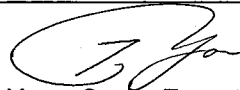



Verification and certification report form for CDM programme of activities
(version 01.0)

Complete this form in accordance with the "Attachment. Instructions for filling out the verification and certification report form for CDM programme of activities" at the end of this form.

VERIFICATION AND CERTIFICATION REPORT

| | | |
|--|--|---|
| Title of the programme of activities (PoA) | Green Power for South Africa | |
| UNFCCC reference number of the PoA | 7167 | |
| Version number(s) of the PoA-DD(s) applicable to this report | Version 10 | |
| Version number of the verification and certification report | 02 | |
| Completion date of the verification and certification report | 06/07/2016 | |
| Monitoring period number | 1 | |
| Duration of this monitoring period | 01/06/2013 – 30/06/2015 | |
| Number and version number of the monitoring report to which this report applies | Monitoring report number: 01 Monitoring report version number: 03 | |
| Coordinating/managing entity (CME) | Additional Energy Limited | |
| Host Party(ies) | Host Party(ies) of the PoA | Is this a host Party to a CPA covered in this report? (yes/no) |
| | Republic of South Africa | Yes |
| Sectoral scope(s) | 1. Energy industries (renewable / non-renewable sources) | |
| Selected methodology(ies) | ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ver. 12.3.0) | |
| Selected standardized baseline(s) | N/A | |
| Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in this report | 355,260 tCO ₂ e | |
| Total certified GHG emission reductions or net GHG removals for this monitoring period for the included CPA(s) covered in this report | 341,254 tCO ₂ e | |
| Name of DOE | Japan Quality Assurance Organization | |
| Name, position and signature of the approver of the verification and certification report |  Tadayuki Yano, Senior Executive | |

SECTION A. Executive summary

Brief Summary

Japan Quality Assurance Organization (JQA) has performed the 1st periodic verification of the emission reductions achieved by the large-scale registered CDM PoA "Green Power for South Africa (Ref. 7167, registered on 14/12/2012)" under the contract with Additional Energy Limited. The verification covers the monitoring period from 01/06/2013 to 30/06/2015. Three CPAs of CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 under the registered PoA were implemented during the 1st monitoring period and the emission reductions achieved by the implementation of these three CPAs were claimed for this monitoring period.

The objective of the registered PoA is to generate electricity using solar or wind energy and to contribute to the reduction of GHG emissions from grid electricity which is mainly supplied by coal-fired power stations.

Through the verification of the three CPAs, JQA raised six CARs and seven CLs. As a result of the resolution of these CARs/CLs, JQA confirms that the three CPAs and their monitoring activities are implemented and operated in accordance with the registered PoA-DD, the registered monitoring plan and the applied methodology/ tools.

The GHG emission reductions are transparently and correctly calculated in accordance with the methodology ACM0002 (ver.12.3.0) and each CPA-DD under the registered PoA-DD. JQA determines that the claimed emission reductions of 341,254 tCO₂e in the 1st monitoring period achieved by CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 are free from material errors, omissions or misstatements with a reasonable level of assurance.

Scope of verification

The Monitoring Report (ver. 01 and ver. 03) and the ER Calculation Spreadsheet (ver. 1.0 and ver. 03) were reviewed against:

- Decisions by UNFCCC
- Kyoto Protocol
- Decision 3 / CMP.1
- Relevant decisions of COP/MOP and CDM-EB
- Monitoring report form for CDM programme of activities (ver. 01.0) including Attachment: Instructions for filling out the monitoring report form for CDM programme of activities
- CDM Validation and Verification Standard (VVS) (ver. 09.0)
- CDM Project Standard (PS) (ver. 09.0)

The MR and the ER calculation spreadsheet were also assessed to confirm their conformities with the following documents:

- Registered PoA-DD
- Registered CPA-DDs of CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 under the registered PoA
- Validation Reports of the registered PoA-DD and each CPA-DDs
- ACM0002- Consolidated baseline methodology for grid-connected electricity generation from renewable sources (ver. 12.3.0)
- Tool to calculate the emission factor for an electricity system (ver. 02.2.1)
- Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (ver. 02)
- Combined tool to identify the baseline scenario and demonstrate additionality (ver. 04.0.0)
- Tool for the demonstration and assessment of additionality (ver. 06.1.0)
- All supporting documents relevant to the MR and the ER calculation

Verification process

The verification process of JQA consists of the following steps:

- 1) Desk review of relevant documents including MR provided from the CME and each CPA developer;
- 2) Materiality assessment and preparation of verification and sampling plan
- 3) On-site assessment including site-tour, interview with the relevant personnel, cross-check of the data and the calculation for GHG emission reductions, and identification of the PPs' quality control and the quality assurance procedures;
- 4) Resolution of corrective action requests (CARs) and clarification requests (CLs); In case that forward action requests (FARs) are raised, the CME and CPA implementer are expected to address the issues for the next verification period;
- 5) Preparation of the draft Verification and Certification Report; and
- 6) Internal quality control (Technical Review) and final decision on the issuance of Verification and Certification Report

In order to ensure transparency, CDM Verification Checklist is customized for the project according to VVS and decisions/rulings issued by the CDM-EB. Issues identified in the verification process are indicated under the titles "CAR", "CL" and "FAR" in the checklist and are listed in Appendix 4 of this report. The verification process does not provide the project participants with any consulting service. However, appropriate actions to CARs, CLs and FARs could contribute to improve monitoring documentations and monitoring activities.

The criteria for CAR, CL and FAR according to VVS are as follows:

CAR (Corrective Action Request)

- a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient
- b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

CL (Clarification Request)

- a) Information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

FAR (Forward Action Request)

- a) Monitoring and reporting require attention and/or adjustment for the next verification period.

JQA lists all issues and findings in Appendix 4 of this report.

Verification conclusion

Based on the 1st periodic verification of the registered PoA "Green Power for South Africa" and its three CPAs (7167-0001, 7167-0006 and 7167-0010) for the monitoring period from 01/06/2013 to 30/06/2015, JQA confirms that the registered PoA and CPAs and their monitoring activities are implemented and operated in accordance with the registered PoA-DD and CPA-DDs, the registered monitoring plan and the monitoring methodology/ tools.

The GHG emission reductions are transparently and correctly calculated based on the methodology ACM0002 (ver. 12.3.0). JQA determines that the claimed emission reductions of 341,254 tCO₂e in the 1st monitoring period are free from material errors, omissions or misstatements with a reasonable level of assurance.

SECTION B. Verification team, technical reviewer and approver**B.1. Verification team members**

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) | Involvement in | | | |
|-----|-------------|------------------|-----------|------------|---|----------------|--------------------|--------------|-----------------------|
| | | | | | | Desk review | On-site inspection | Interview(s) | Verification findings |
| 1. | Team Leader | EI | Yoshida | Tadashi | N/A | x | x | x | x |
| 2. | Verifier | IR | Motokawa | Hiroshi | Tokyo central office | x | x | x | x |

B.2. Technical reviewer and approver of the verification and certification report

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of DOE or outsourced entity) |
|-----|--------------------|------------------|-----------|------------|---|
| 1. | Technical reviewer | IR | Tanabe | Koichiro | Tokyo central office |
| 2. | Approver | IR | Yano | Tadayuki | Tokyo central office |

SECTION C. Means of verification**C.1. Desk review**

The desk review involves;

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan, monitoring methodology including applicable tool(s) and, where applicable, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- A review of calculation and assumptions made in determining the GHG data and emission reductions;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

Documents reviewed or referenced during the verification are listed in Appendix 3 of this report.

C.2. On-site inspection

| Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY | | | | |
|---|--|--|-------------------------|-------------------------------------|
| No. | Activity performed on-site | Site location | Date | Team member |
| 1. | Assessment of implementation and operation of the project activity based on the registered monitoring plan and physical features of the project activity as per PoA-DD and CPA-DDs | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 2. | Review of information flows for generating, aggregating and reporting the monitoring parameters | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 3. | Interview with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the CPA-DD | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 4. | Check of the monitoring equipment including calibration performance against the requirements of the CPA-DD, the applied methodology and national standards, where applicable | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 5. | Cross-check between information provided in the monitoring report and data from other sources such as plant logbook, sales/purchase invoices or | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 6. | Review of calculation and assumption made in determining the GHG data and emission reductions | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |
| 7. | Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters | Northern / Eastern Cape Province, South Africa | 02/10/2015 - 05/10/2015 | Tadashi Yoshida Hiroshi Motokawa |

C.3. Interviews

| No | Interviewee | | | Date | Subject | Team member |
|----|-------------|--------------|---|----------------------------|--|------------------------------------|
| | Last name | First name | Affiliation | