-scale projects, the procedures for registration of a programme of activities as a single CDM project activity and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-II.K (Version 1).

The validation team has, based on the requirements contained in the Validation and Verification Manual and the procedures for registration of a programme of activities as a single CDM project activity employed a rules-based approach, focusing on the identification of significant risks for programme implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the PoA Managing Entity, CPA Implementer(s) and/or project participant(s) (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the programme design.

2 METHODOLOGY

The validation consists of the following four phases, against §33 of CDM Validation and Verification Manual (Version 01.2) /B01/:

- I. Publication of the programme design documents (PoA-DD, CPA-DD template and completed CPA-DD) in UNFCCC for global stakeholder consultation;
- II. A desk review of the PoA-DD, CPA-DD template and the associated real case CPA-DD;
- III. On-site visit and follow-up interviews with programme stakeholders; and
- IV. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

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2.1 Document Review

The following table lists the documentation that was reviewed during the validation

| REFERENCE NO. | DOCUMENTS |
|---------------|---|
| /01/ | PoA-DD (webhosted version), for "Cogeneration and/or trigeneration at commercial sites", Version 01, Date - 08/07/2011 |
| /02/ | g-CPA-DD template (webhosted version) |
| /03/ | PoA-DD for "Cogeneration and/or trigeneration at commercial sites", Version 02, Date – 30/12/2012 |
| /04/ | g-CPA-DD template (final version) |
| /05/ | CPA-DD (webhosted version) – "Cogeneration and/or trigeneration at commercial sites, number 001, Centurion", Version 1.0, Date -01/11/2011 |
| /06/ | CPA-DD (final version) – "Cogeneration and/or trigeneration at commercial sites, number 001, Centurion", Version 2, Date -30/12/2012 |
| /07/ | <ol style="list-style-type: none"> 1. Letter of Approval from the DNA of Republic of South Africa (dated 31/10/2012), authorizing Carbon Protocol of SA as the project proponent and the coordinating and managing entity (CME) to participate in the CDM project. 2. E-mail from DNA of Republic of South Africa (dated 05/11/2012) confirming the validity of LoA. |
| /08/ | <ol style="list-style-type: none"> 1. Modalities of communication dated, 26/09/2012 2. e-mail sent by Hildegaard Niehaus confirming MoC dated 30/11/2012 3. Carbon Protocol of SA: CME board decision confirming appointment of Lloyd Christie as the signatories on the Modalities of Communication (MoC) dated 18/09/2012 |
| /09/ | Carbon Protocol of SA: Coordinating/Managing Entity (CME) Manual for the Programme of Activities (PoA): Cogeneration and/or trigeneration at commercial sites |
| /10/ | <p>Declaration from the CME (dated 16/08/2012) stating CME:</p> <ol style="list-style-type: none"> 1. Has not received Official Development Assistance (ODA). 2. This programme is a voluntary coordinated action that would not be implemented in the absence of the Clean Development Mechanism (CDM). 3. The Carbon Protocol of SA has been appointed as the Coordinating/Managing Entity (CME) for this programme. |
| /11/ | Carbon Protocol of SA: Sample Criteria Declaration Letter |
| /12/ | <p>Change of CME:</p> <ol style="list-style-type: none"> 1. Approval from CPA confirming the change of CME dated 18/09/2012 2. Approval from Promethium Carbon (Pty) Ltd (webhosted CME) confirming change of CME dated 11/09/2012 |
| /13/ | Framework Financial calculation sheet |
| /14/ | Department of Environmental Affairs: National Climate Change Response white paper |
| /15/ | Department of Minerals and Energy: Energy Efficiency Strategy of the Republic of South Africa, dated 03/2005 |

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| /16/ | Framework emission reduction calculation sheet |
| /17/ | Department of Energy: Policy to support the Energy Efficiency and Demand Side Management dated 20/05/2010 |
| /18/ | <ol style="list-style-type: none"> 1. Carbon Check (Pty) Ltd: Contract between DOE and webhosted CME dated 01/06/2011 2. Carbon Check (Pty) Ltd: Addendum to the contract signed between DOE, webhosted CME and validation CME dated 07/11/2012 |
| /19/ | <ol style="list-style-type: none"> 1. Promethium Carbon: Letter of voluntary withdrawal dated 03/12/2012 2. Mobile Telephone Networks: Letter of voluntary withdrawal dated 03/12/2012 |

Background documents/websites:

| | |
|-------|--|
| /B01/ | CDM EXECUTIVE BOARD: EB 55 ANNEX 1 "CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL" VERSION 01.2 OF 30/07/2010 |
| /B02/ | CDM Executive Board: Approved baseline and monitoring methodology AMS-II.K. Installation of co-generation or tri-generation systems supplying energy to commercial buildings (version 1) |
| /B03/ | <p>PoA Specific guidelines / standards published by UNFCCC:</p> <ol style="list-style-type: none"> 1. CDM Executive Board: Programme of activities Design Document form (CDM-SSC-PoA-DD) Version 01, EB 33 Annex 43 2. CDM Executive Board: Component Project Activity Design Document form (CDM-SSC-CPA-DD) Version 01, EB 33 3. CDM Executive Board: 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, Version 04.1, EB 55 (Annex 38) 4. CDM Executive Board: Procedures for review of erroneous inclusion of a CPA, version 03, EB 61 (Annex 22) 5. CDM Executive Board: Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, EB 65 (Annex 03) 6. CDM Executive Board: Clarifications regarding the "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", version 01, EB 60 (Annex 26) 7. CDM Executive Board: Guidelines on assessment of de-bundling for SSC project activities, Version 03, EB 54 (Annex 13) 8. CDM Executive Board: Guidelines on the demonstration of additionality of small-scale project activities, version 09.0, EB 68 (Annex 27) 9. CDM Executive Board: Guidelines for the demonstration and assessment of prior consideration of the CDM, version 04, EB 62(Annex 13) 10. CDM Executive Board: Guidelines for Demonstrating additionality of microscale projects, version 04, EB 68 (Annex 26) 11. Procedures for processing and reporting on validation of CDM project activities, version 03, EB 50 Annex 48. |
| /B04/ | <ol style="list-style-type: none"> 1. CDM Executive Board: Approved baseline and monitoring methodology AMS-I.D. Grid connected renewable electricity generation (version 17) 2. CDM Executive Board: "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion", version 02, EB 41 (Annex 11) 3. CDM Executive Board: Tool to calculate baseline, project and/or leakage emissions from electricity consumption, version 01, EB 39 (Annex 7) 4. CDM Executive Board: Tool to calculate the emission factor for an electricity system, version 02.2.1, EB 63 (Annex 19) 5. CDM Executive Board: Approved baseline and monitoring methodology ACM0009 Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas (version 4) |
| /B05/ | General Guidelines for SSC CDM methodologies, version 19.0, EB 69 (Annex 27) |

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| /B06/ | CDM Executive Board: Glossary of CDM terms, version 07, EB 70 (Annex 7) |
| /B07/ | Websites: 1. www.unfccc.int 2. http://www.blueworldcarbon.com/ 3. http://www.cdmpipeline.org/ 4. http://www.uneprioe.org/default.aspx 5. http://en.wikipedia.org/wiki/South_Africa |

The changes between the PoA-DD version 01 published for the 30 days stakeholder commenting period /01/ and the final version submitted for registration /03/ are addressed in the table 2 and 3 of the validation protocol as a part of this report.

The main changes between the PoA-DD, version 1.0 /01/ published for the 30 days stakeholder commenting period and the final version /03/ submitted for registration are presented in the below table as follows:

| Topic | PoA-DD – GSC/01/ | Final PoA-DD/03/ | Assessment |
|---------------------------|---|---|--|
| PoA title | “Cogeneration and/or trigeneration at commercial sites” | “Cogeneration and/or trigeneration at commercial sites” | No Change |
| Parties | Republic of South Africa (Host) | Republic of South Africa (Host) | No Change |
| Project Participants/ CME | Promethium Carbon (CME) Mobile Telephone Networks | Carbon Protocol of SA (CME) | Project participants in host party have changed from “Promethium Carbon” and “Mobile Telephone Networks” to “Carbon Protocol of SA”. CAR 2, CAR 3, CL 3 and CL 4 were raised in this regard and has been successfully closed. Webhosted CME “Promethium Carbon” has confirmed the change of CME/12-2/ and this has also been confirmed by the 1 st CPA implementer MTN /12-1/. Voluntary withdrawal letters have been provided by the webhosted project participant, “Promethium Carbon”/19-1/ and “Mobile Telephone Networks” /19-2/, confirming the requirements § 8 of EB 50 Annex 48/B03-11/ and with the |

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| | | | requirements of § 41 of EB 30. DOE has a contractual relationship with the validation CME (Carbon Protocol of SA)/18-2/, this meets the requirement of § 7 of EB 50 Annex 48/B03-11/. As the contract with DOE was signed by validation CME at the same time no objections were provided by the webhosted project participants /12-1/ /12-2/, it was not deemed necessary to republish the PoA-DD as per § 9 of EB 50 Annex 48/B03-11/. |
| Scope | 3: Energy demand | 3: Energy demand | No change |
| Methodology / Activity | AMS-II.K (Version 1) / Small-scale | AMS-II.K (Version 1) / Small-scale | No change |
| Amount of emission reductions (tCO ₂) | Quantification of ERs at PoA level is not required as per the PoA DD template. | Quantification of ERs at PoA level is not required as per the PoA DD template. | NA |
| PoA starting date | 11/07/2011 (the date of publishing of the PoA for global stakeholder consultation) | 01/02/2013 or the date of registration whichever is later | Starting date has been changed to 01/02/2013 (The starting date of PoA has been changed to meet the UNFCCC interface requirement to have start date of PoA as at least 4 weeks later than date of submission of PoA for registration). |
| Real case CPA starting date | 18/07/2011 as indicated in section A.4.2.1 of CPA-DD version 01. /05/ | 01/04/2013 as indicated in section A.4.2.1 of CPA-DD version 03. /06/ | Starting date has been changed to 01/04/2013. CL 5 was raised in this regard and has been successfully closed. |
| PoA Location | Republic of South Africa | Republic of South Africa | No change |

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2.2 Follow-up actions

In order to reach to a Validation Opinion a site visit along with an interview was planned for 06/09/2011. Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

| Sr. No. | Date | Name and Role | Organization | Topic |
|---------|------------|-----------------------------|----------------------|--|
| /a/ | 06/09/2011 | Robbie Louw (Director) | Promethium Carbon | <ul style="list-style-type: none"> • CME coordinating CDM functions and responsibilities. • Discussion on eligibility criteria and inclusion of a typical CPAs in the PoA including the real case CPA. • Discussion on Additionality justification on PoA level and on typical CPA level including the real case CPA. • Discussion on record keeping, monitoring plan and manual. • Discussion on double counting • Discussion on financing pattern(means of finance) of the CPAs(including real case) and involvement of public funding • Discussion on LSC (both on PoA level and real case CPA) and EIA done at CPA level including statutory clearances required for the implementation of the CPA. |
| /b/ | 06/09/2011 | Harmke Immink (Director) | Promethium Carbon | <ul style="list-style-type: none"> • CME coordinating CDM functions and responsibilities. • Discussion on eligibility criteria and inclusion of a typical CPAs in the PoA including the real case CPA. • Discussion on Additionality justification on PoA level and on typical CPA level including the real case CPA. • Discussion on record |

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| | | | | <p>keeping, monitoring plan and manual.</p> <ul style="list-style-type: none"> • Discussion on double counting • Discussion on financing pattern(means of finance) of the CPAs(including real case) and involvement of public funding • Discussion on LSC (both on PoA level and real case CPA) and EIA done at CPA level including statutory clearances required for the implementation of the CPA. |
| /c/ | 06/09/2011 | Verushka Chetty (CDM Consultant) | Promethium Carbon | <ul style="list-style-type: none"> • CME coordinating CDM functions and responsibilities. • Discussion on eligibility criteria and inclusion of a typical CPAs in the PoA including the real case CPA. • Discussion on Additionality justification on PoA level and on typical CPA level including the real case CPA. |
| /d/ | 06/09/2011 | Katie Ross (CDM Consultant) | Promethium Carbon | <ul style="list-style-type: none"> • CME coordinating CDM functions and responsibilities. • Discussion on eligibility criteria and inclusion of a typical CPAs in the PoA including the real case CPA. • Discussion on Additionality justification on PoA level and on typical CPA level including the real case CPA. |
| /e/ | 06/09/2011 | Olu Soluade | Engineering consulting company | <ul style="list-style-type: none"> • Project concept and design. • Discussion on the operational and management arrangements of the PoA. |
| /f/ | 06/09/2011 | Adele v/d Walt | MTN (Mechanical Engineer) | <ul style="list-style-type: none"> • Project concept and design. |

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| | | | | <ul style="list-style-type: none"> Decision to undertake the project as CDM project. Discussion on stated goal and policy of the PoA. Discussion on the operational and management arrangements of the PoA. |
| /g/ | 06/09/2011 | Willem Weber | Senior Manager (Core Imp - Manager: Engineering Services) | <ul style="list-style-type: none"> Project concept and design. Decision to undertake the project as CDM project. Discussion on stated goal and policy of the PoA. Discussion on the operational and management arrangements of the PoA. |
| /h/ | 06/09/2011 | Pierre Lombard | Project Manager (MTN) | <ul style="list-style-type: none"> Project concept and design. Decision to undertake the project as CDM project. Discussion on stated goal and policy of the PoA. Discussion on the operational and management arrangements of the PoA. |
| /i/ | 06/09/2011 | Wynand Nel | Claassen Inc (Technology Provider) | <ul style="list-style-type: none"> Project concept and design. Discussion on the operational and management arrangements of the PoA. |
| /j/ | 06/09/2011 | Chris Leeson | Claassen Inc (Technology Provider) | <ul style="list-style-type: none"> Project concept and design. Discussion on the operational and management arrangements of the PoA. |
| /k/ | 06/09/2011 | Andrew Shears | Project Manager (ISF) | <ul style="list-style-type: none"> Project concept and design. Discussion on the operational and management arrangements of the PoA. |

Validation Team considered the views obtained in these interviews while arriving at Validation Opinion.

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2.3 Resolution of outstanding issues

The objective of this phase of the validation is to resolve any outstanding issues, which need be clarified prior to Carbon Check's conclusion on the PoA design. In order to ensure transparency a validation protocol is customised for the programme. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM PoA 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 validation protocol consists of three tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA is enclosed in Appendix A to this report.

Findings established during the validation could either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of programme objectives is identified. Corrective action requests (CAR) are issued, where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The CDM requirements have not been met;
- There is a risk that emission reductions cannot be monitored or calculated.

A request for clarification (CL) may be 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 be raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity.

Figure 1 Validation protocol tables

| Validation Protocol, Table 1 - Requirement checklist | | | | | |
|--|---|--|---|---|--|
| Checklist Question | Ref. | MoV | Comments | Draft Conclusion | Final Conclusion |
| The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections. | Makes reference to documents where the answer to the checklist question or item is found. | Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable. | The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far. | OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. For CAR, CL and FAR see the definitions above. | OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. |

| Validation Protocol, Table 2 - Resolution of Corrective Action Requests and Clarification | | | |
|---|----------------------|----------------------------------|-----------------------|
| Corrective action requests and/or clarification requests | Reference to Table 2 | Response by project participants | Validation Conclusion |
| | | | |

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|---|---|---|---|
| The CAR and/or CLs raised in table 1 are repeated here. | Reference to the checklist question number in Table 1 where the CAR or CL is explained. | The responses given by the project participants to address the CARs and/or CLs. | The validation team's assessment and final conclusion of the CARs and/or CLs. |
|---|---|---|---|

| Validation Protocol, Table 3 - Forward Action Requests | | |
|--|---|---|
| Forward action request | Reference to Table 2 | Response by project participants Validation Conclusion |
| The FAR raised in table 1 is repeated here. | Reference to the checklist question number in Table 1 where the FAR is explained. | Response by the project participants on how forward action request will be addressed prior to first verification. |

2.4 Internal quality control

Before the assessment begins, members of the team covering the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the CDM PoA/CPA are appointed. The validation report including the validation findings underwent a technical review. A technical reviewer qualified in accordance with Carbon Check's qualification scheme for CDM validation and verification performed the technical review.

2.5 Validation team and the technical reviewer(s)

The validation team and the technical reviewers consist of the following personnel:

| Validation Team | | Type of Involvement | | | | | | |
|--------------------|---|---------------------|-------------|------------------------|---------------------------|------------------------|-------------------|--------------------|
| Full Name | Appointed for Sectoral scopes (Technical Areas) | Supervision of work | Desk review | Site visit & Interview | Report & protocol writing | Technical Expert Input | Reporting support | Technical Reviewer |
| Ravi Shankar | 1.2, 2.1, 2.2, 3.1, 13.1 | X | X | X | | X | | |
| Adam Simcock | -- | | | X | | | | |
| Anubhav Dimri | 1.2 | | X | | X | | X | |
| Vikash Kumar Singh | 1.2, 3.1,13.1 | | | | | | | X |

3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

During the course of validation a total of 14(Fourteen) Corrective Action Requests (CARs) and 08 Clarification Requests (CLs) were identified on webhosted PoA-DD/01/. Upon evaluation of responses provided by the Project Participant (CME) all the identified issues were closed successfully.

The issues raised, PP response and the assessment by validation team are included in Table 2 and Table 3 of Appendix A of validation protocol.

The final validation findings relate to the programme design as documented and described in the PoA-DD /01/ and g-CPA-DD /02/.

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3.1 Approval and Participation

The below table summarizes the project participant and party involved. The validation team received letter of approval for Host party from the CME of the PoA /07-1/. The copy of the LoA was verified against the original LoA issued by the host country DNA. The contents of the LoA and the signature of the authorised issuer were also compared with those of other approval cases issued by the host country DNA. The authenticity of LoA was also confirmed by the DNA of South Africa through a mail dated 05/11/2012/07-2/. Therefore, the team has confirmed the authenticity of the letter issued. This LoA is therefore regarded as valid and meeting the CDM requirements. CL 3 was raised in this regard and has been addressed.

The Validation Team can confirm that issued LoA from host party refers to the precise proposed PoA title as in the PoA-DD /01/ and g-CPA-DD /02/. The Validation Team can confirm that the project participant i.e. the CME is listed in tabular form in section A.3 of the PoA-DD /03/ and this information is consistent with the contact details provided in Annex 1 of the PoA-DD /03/. The letter of approval was also found to be unconditional with respect to paragraph 45 (a) to (d) of VVM, version 01.2 /B01/. And hence these letter(s) are in accordance with paragraphs 45 - 48 of VVM version 01.2/B01/. The LoA, was checked and found in compliance of CDM requirements including requirements of PoA vide § 8, 9 and 10 of annex 38, EB 55 /B03-3/.

The below table summarizes the project participants and parties involved:

| | |
|---|---|
| Project Participant/CME | Carbon Protocol of SA |
| Party Involved | Republic of South Africa |
| Approval | |
| LoA Received | Yes |
| Date of LoA | 31/10/2012 |
| LoA received from | DNA of Republic of South Africa: Department of Energy |
| Approval Number | N/A |
| Validation of Authenticity | The LoA was received from the project participant. The DNA of Republic of South Africa via an email dated 05/11/2012 as required in § 48 VVM /B01/, confirmed the validity of the LoA. |
| Validity of LoA | Yes, validation team considers the LoA in accordance with § 45 to 48 VVM, version 01.2 /B01/ |
| Participation | |
| Party is party to the Kyoto Protocol | Yes |
| Voluntary participation | Yes |
| Diversion of Official Development Assistance (ODA) towards host country | No |
| Project contribution to Sustainable Development | Yes |

Validation of ODA

The proposed project does not involve any public funding from any Annex I Party, and the validation did not reveal any information that indicated that the project could be seen as a diversion of official development assistance (ODA) funding towards the Host Country.

It is also confirmed from the letter provided by CME /10/ about no ODA diversion from Annex-I party in the development of the PoA. CL 6 was raised in this regard and has been addressed.

Confirmation of Modalities of Communication (MoC)

The project Modalities of Communication (MoC) /08-1/ signed on 26/09/2012 was received from the CME. As required in Procedures for Modalities of Communication between Project Participants and the Executive Board, the Validation Team has verified the names of authorised signatories for future

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communication related to the corresponding scope of authority with UNFCCC from the Host country project participant. The Validation Team can confirm that the signatory and contact details on the MoC are authorized and credible. The MoC has been directly received from the CME. To validate that the MoC details are correct, written confirmation/08-2/ from the coordinating/managing entity has been received that all corporate and personal details, including specimen signatures, are valid and accurate. The primary authorised signatory as per MoC is Lloyd Christie and alternate authorised signatory is Robert Louw. CL 4 was raised in this regard and has been addressed.

3.2 Programme of Activities Design Document

The PoA-DD /03/ and the CPA-DD template /04/ are in compliance with relevant form /B03-1/,/B03-2/ and guidance /B04/ as provided by UNFCCC. The most recent version of the forms is used. Validation team confirms that the guidelines for the completion of the PoA documents (as contained in the DD form itself) in their most recent version have been followed. The Managing entity and/or project participants in the applicable PoA sections provided relevant information. Validation team further confirms the consistency between PoA-DD /03/ and the g-CPA-DD /04/ to be used for inclusion of a CPA in the registered PoA, this confirms to the requirement of § 15 (d) of EB 55 annex 38/B03-3/.

3.3 Programme Description

The “Cogeneration and/or trigeneration at commercial sites” (here in after referred as the “PoA”) is promoted by the Coordinating and Managing Entity (CME) “Carbon Protocol of SA”.

This programme aims to reduce GHG emissions by developing a series of cogeneration and/or trigeneration projects at commercial facilities² in South Africa. CAR 1 was raised in this regard and has been addressed. These projects will see the simultaneous production of electricity and cooling and/or heating, from a single fuel source – methane-rich natural gas. The CDM programme activities (CPAs) under the PoA will be implemented in the territory of the Republic of South Africa. Thus, the PoA aims to contribute to the sustainable development of South Africa, reduce Greenhouse Gas (GHG) emissions and adverse environmental impacts of global warming in South Africa. The geographical boundary of the PoA is confirmed to be within South Africa, checked and confirmed by reviewing the PoA-DD /03/. Review of PoA DD /03/ reveals the definition of the boundary for the PoA in terms of a geographical area i.e. within RSA (within which all CPAs included in the PoA will be implemented) has been transparently defined and it take into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary are reflected in the determination of the baseline. This confirms to the requirement of §6 (b) of EB 55 annex 38/B03-3/.

The review of PoA-DD reveals two possible technological scenarios in which the CPAs of the PoA may fall:

1. Replacement or supplementation of existing systems that supply electricity (grid or on-site generation) and cooling (e.g. chillers) and/or heating systems (e.g. boilers).
2. A new development where co-generation or trigeneration systems would not have been built. (i.e. electricity and cooling and/or heating systems would have been built and utilized.)

Validation team confirms that the PoA-DD /03/, transparently describes a typical CPA that will be included in the PoA covering the technology or measures to be used, justification of the choice of an approved baseline and monitoring methodology i.e. AMS-II.K, version 01/B02/, this also confirms to the requirement of § 6(f) of EB 55 annex 38/B03-3/.

Each CPA will cover a single commercial site in South Africa. The site may comprise one or a number of individual buildings. The CPA will involve the implementation of a new onsite cogeneration and/or trigeneration project. The system will replace or supplement either: the operation of (a) existing systems that supply and cooling and/or heating systems, or (b) electricity and cooling and/or heating systems that would have been built and utilized.

² A commercial facility is classified as the premises of a business. Only commercial facilities defined as the premises of a business enterprise excluding industrial facilities may be included in this PoA.

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In the event that the project owner is not the owner of the facility, a contract will need to be established between the project owner and the owner of the facility/03/. The contract must cover at least the following:

- Access/ availability of data
- Enforce the implementation of the monitoring plan
- Ownership of the credits must be specified to avoid double-counting.

CL 1 was raised in this regard and has been addressed.

There will be transfer of knowledge from the countries supplying the cogeneration and/or trigeneration systems to South Africa. However there will be no technology transfer from any Annex-1 party/02/. In accordance with the methodology, the energy savings caused by a single project activity shall not exceed the equivalent of 60 GWh per year.

The proposed PoA involves use of a single source of fuel, natural gas for simultaneous production of electricity and cooling and/or heating. Thus the emission reductions at the CPA level would occur mainly due to cogeneration or trigeneration at commercial sites.

The baseline options available for PoA, in line with §12 of methodology, AMS-II.K, version 01/B02/ are:

- (a) Electricity is imported from the grid;
- (b) Cooling (e.g. chilled water) is produced in a vapour compression system driven by electricity;
- (c) Heating (e.g. hot water) is produced using electricity.

CPAs to be included in PoA shall not include generation of electricity in a captive power plant in the baseline scenario.

As per the PoA-DD/03/ and on-site interviews it was confirmed that there are no mandatory requirements to implement cogeneration and/or trigeneration systems in South Africa. The CPA implementer(s) will voluntarily install the new technology. CL 2 was raised in this regard and has been addressed. This also confirms to the requirement of § 4 of EB 55 annex 38/B03-3/. The technology described in the PoA complies with all laws and regulations in South Africa. South Africa is supportive of co-generation as mentioned in the Renewable Energy White Paper and the Energy Efficiency Strategy /14/ /15/, but these are not mandatory policies. CAR 4 was raised in this regard and is successfully closed.

From the site visit interviews /a/ /b/ and desk review of PoA DD and other associated template documents, it is revealed that this programme does not involve any ODA funding. Thus, the validation team considers that no ODA funding from any Annex 1 country has been involved under this programme. This is further confirmed by the undertaking /10/ provided by the CME.

The GHG emission reductions can be attributed to the simultaneous production of electricity and cooling and/or heating, from a single fuel source. The energy savings caused by a single project activity will displace FF dominated grid electricity. A typical baseline of the CPA of the PoA as per the PoA DD shall be electricity(imported from grid) and cooling (e.g. cooling from electricity) and/or heating separately (e.g. hot water from electricity) and thus this energy saving leads reduction in GHG emissions. Emission reductions in the CPA would be the difference of Baseline emissions and Project emissions and leakage emissions. Baseline emissions due to electricity produced by a captive power plant are not included in the PoA as no captive power plants would be there in the baseline for PoA and are not included within the scope of PoA also the steam generated from boiler is not included under the scope of the PoA. Also, leakage emissions identified in § 24 and § 25 of the methodology, AMS-II.K, version 01/B02/ are not to be included in the PoA/03/ as the displaced energy generating equipment shall not be transferred in the PoA and displaced refrigerant if identified as a greenhouse gas shall be destroyed/03/. Leakage emissions shall only be accounted from the upstream natural gas system/03/, identified in § 27 of the methodology, AMS-II.K, version 01/B02/.

As per the PoA-DD/03/, the starting date of the PoA in the PoA-DD/03/ is 01/02/2013. The length of the PoA is taken as 28 years. The starting date of the validation of the PoA is 12/07/2011 i.e. the date the PoA was published for GSC. In the PoA-DD/03/ and g-CPA DD/04/, it has been confirmed that no CPA shall be applicable for the inclusion in the PoA if the start date is before the start of validation. This is in conformity with the § 7(d) of annex 38 of EB 55/B03-3/

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3.4 Eligibility Criteria for CPA Inclusion

Review of PoA-DD /03/, g-CPA-DD template /04/ and on-site interview with representatives of CME reveals that the CME of the PoA employs clear and unambiguous criteria for the inclusion of the CPAs. The eligibility criteria have been stated and validation team confirms the eligibility criteria are in line with requirement of § 14, annex 3 of EB 65 /B03-5/. Additionality and applicability of the applied methodology and the eligibility criteria are as per the PoA-DD/03/, which is deemed appropriate and acceptable to the validation team. This also confirms to the requirement of the § 15(b) of EB 55 annex 38/B03-3/. The eligibility criteria can be checked at the CPA level by the CME and shall be confirmed by the DOE before inclusion of the CPAs in the PoA.

| Sl. No. | Eligibility criteria description in PoA-DD/03/ and g-CPA-DD/04/ | Information/document required as listed in the PoA-DD/03/ and g-CPA-DD/04/ | Assessment by the validation team |
|---------|--|--|---|
| 1. | <p>The geographic boundary set for the PoA is South Africa (host country). The SSC-CPA location is verified against this by the CME. The details of the SSC-CPA location provided by the project participant shall be crosschecked with one or more of the following documents by the CME at the time of inclusion to the PoA:</p> <ul style="list-style-type: none"> • Detailed project report • Land documents with clear definition of the project location • EPC/ Purchase Order Letter of Intent with the site location details • Any Statutory Approvals / clearance received for the project having the mention of project location details | <ul style="list-style-type: none"> • Detailed project report • Land documents with clear definition of the project location • EPC/ Purchase Order Letter of Intent with the site location details • Any Statutory Approvals / clearance received for the project having the mention of project location details | <p>At the time of inclusion request of any proposed CPA, DOE shall verify by the means of documents submitted that the CPA is located within the geographical boundary of South Africa. Geographical coordinates provided in the documents shall be used for reference by CME. This shall also be checked from Criteria declaration letter from CME.</p> <p>This is acceptable.</p> |
| 2. | <p>The double counting of emission reductions occur when the SSC-CPA part of the present PoA has been registered or has proposed to register under the CDM of the UNFCCC or any other voluntary scheme for availing GHG emission reduction benefits. Should such a case occur, then the CME will not proceed with inclusion of the corresponding SSC-CPA under the proposed PoA. In order to avoid the same, the CME shall assign a Unique Identification</p> | <p>a) Project location with any of the documents mentioned in point (a)</p> <p>b) Cross-checking of the SSC-CPA geo co-ordinates.</p> <p>c) Comparing between the CME database and the list of project activities that have submitted prior consideration for CDM, that are under validation, registered, rejected or withdrawn available on the UNFCCC website.</p> <p>d) Undertaking from the SSC-CPA project developer.</p> | <p>At the time of inclusion request of any proposed CPA, CME shall submit the information to the DOE who will be performing validation for the consistency and integrity check. This shall also be checked from Criteria declaration letter from CME/11/.</p> <p>This is done to avoid the double counting of the project activity.</p> <p>This is acceptable.</p> |

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| | <p>Number to the SSC-CPA(s) and shall cross verify with the following documents / sources at the time of SSC-CPA inclusion to the PoA and submit one of the below to the DoE at the time of validation/ verification:</p> <p>a) Project location with any of the documents mentioned in point (a)</p> <p>b) Cross-checking of the SSC-CPA geo co-ordinates.</p> <p>c) Comparing between the CME database and the list of project activities that have submitted prior consideration for CDM, that are under validation, registered, rejected or withdrawn available on the UNFCCC website.</p> <p>d) Undertaking from the SSC-CPA project developer.</p> | | |
| 3. | <p>The technology / measure allowed under the PoA must be the installation of new natural gas based cogeneration or tri-generation systems that simultaneously produce electricity and cooling (e.g. chilled water) and/or heating (e.g. warm or hot water) for supplying such energy to commercial or non-industrial buildings.</p> <p>For the purpose of this programme, natural gas is defined as a gas which consists primarily of methane and which is generated from: (i) natural gas fields (non-associated gas), (ii) associated gas found in oil fields. It may be blended up to 1% on a volume basis with gas from other sources, such as, inter alia, biogas generated in biodigesters, gas from coal mines, gas which is gasified from solid fossil</p> | <ul style="list-style-type: none"> • Detailed Project Report • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate | <p>At the time of inclusion request of any proposed CPA, CME shall submit the mentioned evidences to the DOE who will be performing validation for the consistency and integrity check.</p> <p>This eligibility criterion will ensure that the technology/ measure including the level and type of service, performance specifications including compliance with testing/ certifications shall be as per the requirements of methodology. This shall also be checked from Criteria declaration letter from CME/11/. This is acceptable.</p> |

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| | <p>fuels.</p> <p>The system may replace or supplement either: the operation of (a) existing systems that supply electricity (grid or on-site generation) and cooling (e.g. chillers) and/or heating systems (e.g. boilers) or (b) electricity and cooling and/or heating systems that would have been built and utilized. If the system is replacing or supplementing (a)- an existing system, then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available.</p> <p>Onsite captive power plants are excluded and the existing system has to be grid connected.</p> <p>Facilities using or producing steam is excluded from this PoA. The design, layout and temperatures of the water streams will serve as confirmation.</p> <p>The methodology does not apply to the replacement of existing co-generation or trigeneration systems.</p> <p>Various types and designs of co-generation or trigeneration facilities exist, and these are all valid under this programme.</p> <p>To verify the same, the CME shall check the SSC-CPA technology adopted with the aid of one or more of the following documents:</p> <ul style="list-style-type: none"> • Detailed Project Report • Technology offer | | |
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| | <p>along with the specifications provided by the supplier/ Tender form</p> <ul style="list-style-type: none"> • Purchase order copies • Project commissioning certificate | | |
| 4. | <p>The start date shall be considered to be the date on which the SSC-CPA project participant has committed to expenditures related to the implementation or related to the construction of the SSC-CPA and should not be before the webhosting date of 12/07/2011.</p> <p>To verify the same, the CME shall check the date of the SSC-CPA EPC contracting/ purchase order placement / appropriate documentary evidence by the project participant. Further it is verified that these activities have happened after the commencement of PoA validation.</p> | SSC-CPA EPC contracting/ purchase order placement / appropriate documentary evidence by the project participant. | <p>At the time of inclusion request of any proposed CPA, CME shall submit the mentioned documentary proof and criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check.</p> <p>This eligibility criterion will ensure that the start date of the CPA is after the date of start of validation of PoA, i.e. later than the date of global stakeholder consultation for the PoA.</p> |
| 5. | <p>Each CPA must meet the applicability criteria for methodology AMS-II-K version 01.0.):</p> <ul style="list-style-type: none"> - This methodology applies only to the installation of natural gas based co-generation or tri-generation facilities that simultaneously produce electricity and cooling (e.g. chilled water) and/or heating (e.g. hot water) for supplying such energy to commercial, non-industrial, buildings. - This methodology only applies to | <ul style="list-style-type: none"> • Annual report or company website • Signed declaration from the project participant • Detailed Project Report • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate | <p>At the time of inclusion request of any proposed CPA, CME shall submit the mentioned documentary proof to the DOE who will be performing validation for the consistency and integrity check.</p> <p>This eligibility criterion will ensure that the CPA meets the applicability conditions of the methodology, AMS-II.K, version 01.</p> |

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| | <p>commercial, non-industrial applications that comprise energy efficiency measures implemented through integration of a number of utility provisions (for example, integrating power, steam/heat and cooling systems). Industrial facilities cannot apply this methodology.</p> <p>To verify the same, the CME shall check the SSC-CPA is a commercial, non-industrial applications with the aid of one or more of the following documents:</p> <ul style="list-style-type: none">• Annual report or company website• Signed declaration from the project participant <p>The CME shall also check the SSC-CPA technology adopted and fuel used with the aid of one or more of the following documents:</p> <ul style="list-style-type: none">• Detailed Project Report• Technology offer along with the specifications provided by the supplier/ Tender form• Purchase order copies• Project commissioning certificate <p>The methodology is applicable to installation of new cogeneration or tri-generation systems that replace or supplement either: the operation of (a) existing systems that supply electricity (grid or on-site generation) and cooling (e.g. chillers) and/or heating systems (e.g. boilers) or (b) electricity and cooling and/or heating systems</p> | | |
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| | <p>that would have been built and utilized.</p> <p>The CME will verify the compliance through</p> <ul style="list-style-type: none"> • Detailed Project Report • Existing system specification, if relevant • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies <p>The methodology does not apply to the replacement of existing co-generation or trigeneration systems.</p> <p>The PoA does not allow the transfer of energy generating equipment to or from another project.</p> <p>The CME will verify compliance through</p> <ul style="list-style-type: none"> • Detailed Project Report • Existing system specification, relating to electricity, heating and cooling demand. <p>For this PoA, if it is identified that the baseline situation is the continued use of existing system then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available.</p> <p>The CME will verify compliance through: The historic records of power consumption and performance for three years prior to project implementation.</p> <p>This methodology only applies to commercial, non-industrial applications. Projects that comprise</p> | | |
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| | <p>energy efficiency measures implemented through integration of a number of utility provisions (for example, integrating power, steam/heat and cooling systems) of an industrial facility cannot apply this methodology</p> <p>The CME will verify this through the review of the</p> <ul style="list-style-type: none">• Detailed Project Report <p>For the purpose of this methodology, natural gas is defined as a gas which consists primarily of methane and which is generated from: (i) natural gas fields (non-associated gas), (ii) associated gas found in oil fields. It may be blended up to 1% on a volume basis with gas from other sources, such as, inter alia, biogas generated in biodigesters, gas from coal mines, gas which is gasified from solid fossil fuels</p> <p>The CME will verify compliance through review of the Detailed Project Report including technical specifications such as the fuel source supplier and composition.</p> <ul style="list-style-type: none">- Any chilled water/cooling, steam/hot water/heat and electricity produced by the cogeneration or trigeneration system must be used on-site (within the project boundary) to meet all or part of the energy demand. <p>To verify the same, the CME shall check the SSC-CPA technology adopted with the aid of one or more of the following documents:</p> | | |
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| | <ul style="list-style-type: none"> • Detailed Project Report including a clear demarcation of existing and new systems • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate <p style="margin-left: 40px;">– The energy savings caused by a single project activity may not exceed the equivalent of 60 GWh per year.</p> <p>To verify the same, the CME shall check the SSC-CPA technology adopted with the aid of one or more of the following documents:</p> <ul style="list-style-type: none"> • Detailed Project Report • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate <p style="margin-left: 40px;">– This project activity can include installation of cooling equipment which use refrigerants only if such refrigerants have no ozone depleting potential (ODP). South Africa became a signatory of the Montreal Protocol in January 1990. This international agreement was put in place to control the production and the use of ozone-depleting substances.</p> <p>The re-use of refrigerant</p> | | |
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| | <p>from displaced equipment is excluded. The CME will confirm if the displaced refrigerant is a greenhouse gas as defined in Annex A of the Kyoto Protocol or in paragraph 1 of the Convention, and if so, proof of destruction must be provided.</p> <p>To verify the same, the CME shall check the SSC-CPA technology adopted with the aid of one or more of the following documents:</p> <ul style="list-style-type: none">• Detailed Project Report• Technology offer along with the specifications provided by the supplier/ Tender form• Purchase order copies• Declaration from the project participant or technology provider <p style="margin-left: 40px;">– This programme is only applicable to project activities where the CPA implementer is the owner of the facility where the co-generation or trigeneration system is being implemented or a contract between the project owner and consumer of the energy must be in force, during the crediting period, specifying that only the facility generating the energy can claim CERs from the emissions displaced by the subject project.</p> <p>To verify compliance, the CME shall check the SSC-CPA is a commercial, non-industrial applications with the aid of one or more of the following documents:</p> | | |
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| | <ul style="list-style-type: none"> • Annual report or company website • Signed declaration from the project participant • Contracts between project owner and the consumer of energy <p>Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of natural gas outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero.</p> <p>Compliance will be verified by reviewing the</p> <ul style="list-style-type: none"> • Detailed project report on the source of the natural gas and the relevance of leakage for the project. <p>No other methodologies will be used.</p> <p>Each CPA must also meet the applicability criteria for the following tools: Tool to calculate the emission factor for an electricity system (Version 02.2.1) Tool to calculate project or leakage CO2 emissions from fossil fuel combustion (Version 02) 'Tool to calculate baseline, project and/or leakage emissions from electricity consumption', (Version 01)</p> <p>The CME to verify the same shall take an undertaking from the SSC-CPA implementing entity at</p> | | |
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| | <p>the time of inclusion to the PoA.</p> <p>Further the justification to how the chosen methodology is applicable to the SSC-CPA is given in detail in section E.2 of this PoA.</p> | | |
| 6. | <p>Each CPA shall prove additionality in accordance to “Guidelines on the demonstration of additionality of small-scale project activities” EB 68, Annex 27.</p> <p>Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to the existence of at least one of the following barriers:</p> <ul style="list-style-type: none"> • Investment barrier • Technological barrier • Barrier due to prevailing practice • Other barriers <p>Additionality will be demonstrated at the CPA level in the CPA-DD and checked by the CME.</p> <p>The CPA implementer is to provide evidence to prove the existence of the barrier as well as an explanation as to how the CDM alleviated the existence of the barrier.</p> <p>In the case of proving the investment barrier, the CPA implementer shall use Equity IRR or other appropriate indicator or apply benchmark analysis or may use the framework financial calculation sheet provided. In the case of proving the technology barrier, the CPA implementer may confirm this through an independent report including but not limited to:</p> | <p>The CPA implementer is to provide evidence to prove the existence of the barrier as well as an explanation as to how the CDM alleviated the existence of the barrier.</p> <p>In the case of proving the investment barrier, the CPA implementer may use the framework financial calculation sheet provided. The CPA implementer may also provide documentary evidence of the project’s debt provider taking CDM into account.</p> | <p>At the time of inclusion request of any proposed CPA, CME shall submit the documentary proof with regards to the identified barrier to the DOE who will be performing validation for the consistency and integrity check. This eligibility criterion will ensure that CPAs meet the requirements pertaining to the demonstration of additionality.</p> |

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| | <p>performance uncertainty or low market share of the new technology adopted for the project activity, or the demonstration of non-availability of human capacity to operate and maintain the technology, or lack of infrastructure to utilize the technology, or unavailability of the technology, or high level of technology risk.</p> <p>In case of the proving the prevailing practice barrier, the demonstration should include, but not be limited to, that the proposed project is among the first of its kind in terms of technology, geography, sector, type of investment and investor or market</p> <p>In case of demonstrating other barriers the demonstration should include information about institutional barriers or limited information, managerial resources, organizational capacity, or, or capacity to absorb new technologies.</p> <p>Thus in accordance with the above ruling, at the time of SSC-CPA inclusion, the additionality of the SSC-CPA shall be evaluated on the basis that if the proposed SSC-CPA(s) meets the eligibility criteria in section E.5.2 of the PoA, the SSC-CPA shall be deemed additional.</p> | | |
| 7. | <p>Local stakeholder participation will be conducted on a CPA level. The minimum requirements are to invite comments from the local stakeholders by publishing newspaper articles in the local papers in both English and the native language, describing the project and informing stakeholders of the registration of the project under the CDM.</p> | <p>The CPA implementer must provide copies of the newspaper to the CME.</p> <p>The environmental impact analysis will be conducted at a CPA level in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998).</p> | <p>At the time of inclusion request of any proposed CPA, CME shall submit the documentary proof and criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check. This eligibility criterion will ensure that conditions related to</p> |

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| | <p>The CPA implementer must provide copies of the newspaper to the CME.</p> <p>The environmental impact analysis will be conducted at a CPA level in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998).</p> | | <p>undertaking local stakeholder consultations and environmental impact analysis are met by CPAs.</p> |
| 8. | <p>The target group is commercial buildings in South Africa.</p> <p>In the case that the CPA is in existing facility then either of</p> <ul style="list-style-type: none"> • Detailed Project Report • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate or • An undertaking from the CPA implementer can be provided as supporting document to the CME. <p>There are no specific distribution mechanisms.</p> | <p>In the case that the CPA is in existing facility then either of</p> <ul style="list-style-type: none"> • Detailed Project Report • Technology offer along with the specifications provided by the supplier/ Tender form • Purchase order copies • Project commissioning certificate or • An undertaking from the CPA implementer can be provided as supporting document to the CME. | <p>At the time of inclusion request of any proposed CPA, CME shall submit the documentary proof to the DOE who will be performing validation for the consistency and integrity check.</p> <p>This eligibility criterion will ensure that conditions related to the target group of commercial buildings in South Africa is met by the CPAs.</p> |
| 9. | <p>No sampling will be done within the PoA.</p> <p>Not applicable</p> | Not applicable | <p>At the time of inclusion request of any proposed CPA, CME shall submit the criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check.</p> <p>This will ensure no sampling will be done within PoA.</p> |
| 10. | <p>The energy savings caused by a single project activity may not exceed the equivalent of 60 GWh per year. A maximum saving of 60 GWh is equivalent to maximum savings of 60 GWh_e of electricity consumption or maximum savings of 180 GWh_{th} of fuel consumption, i.e. for calculation of maximum savings allowable per year, 1 GWh_e equals 3 GWh_{th}.</p> | <p>CPA implementer to provide baseline data and calculation to the CME.</p> | <p>At the time of inclusion request of any proposed CPA, CPA implementer shall provide description of baseline data and calculation in CPA-DD and CME shall confirm by providing the criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check.</p> |

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| | <p>If a project activity is aims to achieve energy savings at a scale of no more than 20 gigawatt hours per year then latest approved version of the “Guidelines for demonstrating additionality of microscale project activities” must be followed as demonstrated in E.5.2 below.</p> <p>Each CPA must be approved by the CME to ensure this condition prior to its incorporation into the PoA.</p> <p>CPA implementer to provide baseline data and calculation to the CME</p> | | <p>This will ensure that the CPAs meet the criteria for small-scale/micro-scale project activities.</p> |
| <p>11.</p> | <p>The CPA must meet the requirements for the debundling check for the small-scale (SSC) project category. The CME will confirm that the steps for the debundling check has been taken, and will keep record of the conclusion.</p> <p>Debundling for a PoA is determined according to the following rule: A proposed small-scale project activity shall be deemed to be a debundled component of a large scale activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:</p> <ol style="list-style-type: none"> a. with the same project participants; b. in the same project category and technology/measure; c. registered within the previous 2 years; and d. whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point. (EB 54, Annex 13, paragraph 2). <p>However, if the combined</p> | <p>Description in CPA-DD shall be checked for debundling.</p> | <p>At the time of inclusion request of any proposed CPA, CPA implementer shall provide description of debundling check in CPA-DD and CME shall confirm by providing the criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check. This will ensure that the CPAs meet the criteria for debundling.</p> |

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| | <p>size of proposed small-scale CPAs (that are deemed to be debundled components of a large-scale CPA) does not exceed the relevant limits for that type of small-scale project, the bundle will be eligible to use the simplified modalities and procedures:</p> <p>If a proposed small-scale CPA of a PoA is deemed to be a debundled component, but the total size of such an activity combined with the previous registered small-scale CDM project activity does not exceed the limits for small-scale CDM project activities as set out in paragraph 6(c) of the decision 17/CP.7, the project activity can qualify to use simplified modalities and procedures for small-scale CDM project activities (EB 54, Annex 13, paragraph 3).</p> | | |
| 12. | <p>The CME will investigate the facts in each CPA and in each CPA-DD include a confirmation that no Official Development Assistance will be involved or diverted. The latter must be substantiated with an official statement from the CPA implementer that will be provided and stored by the CME.</p> <p>The CPA implementer to provide confirmation of no Official Development Assistance to the CME.</p> | The CPA implementer to provide confirmation of no Official Development Assistance to the CME. | At the time of inclusion request of any proposed CPA, CME shall provide documents as evidence and the criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check. This will ensure that the CPAs do not involve any official development assistance. |
| 13. | <p>In the event that the project owner is not the owner of the facility, a contract will need to be established between the two entities. The contract must cover at least the following:</p> <ul style="list-style-type: none"> • Access/ availability of data • Enforce the implementation of | The CME will either need documentation to verify that the project owner is the owner of the facility or see a contract between the project owner and facility owner. | At the time of inclusion request of any proposed CPA, CME shall provide documents as evidence and the criteria declaration letter/11/ to the DOE who will be performing validation for the consistency and integrity check. This will ensure that the |

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| | <p>the monitoring plan</p> <ul style="list-style-type: none">Ownership of the credits must be specified to avoid double-counting. <p>The CME will either need documentation to verify that the project owner is the owner of the facility or see a contract between the project owner and facility owner.</p> | | <p>CPAs meet that the CPA implementer has authority to implement project activity at the commercial facility.</p> |
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Validation team has checked the CME Management Manual /11/ and based on these documents and on-site interview with personnel involved at the CME end, validation team confirms that the CME has competencies to check the features of potential CPAs of PoA and also have competency to check that each CPA meets all requirements and eligibility criteria before submission to the DOE for the inclusion. The CME will confirm that all criteria are met by duly signing the eligibility criteria declaration /11/. Based on above validation team confirms the compliance of § 14 -15 of annex 3 of EB 65 /B03-05/.

3.5 Operation and Management Plan

Validation team based on the review of PoA DD /03/ and CME Management Manual /11/ confirms that clear and transparent description of the operational and management arrangement has been established by the CME for the PoA. The same has also been confirmed during the on-site interview. All the details of individual CPAs including the documents shall be controlled at CME end. The CME will operate a PoA monitoring database including the CPAs for the PoA. CME will be responsible for data collection and archiving. Following information shall be provided by the CPA to CME during inclusion:

- Name of the CPA
- Name of the CPA developer
- Contact details of the CPA developer including contact person, address, telephone and/or email address
- Installed capacity and other relevant technical specifications of each CPA
- Location of the CPA (e.g. GPS coordinates)
- Project start date of the CPA as defined in EB70, Annex 7
- The commissioning date of the equipment
- The crediting period for each CPA;
- The signed agreement with the CME to participate in the programme
- The CME checks this data for quality and consistency.

Also during crediting period Verification status, CPA monitoring records and monitoring reports of each CPA shall be provided to CME.

By reviewing this validation team confirms that the CME have the competencies to check the features of potential CPAs and can ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. Based on above, validation team confirms the compliance of following, in the management system of CME (in line with the requirement of §17 annex 3 of EB 65 /B03-5/)

An eligibility criterion has been developed to avoid double counting of the CPAs. It shall be validated during inclusion. Also, PoA monitoring database will report and contain the physical location of each CPA.

CME will ensure that the project activity is not a debundled component of already registered by checking the UNFCCC project database. A CPA shall meet the conditions of debundling stated in eligibility criteria for inclusion/03/. 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:

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(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.

The criteria for debundling has been provided in line with § 10 of EB 54 Annex 13/B03-7/.

CME is also required to sign a contract with each CPA owner to ensure that CPA implementer is aware of subscribing to PoA.

Based on above it can be confirmed that the CME would be able to ensure that no double counting occurs. Also, since as each CPA is uniquely identified by the unique identification number assigned during CPA inclusion. CME can check whether a CPA under the PoA is already a registered CDM project or CPA in another PoA from the UNFCCC website. Based on above validation team confirms to the requirement of the §6 (i) and § 15(c) of EB 55 annex 38/B03-3/.

Operational and Management arrangements for the PoA meet the requirements of § 165 (a) of VVM, version 01.2 /B01/.

3.6 Monitoring Plan

There is no sampling approach for the verification of the CPAs of the PoA. CME of the PoA shall opt each of the CPA for the verification. As per PoA DD /03/, Furthermore for the monitoring parameters to be opted by CPAs of the PoA, no sampling is required for any of the parameters. 100% data shall be monitored and no parameters shall be monitored on sampling approach. The same has been verified from the PoA DD /03/. Review of monitoring plan provides a transparent system to ensure that no double counting occurs and that the status of verification can be determined any time for each CPA. The system to avoid double counting has been indicated in the PoA DD /03/. CL 8 and CAR 8 were raised in this regard and have been addressed. This confirms to the requirement of the §6 (j) of EB 55 annex 38/B03-3/.

The main roles and responsibilities and the general scheme of monitoring plan has also been indicated in the PoA-DD.

- The Carbon Protocol of SA is the PoA managing entity and is responsible for the project documentation of the PoA and CPA.
- The installation of the cogeneration and/or trigeneration systems will typically be managed by the owner(s) of each commercial site (the CPA implementer(s)).
- The Carbon Protocol of SA(the CME) has opted to verify each CPA individually. /03/

An online database will be developed by the managing entity, which will record the start and end dates of each monitoring period, as well as the emission reductions for each CPA during the monitoring period. Also, CPA details will be provided with the same. This is done to ensure that no double counting occurs for the CPAs in PoA.

Each CPA will produce a monitoring report at the end of its monitoring period. This report will contain all of the data relating to the CPA's emission reductions during the monitoring period. This report will then be submitted to the DOE for verification. The records and documents pertaining to the monitoring and verification of each CPA will be maintained by the managing entity/03/. This shall ensure that the status of verification can be determined anytime for each CPA.

The description provided in the PoA-DD /03/ on the operational and management arrangements were confirmed based on document review and through on-site interviews.

3.7 Baseline and monitoring methodology

3.7.1 Applicability of selected methodology

The compliance of the applied baseline and monitoring methodology /B02/ is a part of eligibility criteria as mentioned in the PoA DD /03/ and g-CPA DD /04/. The DOE shall check the same during inclusion

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of the CPA in the PoA. The assessment of the validation team (for the requirement to be checked during inclusion) is summarised below:

Applicability of AMS-II.K (version 1)

| Criteria of methodology | Justification in PoA-DD/03/ and g-CPA-DD/04/ | Assessment by the validation team |
|--|---|--|
| Applicability to project activities: | | |
| This methodology applies to the installation of fossil fuel based co-generation or tri-generation facilities that simultaneously produce electricity and cooling (e.g., chilled water) and/or heating (e.g., steam or hot water) for supplying such energy to commercial, non-industrial, buildings. | Each CPA involves the installation of a new natural gas cogeneration or trigeneration system that simultaneously produce electricity and cooling (e.g., chilled water) and/or heating (e.g., hot water) for supplying such energy to commercial, non-industrial, buildings. | It shall be checked during inclusion of CPAs that it involves the installation of a new fossil fuel based cogeneration or trigeneration system that produces electricity and cooling and/or heating. |
| The methodology is applicable to installation of new cogeneration or tri-generation systems that replace or supplement either: the operation of (a) existing systems that supply electricity (grid or on-site generation) and cooling (e.g., chillers) and/or heating systems (e.g., boilers) or (b) electricity and cooling and/or heating systems that would have been built and utilized. | Each CPA involves the installation of a new cogeneration or trigeneration system. The system will replace or supplement either: the operation of (a) existing systems that supply and cooling and/or heating systems, or (b) electricity and cooling and/or heating systems that would have been built and utilized. | It shall be checked during CPA inclusion by CME that each CPA involves the installation of a new cogeneration and trigeneration system. The system will replace or supplement either: the operation of (a) existing systems that supply and cooling and/or heating systems, or (b) electricity and cooling and/or heating systems that would have been built and utilized. |
| The methodology does not apply to the replacement of existing co-generation or tri-generation systems. | Each CPA involves the installation of a new cogeneration or trigeneration system, and not the replacement of an existing cogeneration or trigeneration system. | It shall be checked during CPA inclusion that CPA does not involve replacement of existing co-generation or trigeneration systems and they only involve installation of a new cogeneration or trigeneration system. |
| If it is identified that the baseline situation is the continued use of existing system then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available. | If it is identified that the baseline situation is the continued use of the existing system then each CPA is implemented at a commercial site with a cooling and/or heating system. The existing system will in this case, have been in operation for at least three years prior to the start date of the programme activity. In the case of a new installation, this criterion is not applicable. | It shall be checked during CPA inclusion by CME that only a new installation is involved. |
| This methodology only applies to commercial, non-industrial applications. Projects that comprise energy efficiency measures implemented through | Each CPA will be implemented at a commercial or non-industrial building. With regard to this PoA, a commercial facility is classified as the premises of a business | It shall be ensured by the CME during CPA inclusion that the CPA is implemented only at a commercial, non-industrial building. |

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| <p>integration of a number of utility provisions (for example, integrating power, steam/heat and cooling systems) of an industrial facility cannot apply this methodology.</p> | <p>enterprise excluding industrial facilities.</p> | |
| <p>For the purpose of this methodology, natural gas is defined as a gas which consists primarily of methane and which is generated from (i) natural gas fields (non-associated gas), (ii) associated gas found in oil fields. It may be blended up to 1% on a volume basis with gas from other sources, such as, inter alia, biogas generated in biodigesters, gas from coal mines, gas which is gasified from solid fossil fuels, etc.</p> | <p>The gas fed to the internal combustion engine(s) in each CPA will The gas fed to the internal combustion engine(s) in each CPA will qualify as natural gas under the definition as per the methodology.</p> | <p>It shall be checked during CPA inclusion by the CME that the natural gas fed to the internal combustion engine(s) in each CPA consists primarily of methane.</p> |
| <p>Any chilled water/cooling, steam/hot water/heat and electricity produced by the cogeneration or trigeneration system must be used on-site (within the project boundary) to meet all or part of the energy demand. Existing chillers, boilers, electrical heaters, electricity generating units, etc. may remain in operation after the implementation of the project activity to either (a) supply the balance of the demand not met by the cogeneration or trigeneration systems if the cogeneration or trigeneration system has insufficient capacity to supply the total energy demand and/or (b) provide backup to the cogeneration or trigeneration facilities. However, emission reductions can only be claimed for the cooling, heat and electricity produced by the new cogeneration or trigeneration system.</p> | <p>The chilled water/cooling; steam/hot water/heat; and electricity produced by the cogeneration and/or trigeneration system will be used on-site to meet all or part of the building's energy demand.</p> <p>Compliance needs to be demonstrated in the detailed project plan or technical project specification, including the description of the existing and project future supply and demand.</p> <p>Emission Reductions will only be claimed for cooling, heat and electricity produced by the new co-generation or tri-generation system.</p> | <p>It shall be checked during inclusion of the CPA by the CME.</p> |
| <p>The energy savings caused by a single project activity may not exceed the equivalent of 60 GWh per year. A maximum saving of 60 GWh is equivalent to maximum savings of 60</p> | <p>Each CPA will result in energy savings of less than 60 GWh or maximum savings of 180 GWh_{th} of fuel consumption, per year for both systems that replace or supplement either: the operation of (a) existing systems that supply electricity (grid or on-site</p> | <p>It shall be checked during inclusion of the CPA that the energy savings are less than 60 GWh per year for the systems.</p> |

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| <p>GWh_e of electricity consumption or maximum savings of 180 GWh_{th} of fuel consumption, i.e., for calculation of maximum savings allowable per year, 1 GWh_e equals 3 GWh_{th}.</p> | <p>generation) and cooling (e.g. chillers) and/or heating systems (e.g. boilers) or (b) electricity and cooling and/or heating systems that would have been built and utilized.</p> <p>This item is evaluated by eligibility criterion (e) and (j) as well as in the technical project specifications stating the expected maximum energy savings.</p> | |
| <p>This project activity can include installation of cooling equipment which use refrigerants only if such refrigerants have no global warming potential (GWP) and no ozone depleting potential (ODP) and if such installation is not mandated by laws or regulations.</p> | <p>If the CPA makes use of equipment which use refrigerants, these refrigerants will have no global warming potential (GWP) or ozone depleting potential (ODP).</p> | <p>It shall be checked during inclusion of the CPA by the CME.</p> |
| <p>In case the produced electricity, cooling and/or heat are delivered to a facility that is not owned or under the control of the project owner, a contract between the project owner and consumer of the energy must be in force, during the crediting period, specifying that only the facility generating the energy can claim CERs from the emissions displaced by the subject project.</p> | <p>The electricity, cooling and/or heating in each CPA will be used on-site at each commercial site.</p> <p>In case where the facility is not owned or under the control of the project owner a contract between the project owner and consumer of energy should be in place specifying that only the facility generating the energy can claim CERs from the project.</p> | <p>It shall be ensured in each CPA that electricity, cooling and/or heating will be used on-site at each commercial site.</p> |
| <p>Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero.</p> | <p>CPAs in this programme will calculate leakage in accordance to ACM0009 version 04.0.0.</p> <p>Where reliable and accurate data on upstream CO₂ emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re-gasification and compression of LNG into a natural gas transmission or distribution system is available, project participants should use this data to determine an average emission factor. Where such data is not available, project participants may assume a default value of 6 tCO₂/TJ as a rough approximation. The calculation for this leakage is provided in E.6.2 of PoA-DD.</p> | <p>It shall be ensured for each CPA that the leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels are calculated in line with the methodology ACM0009 version 04.0.0/B04-5/. Hence acceptable to validation team.</p> |

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CAR 10 was raised in this regard and has been addressed. Based on above validation team confirms to the requirement of the §6 (f) of EB 55 annex 38/B03-3/.

3.7.2 PoA and CPA boundary

The geographic boundary of the PoA is confirmed to within RSA, checked and confirmed by reviewing the PoA-DD /03/.

The boundary of the potential/future CPAs of the PoA has been assessed by considering information gathered from the site visit, interviews, and from the technological description of the different technological scenarios of the PoA as stated in the PoA DD /03/.

Validation team confirms that the project boundary for the potential/future CPAs is based on the applied methodology /B02/ and the sources and gases within the boundary have been considered in a clear manner as detailed below:

- A) For the purpose of determining project activity emissions, each CPA includes:
- CO₂ emissions from fossil fuel consumption due to the CPA project activity;
 - CO₂ emissions from supplemental electricity consumption.
- B) For the purpose of determining baseline emissions, each CPA includes the following emissions sources:
- CO₂ emissions from electricity generation in grid used directly and indirectly (through use of heating and/or cooling equipment);
- C) For the purpose of determining leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary, each CPA includes the following emissions sources :
- CO₂ emissions from resulting from leakage resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary
- D) The spatial extent of each CPA comprises:
- In accordance with the methodology AMS-II.K (Version 1.0.0)/B02/ the spatial extent of CPA boundary is the site where the cogeneration or trigeneration system is being implemented and the facility (ies) consuming the energy generated by the project activity.

Validation team based on the above confirms that the project boundary as documented in the PoA-DD/03/ is justified for the project activity and is fully in line with the requirements set by the applied methodology /B02/ and § 81 of VVM version 01.2. /B01/

3.7.3 Baseline Scenario

In accordance with the methodology AMS-II.K (Version 1.0.0) the baseline scenario for baseline emission calculations shall depend (a) on the source of electricity and (b) the technology that would have been used to produce heating and/or cooling, in the absence of the project activity. The baseline options applicable to the methodology are:

- Electricity is imported from the grid;
- Cooling (e.g., chilled water) is produced in a vapour compression system driven by electricity;
- Heating (e.g., hot water) is produced using electricity.

The baseline scenario is selected from one of these scenarios:

- Replacing/Supplementing existing systems.

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- Replacing systems that would have been built.

PoA includes both the scenarios for the CPAs and a baseline scenario shall be demonstrated at the CPA level depending whether it is for existing or a new system. In cases where the baseline scenario consists of the installation of new cooling and/or heating systems and/or the utilization of new electricity sources, a reference plant shall be defined as the baseline scenario. CAR 6 was raised in this regard and has been addressed.

The detailed identification of baseline scenarios shall be provided at the CPA level. This has been provided in line with § 22 of the “General Guidelines for SSC CDM methodologies”, version 19/B05/. The alternative scenarios identified at the PoA level are:

1. Proposed project activity not undertaken as a CDM project activity.
2. Greenfield fossil fuel fired power plant to meet the facility’s energy, heating and cooling requirement.
3. Greenfield renewable energy based power plant to meet the facility’s energy, heating and cooling requirement.
4. Captive energy generation with lower efficiency or lower recovery than the project activity.
5. Electricity is imported from the grid to meet the facility’s energy, heating and cooling requirement.

Based on the steps provided in § 22 of the “General Guidelines for SSC CDM methodologies”, version 19/B05/, appropriate alternatives shall be identified at the CPA level. If more than one alternative remains that correspond to a baseline scenario provided in the methodology, then the alternative with the lowest emissions shall be chosen as the baseline.

Validation team based on the above confirms that the baseline identification as documented in the PoA-DD/03/ is justified for the project activity and is fully in line with the requirements set by the applied methodology /B02/ and § 82 of VVM version 01.2. /B01/

3.8 Additionality

3.8.1 Prior consideration of CDM

As per § 4 of annex 13, EB 62 /B03-9/, “Guidelines for the demonstration and assessment of prior consideration of the CDM” do not apply to PoAs, as at present it is expected that no component of the programme will commence prior to the start date of validation of the PoA.

3.8.2 Additionality of PoA

The description under the PoA-DD /03/ demonstrates the compliance of § 6(e) of annex 38 of EB 55 /B03-3/. CAR 11 was raised in this regard and has been addressed. The stepwise validation of the same is summarized below:

| Relevant text of § 6(e) of Annex 38 of EB 55 | Assessment of the compliance |
|---|--|
| The proposed PoA is a voluntary coordinated action; | Based on the description provided in the PoA-DD /03/ and the on-site interviews with CME, validation team confirms that the proposed program is voluntary coordinated action by the CME. CME has also provided an undertaking of voluntary participation under CDM /10/. Also, it is confirmed from PoA-DD/03/ that there are no mandatory policies/regulations/17/ in South Africa that enforce the installation of trigeneration systems at commercial sites. Hence the proposed PoA is a voluntary coordinated action. CAR 07 was raised in this regard and has been addressed. |
| If the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA; | PoA-DD /03/ clearly states that the PoA is implementing a voluntary coordinated action and it would not be implemented in the absence of the |

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| | |
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| | PoA. CPAs have no other source of revenue than CER sales require carbon revenue to be additional. CME has also provided an undertaking of voluntary participation under CDM /10/, stating that the projects are being developed on a voluntary basis and there is no current legislative obligation on the CME to undertake these projects. The “Policy to support the Energy Efficiency and Demand Side Management”/17/ does not state anything about the Cogeneration or Trigeneration plant. This has also been confirmed by the validation team from the on-site interviews with CME. |
| If the PoA is implementing a mandatory policy/regulation, this would/is not enforced; | Not Applicable for this PoA |
| If mandatory a policy/regulation is enforced, the PoA will lead to a greater level of enforcement of the existing mandatory policy/regulation. | Not Applicable for this PoA |

As has been demonstrated in PoA-DD/03/, that :

1. The programme activity is a voluntary initiative. This has been validated, based on the undertaking provided by the CME that of voluntary participation under CDM /10/, stating that the projects are being developed on a voluntary basis.
2. The PoA is not implementing any mandatory policy/regulation requirements in South Africa which enforces the use of a cogeneration and/or trigeneration system. This has been validated, based on the applicable policies in the host country. The “Policy to support the Energy Efficiency and Demand Side Management”/17/ does not state anything about mandatory requirement with regards to the Cogeneration or Trigeneration plant.

In the absence of the CDM, the proposed voluntary measures would not have been implemented, making this PoA additional.

Hence, it could be concluded that the PoA is additional. Based on above the PoA meets the requirement of the §6 (e) and § 15(a) of EB 55 annex 38/B03-3/.

The additionality of the PoA will be demonstrated at CPA level and is presented in detail in section E.5.1 and E.5.2 of the PoA-DD /03/. PoA applies the small-scale methodology AMS-II.K version 1/B02/, the additionality can be demonstrated using the “Guidelines on demonstrating additionality of micro scale projects”/B03-10/ for micro scale projects or “Guidelines on the demonstration of additionality of small-scale project activities”/B03-8/ for small scale projects. This is deemed appropriate in line with the definition of additionality in the Glossary of Terms, EB 70 Annex 7/B06/. Based on above validation team confirms to the requirement of the §6 (e) and § 15(a) of EB 55 annex 38/B03-3/.

3.8.3 Approach for demonstrating CPA Additionality

As the PoA applies the small-scale methodology AMS-II.K version 1/B02/, the additionality can be demonstrated using the “Guidelines on demonstrating additionality of micro scale projects”/B03-10/ for micro scale projects or “Guidelines on the demonstration of additionality of small-scale project activities”/B03-8/ for small scale projects.

The additionality of the programme has been presented in section E.5.2 of the PoA-DD /03/. If the project is a microscale project then the additionality shall be determined by using guidelines on microscale projects “Guidelines for Demonstrating additionality of microscale projects”, version 04, EB 68 Annex 26/B03-10/.

If the CPA is not a microscale project then additionality shall be determined in line with “Guidelines on the demonstration of additionality of small-scale project activities”/B03-8/.

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As the additionality would be demonstrated at the CPA level guidelines have been provided to ensure that all CPAs use depending whether project activity is a microscale or small scale project.

3.8.3.1 Microscale Projects

“Guidelines on demonstrating additionality of micro scale projects”/B03-10/ shall be used to demonstrate the additionality for micro-scale projects. As the PoA uses the applied methodology AMS-II.K, version 01/B02/, Type II small-scale CDM methodologies are eligible to be considered in energy efficiency project activities as per § 3 of EB 68 Annex 26/B03-10/. Energy efficiency project activities that aim to achieve energy savings at a scale of no more than 20 gigawatt hours per year are additional if any one of the conditions below is satisfied:

- (a) The geographic location of the project activity is in an LDC/SIDS or special underdeveloped zone of the host country identified by the government in accordance with the paragraph 2 (a) (i) of EB 68 Annex 26/B03-10/;
- (b) The project activity is an energy efficiency activity with both conditions (i) and (ii) below satisfied:
 - (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours;
 - (ii) End users of the subsystems or measures are households/communities/SMEs.

3.8.3.2 Barrier Analysis

“Guidelines on the demonstration of additionality of small-scale project activities”/B03-08/ shall be used to demonstrate that the project activity would otherwise not be implemented due to the existence of one or more of the following barriers. CL 7 was raised in this regard and has been addressed.

- (a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;

In the case of proving the investment barrier, the CPA implementer may use the framework financial calculation sheet/13/, both an IRR calculation against the default benchmark would be acceptable. This is acceptable to validation team.

- (b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;

In the case of proving the technology barrier, the CPA implementer may confirm this through an independent report including but not limited to:

- performance uncertainty or
- low market share of the new technology adopted for the project activity, or
- the demonstration of non availability of human capacity to operate and maintain the technology, or
- lack of infrastructure to utilize the technology, or unavailability of the technology, or
- high level of technology risk.

This is acceptable to validation team.

- (c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;

In case of the proving the prevailing practice barrier, the demonstration should include, but not be limited to, that the proposed project is among the first of its kind in terms of technology, geography, sector, type of investment and investor or market. This is acceptable to validation team.

- (d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

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In case of demonstrating other barriers the demonstration should include information about institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies. This is acceptable to validation team.

Assessment of additionality has been done as per § 137 of VVM, version 01.2/B01/.

3.9 Emission reduction from a typical CPA of the PoA

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the PoA-DD /03/ and the g- CPA-DD /04/. The emission reductions of the CPAs of the PoA would be calculated using the formulae mentioned in the applied methodology AMS-II.K (version 1) /B02/. CAR 12 was raised in this regard and has been addressed.

Validation team based on the review of PoA DD /03/ and generic CPA DD /04/, confirms that the formulae are correctly presented for the determination of emission reductions at CPA level. The parameters and equations presented in the PoA-DD /03/, as well as other applicable documents, have been compared with the information and requirements presented in the methodology. An equation comparison has also been made to ensure consistency between all the formulae presented in the PoA-DD, g-CPA-DD, calculation files (for the real case CPA DD), methodology AMS-II.K (version 1) /B02/.

In line with the applied methodology (AMS-II.K, version1), the emission reductions (ER_y) by the project during the crediting period is the difference between the baseline emissions (BE_y) and project emissions (PE_y) and leakage emissions which is expressed as follows:

$$ER_y = BE_y - PE_y - LE_y$$

where

| | |
|--------|---|
| ER_y | Emission reductions in year y (tCO ₂ e/year) |
| BE_y | Baseline emissions in year y (tCO ₂ e/year) |
| PE_y | Project emissions in year y (tCO ₂ e/year) |
| LE_y | Leakage emissions in year y (tCO ₂ e/year) |

Baseline Emissions

The Baseline emissions associated with the PoA are calculated as:

$$BE_y = BE_{grid,y} + BE_{capt,y} + BE_{BC,y} + BE_{BH,y}$$

where,

$BE_{grid,y}$ = Baseline emissions associated with the grid electricity displaced by the project in year y (tCO₂e/year)

$BE_{capt,y}$ = Baseline emissions associated with the electricity produced by a captive power plant in year y (tCO₂e/year)

$BE_{BC,y}$ = Baseline emissions associated with the cooling (e.g., chilled water) produced in year y (tCO₂e/year)

$BE_{BH,y}$ = Baseline emissions associated with the heat (e.g., steam or hot water) produced in year y (tCO₂e/year)

Baseline emissions due to electricity produced by a captive power plant are not included in the PoA as no captive power plants would be there in the baseline for PoA and are not included within the scope of PoA.

Baseline electricity related emissions are calculated based on the amount of grid electricity displaced by the project activity times the emission factor of the grid calculated as:

$$BE_{grid,y} = E_{grid,y} \times EF_{grid,y}$$

where,

$E_{grid,y}$ = Amount of grid electricity displaced by project in year y (MWh)

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$EF_{grid,y}$ = Emission factor of the grid

The PoA does not involve displacement of electricity that was previously obtained from captive power plant(s). No CPA shall have electricity generation from captive power plants in baseline condition.

$$BE_{capt,y} = 0$$

Baseline emissions associated with the electricity consumed to produce chilled water within the project boundary are:

$$BE_{BC,y} = EF_{ELEC,y} \times \sum_i \frac{C_{P,i,y}}{COP_{c,i}}$$

where,

$EF_{ELEC,y}$ = Electricity emission factor of the grid

$C_{P,i,y}$ = Cooling output of baseline scenario chiller(s) i in year y (MWh_{th}/year)

$COP_{c,i}$ = The Coefficient of Performance of the baseline scenario chiller(s) i (MWh_{th}/MWh_e).

For project activities with water heating systems, that use electricity, the baseline emissions are determined using the electricity emission factor and hourly measurements of the total water mass flow-rate and differential temperature of incoming and outgoing water, presented as:

$$BE_{BH,y} = EF_{ELEC,y} \times \sum_{h=1}^{8.760} \frac{m_h \times C_{pw} \times \Delta T_h}{3600}$$

where,

$EF_{ELEC,y}$ = Electricity emission factor of the grid

m_h = The water mass flow-rate from heater(s) during hour h in year y (tonnes/year)

C_{pw} = The specific heat capacity of water (MJ/tonnes °C) (4.2 MJ/t °C)

ΔT_h = Differential temperature of inlet and outlet hot water for heater(s) during hour h (°C)

For project activities replacing baseline scenario steam generating systems (e.g., boiler), that use fossil fuel the baseline emissions are based on the equivalent amount of fuel that would have been used in the absence of the project activity as:

$$BE_{BH,y} = \sum_i EF_i \times \frac{S_{p,i,y}}{\eta_{cs}}$$

where,

EF_i = Emission factor of fossil fuel i

$S_{p,i,y}$ = Thermal energy delivered by the project activity (TJ) in year y measured on an hourly basis using mass flow rate and enthalpy data

η_{cs} = Efficiency of the displaced steam generation system(s) in year y

However, PoA does not involve steam generating systems (e.g., boiler), that use fossil fuel, hence excluded from CER calculations.

$$BE_{BH,y} = 0$$

Project Emissions

Project emissions are equal to the emissions associated with consumption of fossil fuel and electricity within the project boundary by the co-generation or tri-generation system, auxiliary equipment, and systems (such as boilers, chiller and hot water heaters) used to generate any backup or supplemental electricity, heating or cooling.

Project emissions shall be determined as:

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- Fuel consumption of project including any fuel used to run auxiliary equipment. Emissions are calculated using the: “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion”;
- Electricity consumption of project including any electricity used to run auxiliary equipment are calculated using the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”.

$$PE_y = PE_{FC,j,y} + PE_{EC,y}$$

where,

PE_y = Emissions in year y (tCO₂e/year) in project activity

$PE_{FC,j,y}$ = Emissions from the consumption of fossil fuels in the project activity in year y (tCO₂e/year)

$PE_{EC,y}$ = Emissions from the consumption of electricity in the project activity in year y (tCO₂e/year)

Project emissions due to consumption of fossil fuel, natural gas are calculated in line with the “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion”/B04-2/.

$$PE_{FC,y} = FC_y \times COEF_{NG,y}$$

where,

$PE_{FC,y}$ = Project emissions from the consumption of fossil fuels in year y (tCO₂e/yr)

$FC_{j,y}$ = Quantity of fuel consumed by the project activity in year y (m³/yr)

$COEF_{NG,y}$ = CO₂ emission coefficient of natural gas in year y (tCO₂e/ m³)

Option B from the tool/B04-2/ has been used to calculate CO₂ emission coefficient of natural gas. This is due to the fact that for preferable Option A value of weighted average mass fraction of carbon in the natural gas is required. Due to unavailability of this value from the gas supplier Option A is not used.

$$COEF_{NG,y} = NCV_{NG,y} \times EF_{CO_2,NG,y}$$

where,

$COEF_{i,y}$ CO₂ emission coefficient of natural gas in year y (tCO₂e/m³)

$NCV_{NG,y}$ Net calorific value of natural gas in year y (MJ/m³)

$EF_{CO_2,NG,y}$ Emission factor of natural gas in year y (tCO₂e/MJ)

Project emissions due to consumption of electricity are calculated in line with the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”/B04-3/.

$$PE_{EC,y} = EC_{PJ,y} \times EF_{EL,y} \times (1 + TDL_y)$$

where,

$EC_{PJ,y}$ = Energy consumption in year y (MWh/year)

$EF_{EL,y}$ = Emission Factor of the grid in year y (tCO₂e/MWh)

TDL_y = Transmission and distribution losses in year y

Leakage Emissions

Transfer of displaced energy generating equipment is not included in the PoA and the displaced refrigerant, if a greenhouse gas, must be destroyed. Hence, leakage emissions as identified in § 24 and 25 of methodology are not considered for calculation of leakage emissions. Leakage is to be considered if the displaced energy generating equipment is transferred from another activity or the existing equipment is transferred to another activity. Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero.

$$LE_{LNG,CO_2,y} = FF_{Project,y} \times EF_{CO_2,upstream,LNG}$$

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where,

$LE_{LNG,CO_2,y}$ = Leakage emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re-gasification and compression of LNG into a natural gas transmission or distribution system during the year y in tCO₂e.

$FF_{Project,y}$ = Quantity of natural gas combusted in all element processes during the year y in m³

$EF_{CO_2,upstream,LNG}$ = Emission factor for upstream CO₂ emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re-gasification and compression of LNG into a natural gas transmission or distribution system.

All the steps described in PoA-DD for calculation of emission reductions comply with § 89 of VVM, version 01.2/B01/.

3.10 Monitoring Plan of a typical CPA

The monitoring plan presented in the PoA-DD and g- CPA-DD complies with the requirements of the applicable methodology. The validation team has checked all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found. The metering of all the relevant parameters has been provided as per guidance indicated in Table 1 of the applicable methodology/B02/. CAR 14 was raised in this regard and has been addressed.

The validation team through document review and interviews with the relevant personnel has reviewed the procedures. The information provided has allowed the validation team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME of the PoA and the CPA implementer.

The management system document of the CME provide sufficient information which forms the basis of confirmation by the validation team on the issues related but not limited to the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the programme. The monitoring arrangements described in the monitoring plan are feasible within the project design. Therefore, the CME and/or CPA implementer(s) will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified. This confirms to the requirement of the §6 (j) of EB 55 annex 38.

The description of monitoring plan has been provided in line with § 122 of VVM, version 01.2/B01/.

3.10.1 Parameters determined ex-ante

Following are the parameters as per the PoA-DD/03/, fixed either ex-ante at the PoA level or shall be fixed ex-ante at the time of inclusion of the CPA:

- Combined margin CO₂ emission factor for the project electricity system in the year y ($EF_{grid,CM}$)
- The Coefficient of Performance of the baseline scenario chiller(s) i ($COP_{c,i}$)
- Emission factor for upstream CO₂ emissions due to fossil fuel combustion/electricity consumption associated with the liquefaction, transportation, re-gasification and compression of LNG into a natural gas transmission or distribution system ($EF_{CO_2,upstream,LNG}$)

3.10.2 Parameters determined ex-post

Following are the parameters as per the PoA-DD/03/, shall be monitored ex-post by the CPAs of the PoA:

- Amount of grid electricity displaced by the project in year y ($E_{grid,y}$)
- The chilled water mass flow rate for chiller(s) i produced by the project in hour h of year y ($m_{c,i,h}$)
- Differential temperature of inlet and outlet chilled water for chiller(s) i in hour h of year y of incoming and outgoing water from project ($\Delta T_{c,i,h}$)

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- The water mass flow rate from heater(s) during hour h in year y (m_h)
- Differential temperature of inlet and outlet hot water from heater(s) during hour h (ΔT_h)
- Quantity of fuel consumed by the project activity in year y ($FC_{j,y}$)
- Quantity of fuel consumed by the project activity in year y ($FF_{j,y}$)
- Net calorific value of natural gas in year y ($NCV_{NG,y}$)
- Emission factor of natural gas in year y ($EF_{CO_2,NG,y}$)
- Quantity of electricity consumed by the project electricity consumption source j in year y ($EC_{PJ,j,y}$)
- Average technical transmission and distribution losses for providing electricity to source j in year y ($TDL_{j,y}$)

CAR 13 was raised in this regard and has been addressed.

3.10.3 Monitoring and reporting system and quality assurance

The operational and management structure of the CME in context of the PoA has been clearly described in the PoA-DD /03/ and checked from the review of CME Manual /09/ provided by the CME. The responsibilities and institutional arrangements for data collection and archiving have been clearly provided in the same document /09/. The Carbon Protocol of SA's CME Coordinator will be responsible for maintaining the records. Records are to be held in a way that protects them from damage, loss or unauthorized access.

The process of data collection and storage is as follows:

1. The data will be fed to the plant control system.
2. Data is collected from the plant control system and is logged directly into a database. The data will be available for a period of five years.

All data will be archived electronically, consolidated and submitted to the CME database on a monthly basis. /09/

3.11 Environmental Impacts

It has been indicated in the PoA DD, that the environmental analysis shall be done at the individual CPA level. This is deemed appropriate in the context of the CPAs of the PoA. CAR 9 was raised in this regard and has been addressed.

3.12 Local stakeholders consultation

It has been indicated in the PoA DD, that the local stakeholder consultation shall be done at the individual CPA level. This is deemed appropriate in the context of the CPAs of the PoA..

4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PoA-DD /01/, g-CPA-DD/02/ and real-case CPA-DD/04/, all dated 08/07/2011 were made publicly available on UNFCCC's website:

(<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/M9OTRG957HGPY1SQ7K4EQ6PCV1SALV/view.html>) and parties, stakeholders and NGOs were invited through the CDM website to provide comments during a 30 days period from 12/07/2011 to 10/08/2011. Only one comment was received during this period and is discussed below:

| Global Stakeholders Comment | Comments by PP | Comment by DOE |
|---|---|---|
| Submitted by: Darshan R, drshn926@gmail.com | | |
| Inclusion criteria for CPA inclusion is not fully descriptive and adequate, must be enlarged and refined. The PoA to be webhosted for | The eligibility criteria have been updated according to the Standard for demonstration of additionality, development of | As the standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities EB 65 Annex 03/B03-5/ was |

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| international stake holder consultations again after modifying the relevant sections. DoE should not undertake the validation of this kind of PoA's. | eligibility criteria and application of multiple methodologies for programme of activities Ver01.0 EB65 Annex03 | available only after 25 November 2011 and not at the time of global stakeholder consultation process, eligibility criteria was updated in line with the standard/B03-5/. |
| Number of CPA's to be included is not clear and more elaborate explanation necessary. Please correct the same and webhost the project again for comments. DoE to ensure that the project is republished for international stakeholder process. | There is no limit to the number of possible CPA's that could join this PoA. This comment is not valid. | Number of CPAs to be included in the PoA is not fixed and is not required as per §22-25 of EB 55, Annex 38/B05-3/. |
| DoE must confirm the correct and conservative identification of the Baseline. Baseline must be verifiable. Identification of baseline is not clear in all situations. | DoE to validate and confirm. | Identification of the baseline has been done in line with the applicable methodology AMS-II.K, version 01/B02/ and shall be detailed in each CPA-DD. The baseline scenario is selected from one of these scenarios: <ul style="list-style-type: none"> • Replacing/Supplementing existing systems. • Replacing systems that would have been built. |
| Multiple site visits must be made by DoE to cross check and establish proper baselines. | DoE to validate and confirm. | Baseline for the PoA and real case CPA has been done in line with the applicable methodology AMS-II.K, version 01/B02/ and has been checked during site visit by the validation team. |
| DoE to check for appropriate positioning of the PoA with regard to technological aspects. | DoE to validate and confirm. | Technological aspects of the PoA have been provided in section A.4 of PoA-DD and for a typical CPA in A.4.2.1 of PoA-DD. |

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APPENDIX A

VALIDATION PROTOCOL FOR PROGRAMME OF ACTIVITIES COGENERATION AND/OR TRIGENERATION AT COMMERCIAL SITES REPORT No. CCL0008/CTCM/01062011

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Table 1: Conformity of CDM Programme of Activities

| CHECKLIST TOPIC / QUESTION | Ref. | COMMENTS | GSP | Final |
|---|------|---|-------------------------------------|-------------------------------------|
| A. GENERAL DESCRIPTION OF SMALL-SCALE PROGRAMME OF ACTIVITIES (POA) | | | | |
| A.1. Title of the small-scale programme of activities (PoA) | | | | |
| A.1.1. Does the used PoA title clearly enable to identify the unique CDM programme of activities? | /01/ | Yes, the PoA title clearly enables to identify the unique CDM PoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.1.2. Are there any indications concerning the revision number and the date of the revision? | /01/ | Yes, the GSP-PoA-DD indicates version number 1 with date 08/07/2011. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.1.3. Is this consistent with the time line of the programme's history? | /01/ | Start date of the PoA is indicated in the GSP-PoA-DD as 11/07/2011. The project starting date is after the validation start date. Hence it is line with the PoA history and time line. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.2. Description of the small-scale programme of activities | | | | |
| A.2.1. Is the description delivering a transparent overview of the general operating and implementing framework of the PoA? | /01/ | It has been indicated that the PoA aims at developing cogeneration and/or trigeneration projects at commercial facilities across South Africa using natural gas as the fuel. Promethium Carbon (Pty) Ltd will be the coordinating/managing entity (CME) of the PoA. The installation at the commercial facilities will be managed by the owner(s) of the facility, referred as CPA implementers. Clarification Request No. 1. Please clarify the situation in which the implementing agency is not the owner of the commercial facility. Corrective Action Request No.1. Please clarify the definition of commercial facility/site in the context of the PoA. It is to be noted that only commercial buildings are covered under the methodology AMS-III.K. Further, the likely source(s) for heating in the baseline has not been discussed. | CAR, CL | <input checked="" type="checkbox"/> |
| A.2.2. Is the policy/measure or stated goal of the PoA clearly and unambiguously presented? | /01/ | The policy/measure or stated goal of the PoA is clear and unambiguously presented. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.2.3. Is there a valid confirmation that the | /01/ | The voluntary action for participation has been indicated in PDD However | CL | <input checked="" type="checkbox"/> |

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| | proposed PoA is a voluntary action by the coordinating/managing entity. | | <u>Clarification Request No. 2.</u> A valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity is required | | |
| A.2.4. | Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance? | /01/ | Yes, the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.2.5. | Is the brief explanation how the programme will reduce greenhouse gas emission transparent and suitable? | /01/ | Yes, a brief explanation how the programme will reduce greenhouse gas emission is presented in a transparent and suitable manner | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.3. Coordinating/managing entity and participants of SSC-PoA | | | | | |
| A.3.1. | Is the form required for the indication of project participants correctly applied? | /01/ | <u>Corrective Action Request No.2.</u> PP needs to clearly indicate in section A.3 if the Project participants are Public or Private entities. | CAR | <input checked="" type="checkbox"/> |
| A.3.2. | Is the participation of the listed entities or Parties in the PoA confirmed by each one of them? | /01/ | <u>Clarification Request No. 3.</u> Letter of authorization & letter of approval needs to be provided from DNA of South Africa. | CL | <input checked="" type="checkbox"/> |
| A.3.3. | Is all information on participants / Parties provided in consistency with details provided by further chapters of the PoA-DD (in particular annex 1)? | /01/ | Promethium Carbon and Mobile Telephone Networks have been indicated as the project participants. <u>Corrective Action Request No.3.</u> The name of the project participants in particular for the CME has not been indicates / reported consistently. | CAR | <input checked="" type="checkbox"/> |
| A.3.4. | Is it evident that the coordinating or managing entity of the PoA is the entity which communicates with the Executive Board (EB)? | /01/ | <u>Clarification Request No. 4.</u> Please provide the MoC (modalities of communication with CDM EB-UNFCCC). | CAR | <input checked="" type="checkbox"/> |
| A.4. Technical description of the small-scale programme of activities | | | | | |
| A.4.1. Location of the programme of activities | | | | | |
| A.4.1.1. | Does the information provided on the location of the programme allow for a clear definition identification of the boundary for the PoA in terms of a geographical area, | /01/ | The CPAs under the PoA will be implemented throughout the host country – South Africa. The PP intends to expand the project to countries outside South Africa in accordance to EB 60, Annex 26, Para 6. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| within which all CPAs included in this PoA will be implemented? | | | | |
| A.4.1.2. Is the consideration of all applicable national and/or sectoral policies and regulations of each host country within the boundary evident and substantiated? | /01/ | <p>The information on the applicable national and/or sectoral policies and regulations which are relevant to the PoA has not been provided in section A.4.2.1 of PoA-DD.</p> <p>Corrective Action Request No.4. Please indicate in section A.4.1.2 of the PoA-DD regarding the applicable national and/or sectoral policies and regulations which are relevant to the PoA. The references/supportive of such policies need to be included in the PoA-DD.</p> <p>Corrective Action Request No.5. The baseline for electricity, cooling and heating has not been explicitly indicated.</p> | CAR | <input checked="" type="checkbox"/> |
| A.4.1.3. Is/are the Host Party(ies) stated? | /01/ | At the time of registration South Africa has been identified as the host party, However PP intends to expand the PoA to other countries in line with EB 60, Annex 26, Para 6. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2. Description of a typical small-scale CDM programme activity (CPA) | | | | |
| A.4.2.1. Is it unambiguously stated which technology or measures are to be employed by the SSC-CPA? | /01/ | Corrective Action Request No.6. The description of project with respect to capacity (electricity, cooling system, and heating system) of the different components of trigeneration is not very clear. | CAR | <input checked="" type="checkbox"/> |
| A.4.2.2. Is the type and category of project activities correctly identified and indicated? | /01/ | The project predominantly belongs to Type II “Energy efficiency improvement project” and category II.K. Installation of co-generation or tri-generation systems supplying energy to commercial buildings. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.3. Does the technical design of the project activity reflect current good practices? | /01/ | The technical design of the project activity reflect current good practices | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.4. Does the implementation of the project activity require any technology transfer from Annex-I-countries to the host country (ies)? | /01/ | No technology Transfer is involved in the project however the technical parts/ components of the project may be imported from other countries including Annex-I countries. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.5. Is the technology implemented by the project activity environmentally safe? | /01/ | The technology implemented by the project activity is well established and environmentally safe. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.6. Is the information provided in compliance with actual situation or planning? | /01/ | Yes, the information provided is in compliance with actual situation and planning. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.7. Does the project use state of the art technology and / or does the technology result in a significantly better performance | /01/ | The project use high end technology and results in a significantly better performance than any commonly used technologies in the host country. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| than any commonly used technologies in the host country? | | | | |
| A.4.2.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period? | /01/ | The project requires extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period. The OEM has been employed for maintenance. Trained personnel have been employed to carry out regular operation. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.9. Is information available on the demand and requirements for training and maintenance? | /01/ | Yes, information is available on the demand and requirements for training and maintenance. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.2.10. Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA? | /01/ | Yes, the eligibility criteria for the inclusion of a SSC-CPA into the PoA Are clear and unambiguous. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.3. Description of how the anthropogenic emissions of GHG by sources are reduced by a SSC-CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality of the PoA as a whole) | | | | |
| A.4.3.1. Is it evident and clearly documented that the proposed PoA is a voluntary coordinated action? | /01/ | It has been clearly documented in the PoA-DD that proposed PoA is a voluntary coordinated action. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.3.2. Is it evident and substantiated that this voluntary coordinated action would not be implemented in the absence of the PoA? | /01/ | Corrective Action Request No.7. It is not evident that voluntary coordinated action would not be implemented in the absence of the PoA. | CAR | <input checked="" type="checkbox"/> |
| A.4.3.3. Is it evident and substantiated that in case the PoA implements a mandatory policy or regulation this would not be enforced otherwise? | /01/ | Not applicable (NA) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.3.4. Is it evident and substantiated that in case the PoA implements a mandatory policy or regulation that is enforced the PoA will lead to a greater level of enforcement? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| A.4.4. Operational, management and monitoring plan for the programme of activities (PoA) | | | | |
| A.4.4.1. Is there a clear and transparent description of the operational and management arrangements established by the coordinating/managing entity? | /01/ | Corrective Action Request No.8. Although a description of the operational and management arrangements established by PP has been provided in the PoA-DD, PP needs to further elaborate on the following: <ul style="list-style-type: none"> ● Management Team Structure ● Record keeping and Documentation system | CAR | <input checked="" type="checkbox"/> |

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| <p>A.4.4.2. Is there a record keeping system for each CPA under the PoA?</p> | <p>/01/</p> | <p>It has been indicated in PoA that a record keeping system for each CPA under the PoA will be implemented which is referenced in CPA 01 and confirmed with PP during site visit.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.4.3. Is there a system or procedure to avoid double accounting, i.e. to avoid that an included CPA under this PoA already is a registered CDM project or CPA in another PoA?</p> | <p>/01/</p> | <p><u>Clarification Request No. 5.</u> There is a system/ procedure to avoid double accounting, i.e. to avoid that an included CPA under this PoA already is a registered CDM project or CPA in another PoA. However it is not evident which unique characteristics / qualities of CPA will be evaluated to confirm that an included CPA under this PoA already is a registered CDM project or CPA in another PoA</p> | <p>CL</p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.4.4. Is there a system or procedure to detect whether a SSC-CPA to be included in the PoA is not a de-bundled component of another CPA or CDM project?</p> | <p>/01/</p> | <p>Yes, it is detailed in PoA-DD that to ensure that each CPA is not a debundled component of another CPA or CDM project activity, the managing entity will follow</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.4.5. Are provisions in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA?</p> | <p>/01/</p> | <p>Yes, it is detailed in PoA-DD that the managing entity is responsible for identifying, registering, and managing all CPAs that will be registered under the proposed PoA. The managing entity will ensure that those operating the CPA are aware of, and have agreed that their activity is being subscribed to the PoA.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.4.6. Is there a monitoring plan for the PoA, including a description of the proposed statistically sound sampling methods or procedures to be used by the DOE for the verification (please consider sampling among CPAs and within CPAs)?</p> | <p>/01/</p> | <p>The Monitoring will be based on actual monitored data and does not propose a Sampling method.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.4.7. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA, does the monitoring plan provide a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA?</p> | <p>/01/</p> | <p>Yes, the monitoring plan provides a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| <p>A.4.5. Public funding of the small-scale project activity</p> | | | | |
| <p>A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?</p> | <p>/01/</p> | <p><u>Clarification Request No. 6.</u> Please submit documentary evidence to justify that ODA has not been used. Also the PoA-DD does not clarify/ indicate any qualifying criteria with respect to ODA for including a CPA under this PoA.</p> | <p>CL</p> | <p><input checked="" type="checkbox"/></p> |

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| A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PoA-DD (in particular annex 2)? | | Yes the information has been consistently provided. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. DURATION OF THE PROGRAMME OF ACTIVITIES | | | | |
| B.1. Starting date of the programme of activities | | | | |
| B.1.1. Is the programme's starting date clearly defined and reasonable? | /01/ | The start date has been referred as 11/07/2011 corresponding to the start of validation. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| B.2. Length of the programme of activities (PoA) | | | | |
| B.2.1. Is the assumed length of the PoA clearly defined by the coordinating managing entity and reasonable (max 28 years)? | /01/ | Length of the PoA is reasonable (28 years) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| C. ENVIRONMENTAL ANALYSIS | | | | |
| C.1. Definition of the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken: | | | | |
| C.1.1. Is it defined whether the environmental analysis takes place at PoA or CPA level? | /01/ | It has been indicated that the environmental analysis takes place at CPA level However <u>Corrective Action Request No.9.</u> It is not clear whether the environmental analysis will be carried out at PoA level or CPA level. Although the cross has been made on environmental analysis at CPA level, the statement underneath states that the analysis would be done at PoA level. Please correct the sections accordingly. | CAR | <input checked="" type="checkbox"/> |
| C.1.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.2. Documentation on the analysis of the environmental impacts of the PoA, including transboundary impacts: | | | | |
| C.2.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.2.2. Has the analysis of the environmental impacts of the project activity been sufficiently described? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.2.3. Will the project create any adverse environmental effects? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.2.4. Were trans-boundary environmental impacts | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |

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| identified in the analysis? | | | | |
| C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA of the PoA: | | | | |
| C.3.1. Have the identified environmental impacts been addressed in the project design sufficiently? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.3.2. Does the project comply with environmental legislation in the host country? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| C.3.3. Is, per host country laws/regulations, an environmental impact assessment necessary for a typical CPA? | /01/ | Please refer section C.1.1 | CAR | <input checked="" type="checkbox"/> |
| D. STAKEHOLDERS' COMMENTS | | | | |
| D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice: | | | | |
| D.1.1. Is there a clear statement whether the stakeholder comments will be invited at PoA or CPA level? | /01/ | Yes, it has been indicated that the stakeholder comments will be done at CPA level. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.2. Is the choice justified in a clear and reasonable manner? | /01/ | Yes, the choice of stakeholder consultation at CPA level in the PoA-DD has been justified in the PoA-DD. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.3. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how comments by local stakeholders were invited? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.4. If the stakeholder comments will be invited at PoA level, is there a summary of the contents? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.1.5. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how due account was taken of any comments received? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2. Brief description how comments by local stakeholders have been invited and compiled | | | | |
| D.2.1. Have relevant stakeholders been consulted? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| D.2.2. Have appropriate media been used to invite comments by local stakeholders? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| D.2.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| D.2.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| D.3. Summary of the comments received | | | | | |
| D.3.1. Is a summary of the received stakeholder comments provided? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| D.4. Report on how due account was taken of any comments received | | | | | |
| D.4.1. Has due account been taken of any stakeholder comments received? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E. APPLICATION OF A BASELINE AND MONITORING METHODOLOGY TO A TYPICAL SSC-CPA | | | | | |
| E.1. Title and reference of the approved SSC baseline and monitoring methodology applied to SSC-CPA included in the PoA | | | | | |
| E.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated? | /01/ /B02/ | Yes, the PoA applies the methodology: AMS II.K, Installation of co-generation or tri-generation systems supplying energy to commercial buildings - Version 01. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E.1.1.2. Is the applied version the most recent one and / or is this version still applicable? | /01/ /B02/ | Yes, the version used is the most recent one at the time of uploading the project for GSP. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E.1.1.3. Is the applied SSC methodology approved by the board, for use in PoA? | /01/ /B02/ | Yes, the applied SSC methodology has been approved by the board, for use in PoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E.2. Justification of the choice of the methodology and why it is applicable to a SSC-CPA | | | | | |
| E.2.1.1. Is the applied methodology considered the most appropriate one? | /01/ /B02/ | Yes, the applied methodology is the most appropriate small scale methodology for this kind of a PoA. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E.2.1.2. Does the SSC methodology account for leakage in the context of a SSC-CPA? | /01/ /B02/ | As per the applied methodology, leakage would only be accounted if generating equipment is transferred from another activity. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| E.2.1.3. Criterion 1: This methodology applies to the installation of fossil fuel based co-generation or trigeneration facilities that simultaneously produce electricity and cooling (e.g., chilled water) and/or heating | /01/ /B02/ | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | | Applicability checklist | | | Yes / No / NA |
| | | Criterion discussed in the PDD? | | | Yes |
| | | Compliance provable? | | | Yes |
| | | Compliance verified? | To be verified at the | | |

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| (e.g., steam or hot water) for supplying such energy to commercial, non-industrial, buildings. | | | time of inclusion of CPA | | | | | | | | | | |
| E.2.1.4. Criterion 2: The methodology is applicable to installation of new cogeneration or tri-generation systems that replace or supplement either: the operation of (a) existing systems that supply electricity (grid or on-site generation) and cooling (e.g., chillers) and/or heating systems (e.g., boilers) or (b) electricity and cooling and/or heating systems that would have been built and utilized. | /01/ /B02/ | | <table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | | |
| E.2.1.5. Criterion 3: The methodology does not apply to the replacement of existing co-generation or tri-generation systems. | /01/ /B02/ | | <table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | | |
| E.2.1.6. Criterion 4: If it is identified that the baseline situation is the continued use of existing system then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available. | /01/ /B02/ | | <table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | | |
| E.2.1.7. Criterion 5: This methodology only applies to commercial, non-industrial applications. Projects that comprise energy efficiency measures implemented through integration of a number of utility provisions (for | /01/ /B02/ | | <table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No / NA</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the | ☑ | ☑ |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | | |
| Compliance verified? | To be verified at the | | | | | | | | | | | | |

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| <p>example, integrating power, steam/heat and cooling systems) of an industrial facility cannot apply this methodology.</p> | | <table border="1"> <tr> <td data-bbox="987 153 1512 217"></td> <td data-bbox="1512 153 1798 217">time of inclusion of CPA</td> </tr> </table> | | time of inclusion of CPA | | | | | | | | |
| | time of inclusion of CPA | | | | | | | | | | | |
| <p>E.2.1.8. Criterion 6: For the purpose of this methodology, natural gas is defined as a gas which consists primarily of methane and which is generated from (i) natural gas fields (non-associated gas), (ii) associated gas found in oil fields. It may be blended up to 1% on a volume basis with gas from other sources, such as, <i>inter alia</i>, biogas generated in bio digesters, gas from coal mines, gas which is gasified from solid fossil fuels, etc.</p> | <p>/01/ /B02/</p> | <table border="1"> <tr> <td data-bbox="987 448 1512 480">Applicability checklist</td> <td data-bbox="1512 448 1798 480">Yes / No / NA</td> </tr> <tr> <td data-bbox="987 480 1512 512">Criterion discussed in the PDD?</td> <td data-bbox="1512 480 1798 512">Yes</td> </tr> <tr> <td data-bbox="987 512 1512 544">Compliance provable?</td> <td data-bbox="1512 512 1798 544">Yes</td> </tr> <tr> <td data-bbox="987 544 1512 635">Compliance verified?</td> <td data-bbox="1512 544 1798 635">To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | |
| <p>E.2.1.9. Criterion 7: Any chilled water/cooling, steam/hot water/heat and electricity produced by the cogeneration or trigeneration system must be used on-site (within the project boundary) to meet all or part of the energy demand. Existing chillers, boilers, electrical heaters, electricity generating units, etc. may remain in operation after the implementation of the project activity to either (a) supply the balance of the demand not met by the cogeneration or trigeneration systems if the cogeneration or trigeneration system has insufficient capacity to supply the total energy demand and/or (b) provide backup to the cogeneration or trigeneration facilities. However, emission reductions can only be claimed for the cooling, heat and electricity produced by the new cogeneration or</p> | <p>/01/ /B02/</p> | <table border="1"> <tr> <td data-bbox="987 799 1512 831">Applicability checklist</td> <td data-bbox="1512 799 1798 831">Yes / No / NA</td> </tr> <tr> <td data-bbox="987 831 1512 863">Criterion discussed in the PDD?</td> <td data-bbox="1512 831 1798 863">Yes</td> </tr> <tr> <td data-bbox="987 863 1512 895">Compliance provable?</td> <td data-bbox="1512 863 1798 895">Yes</td> </tr> <tr> <td data-bbox="987 895 1512 986">Compliance verified?</td> <td data-bbox="1512 895 1798 986">To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the PDD? | Yes | | | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | |

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| trigeneration system. | | | | | | | | | | | | |
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| E.2.1.10. Criterion 8: The energy savings caused by a single project activity may not exceed the equivalent of 60 GWh per year. A maximum saving of 60 GWh is equivalent to maximum savings of 60 GWh_e of electricity consumption or maximum savings of 180 GWh_{th} of fuel consumption, i.e., for calculation of maximum savings allowable per year, 1 GWh_e equals 3 GWh_{th}. | /01/ /B02/ | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | |
| | | <table border="1"> <tr> <th>Applicability checklist</th> <th>Yes / No / NA</th> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | | |
| | | Applicability checklist | Yes / No / NA | | | | | | | | | |
| | | Criterion discussed in the PDD? | Yes | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | |
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| E.2.1.11. Criterion 9: This project activity can include installation of cooling equipment which use refrigerants only if such refrigerants have no global warming potential (GWP) and no ozone depleting potential (ODP) and if such installation is not mandated by laws or regulations. | /01/ /B02/ | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | |
| | | <table border="1"> <tr> <th>Applicability checklist</th> <th>Yes / No / NA</th> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | | |
| | | Applicability checklist | Yes / No / NA | | | | | | | | | |
| | | Criterion discussed in the PDD? | Yes | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| E.2.1.12. Criterion 10: In case the produced electricity, cooling and/or heat are delivered to a facility that is not owned or under the control of the project owner, a contract between the project owner and consumer of the energy must be in force, during the crediting period, specifying that only the facility generating the energy can claim CERs from the emissions displaced by the subject project. | /01/ /B02/ | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | | | | | | |
| | | <table border="1"> <tr> <th>Applicability checklist</th> <th>Yes / No / NA</th> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>Yes</td> </tr> <tr> <td>Compliance provable?</td> <td>Yes</td> </tr> <tr> <td>Compliance verified?</td> <td>To be verified at the time of inclusion of CPA</td> </tr> </table> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | Yes | Compliance provable? | Yes | Compliance verified? | To be verified at the time of inclusion of CPA | | |
| | | Applicability checklist | Yes / No / NA | | | | | | | | | |
| | | Criterion discussed in the PDD? | Yes | | | | | | | | | |
| Compliance provable? | Yes | | | | | | | | | | | |
| Compliance verified? | To be verified at the time of inclusion of CPA | | | | | | | | | | | |
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| <p>E.2.1.13. Criterion 11 (for PoAs): Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero.</p> | <p>/01/ /B02/</p> | <table border="1" data-bbox="994 197 1798 328"> <thead> <tr> <th>Applicability checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Criterion discussed in the PDD?</td> <td>No</td> </tr> <tr> <td>Compliance provable?</td> <td>NA</td> </tr> <tr> <td>Compliance verified?</td> <td>NA</td> </tr> </tbody> </table> <p>Corrective Action Request No.10- Applicability conditions of the methodology for PoAs has not been discussed as per § 27 of the methodology.</p> | Applicability checklist | Yes / No / NA | Criterion discussed in the PDD? | No | Compliance provable? | NA | Compliance verified? | NA | <p>GAR</p> | <p><input checked="" type="checkbox"/></p> |
|---|-----------------------|---|--|--|---------------------------------|----|----------------------|----|----------------------|----|------------|--|
| Applicability checklist | Yes / No / NA | | | | | | | | | | | |
| Criterion discussed in the PDD? | No | | | | | | | | | | | |
| Compliance provable? | NA | | | | | | | | | | | |
| Compliance verified? | NA | | | | | | | | | | | |
| <p>E.3. Description of the sources and gases included in the SSC-CPA boundary</p> | | | | | | | | | | | | |
| <p>E.3.1.1. Does the SSC-CPA boundary include the physical and geographical location where the programme activities take place?</p> | <p>/01/ /B02/</p> | <p>Yes.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.3.1.2. Are all sources and gases within the boundary considered in a clear manner?</p> | <p>/01/ /B02/</p> | <p>Yes.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.3.1.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD?</p> | <p>/01/ /B02/</p> | <p>Yes.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.4. Description of how the baseline scenario is identified and description of the identified baseline scenario:</p> | | | | | | | | | | | | |
| <p>E.4.1.1. Have all technically feasible baseline scenario alternatives to the PoA been identified and discussed by the PoA-DD? Why can this list be considered as being complete?</p> | <p>/01/ /B05/</p> | <p>Approved Small Scale methodology AMS II K version 01 has been applied. The approved methodology discuss all technically feasible baseline scenario alternatives to the project activity, the PoA identifies and discuss all alternatives. Hence this list of all technically feasible baseline scenario alternatives is considered as complete by the PoA-DD.</p> | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.4.1.2. Does project identify correctly and exclude those options not in line with regulatory or legal requirements?</p> | <p>/01/ /B05/</p> | <p>Please refer to CAR 4 in section A.4.1.2</p> | <p>GAR</p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.4.1.3. Have applicable regulatory or legal requirements been identified?</p> | <p>/01/ /B05/</p> | <p>Please refer to CAR 4 in section A.4.1.2</p> | <p>GAR</p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |
| <p>E.4.1.4. Does the PoA-DD identify the most likely baseline scenario in absence of the project activity?</p> | <p>/01/ /B05/</p> | <p>Please refer to CAR 4 in section A.4.1.2</p> | <p>GAR</p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | |

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|--|---------------|---|-------------------------------------|-------------------------------------|
| E.4.1.5. Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc?) | /01/ /B05/ | Please refer to CAR 4 in section A.4.1.2 | GAR | <input checked="" type="checkbox"/> |
| E.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of a typical SSC-CPA, included in a registered PoA (assessment and demonstration of additionality): | | | | |
| E.5.1. Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA clearly and unambiguously stated? | /01/ | The key criteria for assessing additionality of a SSC-CPA that is to be included into the PoA clearly and unambiguously stated. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.2. Key criteria and data for assessing additionality of a SSC-CPA | | | | |
| E.5.2.1. Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA based on the additionality assessment in section E.5.1 of the PoA-DD? | /01/ | The key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA based on the additionality assessment in section E.5.1 of the PoA-DD | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.2.2. Is the choice of the criteria justified, based on the analysis in section E.5.1 of the PoA-DD? | /01/ | <u>Corrective Action Request No.11-</u> As indicated in E.5.1 of PoA-DD The choice available for the project activity is (in baseline) use of grid electricity (no investment) and in the project scenario is an investment; Accordingly the choice of financial indicator as investment comparison analysis is not justified | GAR | <input checked="" type="checkbox"/> |
| E.5.2.3. Does it become evident how these criteria would be applied to assess the additionality of a typical CPA at the time of inclusion? | /01/ | Refer section E.5.2.2 and the CAR | GAR | <input checked="" type="checkbox"/> |
| E.5.2.4. Is this information incorporated into the specific CDM-SSC-CPA-DD ("real case")? | /01/ | Refer section E.5.2.2 and the CAR | GAR | <input checked="" type="checkbox"/> |
| E.5.2.5. If the starting date of the programme activity is before the date of validation, is evidence available to prove that incentive from the CDM was seriously considered in the decision to proceed with the programme activity? | /01/ | The starting date of the programme of activity is after the date of validation and it is evident that incentive from the CDM was seriously considered in the decision to proceed with the programme activity | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.2.6. Is a complete list of barriers developed that prevents the project activity to occur? | /01/ | Barriers have been developed that prevent the project activity to occur. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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|--|---------------|------------------------------------|--------------|-------------|-------------------------------------|-------------------------------------|
| E.5.2.7. Does this list include at least one of the following barriers? | /01/ | Barrier | Discussed? | Verifiable? | CL | <input checked="" type="checkbox"/> |
| | | Investment | | | | |
| | | Technological | | | | |
| | | Due to prevailing practice | | | | |
| | | Other | | | | |
| Clarification Request No. 7. Please provide the framework financial calculation sheets and related supporting documents to validate the investment barrier to be proved at CPA level. Please also submit the evidence for source of each assumption. | | | | | | |
| E.5.2.8. Does the discussion sufficiently take into account relevant national and/or sectoral policies? | /01/ | Yes | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.2.9. Is transparent and documented evidence provided on the existence and significance of these barriers? | /01/ | Yes | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.5.2.10. Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers? | /01/ | Yes | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6. Estimation of Emission reductions of a CPA | | | | | | |
| E.6.1. <i>Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA</i> | | | | | | |
| E.6.1.1. Is it explained how the procedures provided in the methodology are applied? | /01/ /B02/ | Yes | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site? | /01/ /B02/ | Yes | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Determination of Project Emission (Comment on any line answered "No") | | | | | | |
| E.6.1.3. Component 1: Fuel consumption of programme including any fuel used to run auxiliary equipment | /01/ /B02/ | Project emission checklist | Yes / No /NA | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Component discussed in the PoA-DD? | Yes | | | |
| | | Formulae correctly applied? | NA | | | |
| E.6.1.4. Component 2: Electricity consumption of project including any electricity used to run auxiliary equipment. | /01/ /B02/ | Project emission checklist | Yes / No /NA | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | Component discussed in the PoA-DD? | Yes | | | |
| | | Formulae correctly applied? | NA | | | |
| Determination of Baseline Emission (Comment on any line answered "No") | | | | | | |

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| | | | | | |
|--|---------------|---|--------------|-----|---|
| E.6.1.5. Component 1: Baseline emissions associated with grid electricity displaced by the project in year y. | /01/ /B02/ | Baseline emission checklist | Yes / No /NA | ☑ | ☑ |
| | | Component discussed in the PoA-DD? | Yes | | |
| | | Formulae correctly applied? | Yes | | |
| | | PoA does not involve generation of electricity in baseline. | | | |
| E.6.1.6. Component 2: Baseline emissions associated with the electricity produced by a captive power plant in year y | /01/ /B02/ | Baseline emission checklist | Yes / No /NA | ☑ | ☑ |
| | | Component discussed in the PoA-DD? | No | | |
| | | Formulae correctly applied? | NA | | |
| | | PoA does not involve generation of electricity in baseline. | | | |
| E.6.1.7. Component 3: Baseline emissions associated with the cooling (e.g., chilled water) produced in year y | /01/ /B02/ | Baseline emission checklist | Yes / No /NA | ☑ | ☑ |
| | | Component discussed in the PoA-DD? | Yes | | |
| | | Formulae correctly applied? | Yes | | |
| | | PoA does not involve generation of electricity in baseline. | | | |
| E.6.1.8. Component 4: Baseline emissions associated with the heat (e.g., steam or hot water) produced in year y | /01/ /B02/ | Baseline emission checklist | Yes / No /NA | ☑ | ☑ |
| | | Component discussed in the PoA-DD? | Yes | | |
| | | Formulae correctly applied? | Yes | | |
| | | PoA does not involve generation of electricity in baseline. | | | |
| E.6.2. Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA: | | | | | |
| E.6.2.1. Are the formulae required for the determination of emission reductions correctly presented, enabling a complete identification of parameters to be used and / or monitored? | /01/ /B02/ | Yes | | ☑ | ☑ |
| E.6.2.2. Are the equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA, completely presented? | /01/ /B02/ | Corrective Action Request No.12. Please provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA type. | | CAR | ☑ |
| E.6.3. Data and parameters that are to be reported in CDM-SSC-CPA-DD form | | | | | |
| E.6.3.1. Is the list of parameters presented in chapter E.6.2 considered to be complete with regard to the requirements of the applied methodology? | /01/ /B02/ | No. Refer CAR 13 | | CAR | ☑ |
| E.6.3.2. Comment on any line answered with "No" | | | | | |

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| <p>E.6.3.2.1. Parameter Title: $EF_{grid,y}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|--|-----------------------|--|----------------|-------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-----|--|--|
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |
| <p>E.6.3.2.2. Parameter Title: $EF_{ELEC,y}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |
| <p>E.6.3.2.3. Parameter Title: $COP_{c,i}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |

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| <p>E.6.3.2.4. Parameter Title: EF_i</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|---|-----------------------|--|----------------|-------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|-------------------------|-----|-------------------------------|-----|-------------------------------------|-----|---|-----|--|--|
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |
| <p>E.6.3.2.5. Parameter Title: η_{cs}</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |
| <p>E.6.3.2.6. Parameter Title: $EF_{grid,CM,y}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | |

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| <p>E.6.3.2.7. Parameter Title: $TDL_{j,y}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No/NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> | Data Checklist | Yes / No/NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided? | Yes | Has this value been verified? | Yes | Choice of data correctly justified? | Yes | Measurement method correctly described? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> | | | | | | |
|---|-----------------------|---|----------------------|--|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|--|-----|-------------------------------|-----|---|-----|---|-----|--|--|-----------------------------|-----|-------------------------------|-----|--|--|
| Data Checklist | Yes / No/NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Choice of data correctly justified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7. Application of the monitoring methodology and description of the monitoring plan</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1. Data and parameters to be monitored by each SSC-CPA</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.1. Is the list of parameters presented in chapter E.7.1 considered to be complete with regard to the requirements of the applied methodology?</p> | <p>/01/ /B02/</p> | <p>Corrective Action Request No.13. The list of parameters in E.7.1 is not complete as the parameter $TDL_{j,y}$ has not been used as a monitoring parameter as per the tool.</p> | <p>CAR</p> | <p><input checked="" type="checkbox"/></p> | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2. Comment on any line answered with “No”</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2.1. Parameter Title: $E_{grid,y}$ Amount of grid electricity displaced by project in year y</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |

VALIDATION REPORT

CDM VALIDATION REPORT NO CCL0008/CTCM/01062011

| <p>E.7.1.2.2. Parameter Title: C_{p,ij}</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|---|-----------------------|---|----------------------|---------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|--|--|
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2.3. Parameter Title: m_{c,l,h}</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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CDM VALIDATION REPORT NO CCL0008/CTCM/01062011

| <p>E.7.1.2.4. Parameter Title: $\Delta T_{c,l,hj}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|--|-----------------------|---|----------------------|---------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|--|--|
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2.5. Parameter Title: m_h</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |

VALIDATION REPORT

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| <p>E.7.1.2.6. Parameter Title: ΔT_h</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|---|-----------------------|---|----------------------|---------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|--|--|
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2.7. Parameter Title: $FC_{j,y}$</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| <p>E.7.1.2.8. Parameter Title: NCV_{j,y}</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
|---|-----------------------|---|----------------------|---------------|---------------------------------|----------|--------------------------------|-----|---------------------------------------|-----|----------------------------|-----|--|-----|-------------------------------|-----|---|-----|---------------------------------|-----|----------------------------------|-----|-----------------------------|-----|-------------------------------|-----|--|--|
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>E.7.1.2.9. Parameter Title: EF_{CO2,NG,y}</p> | <p>/01/ /B02/</p> | <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No / NA</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>AMS II K</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </tbody> </table> | Monitoring Checklist | Yes / No / NA | Title in line with methodology? | AMS II K | Data unit correctly expressed? | Yes | Appropriate description of parameter? | Yes | Source clearly referenced? | Yes | Correct value provided for estimation? | Yes | Has this value been verified? | Yes | Measurement method correctly described? | Yes | Correct reference to standards? | Yes | Indication of accuracy provided? | Yes | QA/QC procedures described? | Yes | QA/QC procedures appropriate? | Yes | <p><input checked="" type="checkbox"/></p> | <p><input checked="" type="checkbox"/></p> |
| Monitoring Checklist | Yes / No / NA | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Title in line with methodology? | AMS II K | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data unit correctly expressed? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appropriate description of parameter? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Source clearly referenced? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct value provided for estimation? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has this value been verified? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement method correctly described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Correct reference to standards? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Indication of accuracy provided? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures described? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA/QC procedures appropriate? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| E.7.1.2.10. Parameter Title: E C _{PJ,i,y} | /01/ /B02/ | Monitoring Checklist | Yes / No / NA | ☑ | ☑ |
| | | Title in line with methodology? | AMS II K | | |
| | | Data unit correctly expressed? | Yes | | |
| | | Appropriate description of parameter? | Yes | | |
| | | Source clearly referenced? | Yes | | |
| | | Correct value provided for estimation? | Yes | | |
| | | Has this value been verified? | Yes | | |
| | | Measurement method correctly described? | Yes | | |
| | | Correct reference to standards? | Yes | | |
| | | Indication of accuracy provided? | Yes | | |
| | | QA/QC procedures described? | Yes | | |
| QA/QC procedures appropriate? | Yes | | | | |
| E.7.2. Description of the monitoring plan for a SSC-CPA | | | | | |
| E.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation? | /01/ | <p>Clarification Request No. 8. ——— Please provide the Operation and Management structure (Administrative Manual) pertaining to the proposed PoA. Mention clearly the responsibilities and institutional arrangements for data collection archiving.</p> <p>Corrective Action Request No.14. No provision has been made to establish the Total annual consumption of energy (electricity, cooling and heating) by the consuming commercial buildings in baseline (which are fixed ex-ante and monitoring the same for 20% change during the crediting period).-</p> | GL CAR | ☑ | |
| E.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided? | /01/ | See CR in section E.7.2.1 | GL | ☑ | |
| E.7.2.3. Does the monitoring plan provide current good monitoring practice? | /01/ | See CR in section E.7.2.1 | GL | ☑ | |
| E.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions? | /01/ | NA | ☑ | ☑ | |
| E.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies) | | | | | |
| E.8.1.1. Is there any indication of a date when the | /01/ | Yes | ☑ | ☑ | |

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| baseline was determined? | | | | |
| E.8.1.2. Has dd/mm/yyyy format been used to indicate the date? | /01/ | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.3. Is this consistent with the time line of the PoA-DD history? | /01/ | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.4. Is the information on the person(s) / entity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation? | /01/ | Yes. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| E.8.1.5. Is information provided whether this person / entity are also considered a project participant? | /01/ | Yes. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. ANNEXES 1 – 4 | | | | |
| F.1. Annex 1: Contact Information | | | | |
| F.1.1. Is the information provided consistent with the one given under section A.3? | /01/ | Yes | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.1.2. Is the information on all private participants and directly involved Parties presented? | /01/ | Yes. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.2. Annex 2: Information regarding public funding | | | | |
| F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants? | /01/ | Yes. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I countries does not result in a diversion of ODA? | /01/ | Yes. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.3. Annex 3: Baseline information | | | | |
| F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PoA-DD? | /01/ | No further information is provided in Annex-3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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| F.3.2. | Is the data provided verifiable? Has sufficient evidence been provided to the validation team? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.3.3. | Does the additional information substantiate / support statements given in other sections of the PoA-DD? | /01/ | No further information is provided in Annex-3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.4. Annex 4: Monitoring information | | | | | |
| F.4.1. | If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PoA-DD? | /01/ | No additional information is provided in Annex-4 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.4.2. | Is the information provided verifiable? Has sufficient evidence been provided to the validation team? | /01/ | NA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| F.4.3. | Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PoA-DD? | /01/ | No additional information is provided in Annex-4 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Table 2: Resolution of Clarification and Corrective Action Requests

| Requests by validation team | Ref. to table 1 | Summary of programme owner response | Validation team Conclusion |
|---|-----------------|--|---|
| CLARIFICATION REQUESTS | | | |
| CL 1 Please clarify the situation in which the implementing agency is not the owner of the commercial facility. | A.2.1 | Where the produced electricity, cooling and/or heat are delivered to a facility that is not owned or under the control of the project owner, a contract between the project owner and consumer of the energy must be in place, specifying that only the facility generating the energy can claim CERs from the emissions displaced by the subject project. This is in accordance with the methodology AMS II.K. This has been updated in the PoA. | Section A.2 of PoA-DD has been modified to indicate that the situations in which the implementing agency is not the owner of the commercial facility then a contract between the project owner and consumer of the energy must be in place. The contract must cover at least the following: <ul style="list-style-type: none"> • Access/ availability of data |

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| | | | <ul style="list-style-type: none"> Enforce the implementation of the monitoring plan Ownership of the credits must be specified to avoid double-counting. <p>CL closed</p> |
| <p>CL 2 A valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity is required</p> | A.2.3 | <p>The CME has confirmed that the PoA is a voluntary activity. A letter has been submitted to the DOE on behalf of the CME as supporting evidence (Ref # 12). This has been included as part of the eligibility criteria for the PoA.</p> <p>The PoA has been updated.</p> | <p>A valid confirmation has been provided in section A.2 of PoA-DD that he proposed PoA is a voluntary action by the coordinating/managing entity/10/, also an undertaking has been provided by CME as evidence to confirm.</p> <p>CL closed</p> |
| <p>CL 3 Letter of authorization & letter of approval needs to be provided from DNA of South Africa.</p> | A.3.2 | <p>The Letter of Approval was received from the South African DNA. Please see Ref# 13.</p> | <p>Letter of Approval dated 31/10/2012 has been provided to DOE for validation.</p> <p>CL closed</p> |
| <p>CL 4 Please provide the MoC (modalities of communication with CDM EB-UNFCCC).</p> | A.3.4 | <p>Complete MoC (Ref # 14)</p> | <p>Modalities of Communication dated 26/09/2012 has been provided to DOE for validation.</p> <p>CL closed</p> |
| <p>CL 6 Please submit documentary evidence to justify that ODA has not been used. Also the PoA-DD does not clarify/ indicate any qualifying criteria with respect to ODA for including a CPA under this PoA.</p> | A.4.5.1 | <p>Letter from the project participant to confirm that no Official Development Assistance was used (Please see Ref # 15).</p> | <p>A documentary evidence has been provided to justify that ODA has not been used by the coordinating/managing entity has been provided in the form of a declaration that the CME has not received Official Development Assistance (ODA)/10/.</p> <p>CL closed</p> |
| <p>CL 7 Please provide the framework financial calculation sheets and related supporting documents to validate the investment barrier to be proved at CPA level. Please also submit the evidence for source of</p> | E.5.2.7 | <p>The framework financial calculation sheets and related supporting documents are attached as Ref # 16.</p> | <p>Framework financial calculation sheet/13/ have been provided to DOE for validation to be used for investment barrier at CPA level.</p> <p>CL closed</p> |

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| each assumption. | | | |
| <p>CL 8 Please provide the Operation and Management structure (Administrative Manual) pertaining to the proposed PoA. Mention clearly the responsibilities and institutional arrangements for data collection archiving.</p> | E7.2.1 | <p>The operation and management structure is revised in the PoA-DD. The responsibilities and institutional arrangements for data collection archiving are also updated. Coordinating/Managing Entity (CME) Manual for the Programme of Activities (PoA) is attached as reference.</p> | <p>Operation and management structure is updated in section E.7.2 of the updated version of PoA-DD/03/. The responsibilities and institutional arrangements for data collection archiving are also revised in section E.7.2 of PoA-DD/03/. PoA administrative manual or CME manual/09/ has been provided to the DOE for validation. This provides operation and management structure and responsibilities and institutional arrangements for data collection archiving in line with section E.7.2 of PoA-DD/03/.</p> <p>CL closed</p> |
| CORRECTIVE ACTION REQUESTS | | | |
| <p>CAR 1 Please clarify the definition of commercial facility/site in the context of the PoA. It is to be noted that only commercial buildings are covered under the methodology AMS.II.K. Further, the likely source(s) for heating in the baseline has not been discussed.</p> | A.2.1 | <p>With regard to this PoA, a commercial facility is classified as the premises of a business enterprise excluding industrial facilities. Only commercial facilities defined as the premises of a business enterprise excluding industrial facilities may be included in this PoA. The PoA has been revised accordingly.</p> | <p>The definition of commercial facility/site has been provided in section A.2 of PoA-DD/03/, this is in line with the methodology AMS-II.K, version 01/B02/. The likely sources for heating in the baseline have also been indicated in section A.2 of PoA-DD/03/.</p> <p>CAR closed</p> |
| <p>CAR 2 PP needs to clearly indicate in section A.3 if the Project participants are Public or Private entities.</p> | A.3.1 | <p>PP's are private entities. The PoA has been revised accordingly.</p> | <p>It is indicated in section A.3 of the PoA-DD/03/ that the CME or PP is a private entity.</p> <p>CAR closed</p> |
| <p>CAR 3 The name of the project participants in particular for the CME has not been indicated / reported consistently.</p> | A.3.3 | <p>The Carbon Protocol of SA has been indicated as the project participant. The PoA has been revised accordingly.</p> | <p>The name of project participant or CME is updated in section A.3 of PoA-DD/03/ and Annex-1 of PoA-DD and is consistent in PoA-DD/03/. Webhosted CME "Promethium Carbon" has</p> |

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| | | | <p>confirmed the change of CME/12-2/ and this has also been confirmed by the 1st CPA implementer “MTN” /12-1/.</p> <p>Voluntary withdrawal letters have been provided by the webhosted project participants, “Promethium Carbon”/19-1/ and “Mobile Telephone Networks” /19-2/, confirming the requirements § 8 of EB 50 Annex 48/B03-11/ and with the requirements of § 41 of EB 30. DOE has a contractual relationship with the validation CME (Carbon Protocol of SA)/18-2/, this meets the requirement of § 7 of EB 50 Annex 48/B03-11/. As the contract with DOE was signed by validation CME at the same time no objections were provided by the webhosted project participants /12-1/ /12-2/, hence it was not deemed necessary to republish the PoA-DD as per § 9 of EB 50 Annex 48/B03-11/.</p> <p>CAR closed</p> |
| <p>CAR 4 Please indicate in section A.4.1.2 of the PoA-DD regarding the applicable national and/or sectoral policies and regulations which are relevant to the PoA. The references/supportive of such policies need to be included in the PoA-DD.</p> | <p>A.4.1.2</p> | <p>The technology described in the PoA complies with all the laws and regulations in South Africa. The two relevant requirements are the Eskom Grid code and the Health and safety regulation of South Africa.</p> <p>There are policies that exist that support the technology, but these are not mandatory policies. The relevant policies are: South Africa is supportive of co-generation as mentioned in the Renewable Energy White Paper and the Energy Efficiency Strategy. (Ref # 17 and # 18)</p> | <p>Section A.4.1.2 of PoA-DD/03/ has been revised to indicate applicable national and/or sectoral policies and regulations which are relevant to the PoA. A confirmation is provided that there are no mandatory policies to implement the PoA. The relevant policies are provided in National Climate Change Response white paper/14/ and Energy Efficiency Strategy of the Republic of South Africa/15/. The evidences indicate that the PoA implementation is not a mandatory requirement.</p> <p>CAR closed</p> |
| <p>CAR 5 The baseline for electricity, cooling</p> | <p>A.4.1.2</p> | <p>The CPA implementer needs to choose the appropriate baseline in accordance with the methodology. The PoA has</p> | <p>The applicable baseline scenarios for the PoA are provided in section A.4.1.2 of PoA-DD.</p> |

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| <p>and heating has not been explicitly indicated.</p> | | <p>been revised to specify the exact procedure the project participant must follow in selecting the appropriate baseline.</p> <p>The appropriate baseline scenario must be selected from one of the following scenarios:</p> <p>(a) Replacing/supplementing existing systems or</p> <p>(b) Replacing systems that would have been built</p> <p>The PoA has been revised accordingly.</p> | <p>Identified baseline scenarios are in line with the methodology AMS-II.K, version 01/B02/.</p> <p>CAR closed</p> |
| <p>CAR 6 The description of project with respect to capacity (electricity, cooling system, heating system) of the different components of trigeneration is not very clear.</p> | <p>A.4.2.1</p> | <p>In accordance with the methodology, the energy savings caused by a single project activity may not exceed the equivalent of 60 GWh per year. A maximum saving of 60 GWh is equivalent to maximum savings of 60 GWhe of electricity consumption or maximum savings of 180 GWhth of fuel consumption, i.e., for calculation of maximum savings allowable per year, 1 GWHe equals 3 GWhth.</p> <p>The PoA has been revised accordingly.</p> | <p>The description of the project with respect to capacity (electricity, cooling system, heating system) of the different components of trigeneration has been provided in section A.2 of PoA-DD/03/ and eligibility criteria have been provided in section A.4.2.2 of PoA-DD/03/, for a CPA inclusion.</p> <p>CAR closed</p> |
| <p>CAR 7 It is not evident that voluntary coordinated action would not be implemented in the absence of the PoA.</p> | <p>A.4.3.2</p> | <p>The proposed project activity is being developed as a small scale CDM programme activity in order to generate revenues from the certified emission reductions (CERs) resulting from the programme. The CER revenues make it possible for the CPA under the platform to use several services to realise a faster roll out for gas fired cogeneration/trigeneration systems for commercial buildings. As such it is a voluntary coordinated action initiated by the CME. The natural gas based "Cogeneration/trigeneration for commercial buildings" programme activity is a commercial initiative solely based on expected CER revenue.</p> <p>The programme activity will be operated from revenues resulting from the sale of carbon credits and contributions from CPA implementers seeking access to CER revenues to enhance their market position. There are no mandatory policies and/or regulations in South Africa that mandates the installation of gas fired cogeneration or trigeneration systems. The "Policy to support the Energy Efficiency and Demand Side Management" by the Department of Energy in South Africa does not mention cogeneration or trigeneration</p> | <p>Section A.4.3 of the PoA-DD/03/ has been modified to state that the PoA is a voluntary action by the CME. There are no mandatory policies in the host country, South Africa on usage of Cogeneration or Trigeneration Systems. This is supported by the "Policy to support the Energy Efficiency and Demand Side Management", which does not mention cogeneration or trigeneration systems.</p> <p>CAR closed</p> |

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| | | <p>systems. Furthermore, end users (e.g., building owners/tenants) and CPA implementers participating in CPAs under the PoA will do so through a voluntary collaboration with the Carbon Protocol of SA.</p> <p>The prior consideration has been removed from the PoA as it is not applicable.</p> <p>The PoA has been updated accordingly.</p> | |
| <p>CAR 8 Although a description of the operational and management arrangements established by PP has been provided in the PoA-DD, PP needs to further elaborate on the following:</p> <ul style="list-style-type: none"> • Management Team Structure • Record keeping and Documentation system | <p>A.4.4.1</p> | <p>The PoA Manager shall act as a Project Participant, the CME and a Focal Point for the PoA in terms of the Rules of the CDM and shall act in any other capacity as required by any ERPA(s) that are entered into in respect of the PoA from time to time, subject to the terms of this Agreement. The PoA Manager shall at all material times during the term of this Agreement, act in a fiduciary capacity vis-à-vis the CPAs and, therefore, shall always act in the best interest of the PoA;</p> <ul style="list-style-type: none"> • The CPA1 Owner shall be a Project Participant of the PoA and is the legal owner of CPA1; and • The Carbon Specialist shall provide the professional services required by the PoA and act as a Focal Point with the PoA Manager, if so required. As consideration for the professional services to be rendered in terms of this Agreement, the Carbon Specialist shall be paid the Specialist Fee. <p>(i) Record keeping system for each CPA under the PoA</p> <p>The CPA1 Owner shall during the Operational Phase continue to promote and advance the interests of the PoA by, inter alia,:</p> <ol style="list-style-type: none"> 1. operating CPA1 effectively in accordance with the CPA-DD; 2. recording emission reduction data accurately and timeously in compliance with the PoA documents; | <p>Section A.4.4.1 of PoA-DD is updated to indicate Management Team Structure and Record keeping and Documentation system. This is in line with the CME manual provided/09/.</p> <p>CAR closed</p> |

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| | | <p>3. properly maintaining the data in good order and in a format so that the data may be easily and separately identified from any other documents, records or electronic back-ups of the CPA1 Owner or a third party; and for a period of 2 years after the end of the crediting period of CPA1.</p> <p>The PoA and the agreement with the CME has been revised accordingly.</p> <p>Please see the draft CME contract attached as Ref # 19.</p> | |
| <p>CAR 9 It is not clear whether the environmental analysis will be carried out at PoA level or CPA level. Although the cross has been made on environmental analysis at CPA level, the statement underneath states that the analysis would be done at PoA level. Please correct the sections accordingly.</p> | C.1.1 | <p>The environmental analysis will be carried out on a PoA level. This inaccuracy has been corrected in the document.</p> <p>The PoA has been revised accordingly.</p> | <p>It is clearly indicated in section C.1 of PoA-DD that the environment analysis shall be carried out at the CPA level.</p> <p>A justification is provided that each type of CPA will have different types of environmental impacts.</p> <p>CAR closed</p> |
| <p>CAR 10: Applicability conditions of the methodology for PoAs has not been discussed as per § 27 of the methodology.</p> | E.2.1.13 | <p>The PoA has been updated according.</p> | <p>Applicability condition of the methodology for PoAs as per methodology AMS-II.K, version 01/B02/ has been provided in section E.2 of PoA-DD/03/.</p> |
| <p>CAR 11 As indicated in E.5.1 of PoA-DD The choice available for the project activity is (in baseline) use of grid electricity (no investment) and in the project scenario is an investment; Accordingly the choice of financial indicator as investment comparison analysis is not justified</p> | E.5.2.2 | <p>The choice of financial indicator as investment comparison analysis has been removed. The investment barrier is based on the debt provider for the project activity.</p> <p>The PoA has been revised accordingly.</p> | <p>Section E.5.1 and E.5.2 of PoA-DD have been revised in accordance with “Guidelines on the demonstration of additionality of small-scale project activities”/B03-8/ and “Guidelines for Demonstrating additionality of microscale projects”/B03-10/ to indicate that for a small scale project barriers would be identified. Investment barrier shall be based on the debt provider for the project activity.</p> <p>CAR closed</p> |

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| <p>CAR 12 Please provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA type.</p> | <p>E.6.2.2</p> | <p>The standard Emission reduction calculation sheet which would be used for ER computation from each CPA type has been provided as Ref # 3.</p> | <p>Standard emission reduction calculation sheet which would be used for ER computation from each CPA type has been provided to DOE for validation. It shall be used by each CPA for calculation of ER.</p> <p>CAR closed</p> |
| <p>CAR 13: The list of parameters in E.7.1 is not complete as the parameter $TDL_{j,y}$ has not been used as a monitoring parameter as per the tool.</p> | <p>E.7.1.1</p> | <p>$TDL_{j,y}$ has been changed to a monitoring parameter, as per the tool.</p> | <p>The parameter $TDL_{j,y}$ has been changed to a monitoring parameter as per the “Tool to calculate baseline, project and/or leakage emissions from electricity consumption”/B04-3/</p> |
| <p>CAR 14: No provision has been made to establish the Total annual consumption of energy (electricity, cooling and heating) by the consuming commercial buildings in baseline (which are fixed ex-ante and monitoring the same for 20%change during the crediting period).</p> | <p>E.7.2.1</p> | <p>Agreed, the PoA has been changed as follows:</p> <p>(i) If the total annual consumption of energy (electricity, cooling and heating) by the consuming commercial buildings does not increase by more than 20% from the established baseline values during the crediting period then the baseline scenario is the continuation of the operation of the existing systems and baseline emissions are established from the characteristics of the existing systems using data from the immediately prior three years (to the date of project start up);</p> <p>(ii) If during the crediting period, total annual consumption of energy (electricity, cooling and heating) by the consuming commercial building does increase by more than 20% from the established baseline values then one of two options are applicable:</p> <ul style="list-style-type: none"> • If it can be demonstrated, using the related and relevant procedures prescribed in the SSC general guidance, that the most plausible baseline scenario for the supply of additional amounts of energy is the same as the existing systems then such systems can be continued to be used for determining baseline emissions; | <p>Section E.7.2 of PoA-DD has been updated to indicate provisions to establish the Total annual consumption of energy (electricity, cooling and heating) by the consuming commercial buildings in baseline (which are fixed ex-ante and monitoring the same for 20%change during the crediting period).</p> <p>CAR closed</p> |

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| | | <ul style="list-style-type: none"> If it cannot be demonstrated that the most plausible baseline scenario for the supply of additional amounts of energy is the same as the existing systems then the Baseline Reference Plant Approach, as defined below shall be used. <p>(iii) If, irrespective of total annual energy consumption of baseline or project scenarios, it is determined that new and more efficient systems (as compared to the existing systems) would have been installed in the absence of the project activity (for example, due to the baseline equipment reaching the end of its useful life at any point during the crediting period) then the Baseline Reference Plant Approach, as defined in ASM-II.K. version 1 will be used.</p> <p>The PoA has been revised accordingly.</p> | |
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Table3: Forward Action Requests

| Forward action request | Reference to Table 1 | Response by project participants Validation Conclusion |
|------------------------|----------------------|--|
| N/A | | - |

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APPENDIX B CERTIFICATE OF COMPETENCE

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Vikash Kumar Singh

is hereby certified as a

Qualified CDM Technical Reviewer

with Carbon Check (Pty) Ltd, under the regulations of the
UNFCCC and Carbon Check's qualification criteria, in the following
Technical Area/s:

1.2, 3.1, 13.1

Awarded: 11 October 2012

A handwritten signature in blue ink, appearing to read "AS", written over a horizontal line.

Chief Executive Officer
Mr Adam Simcock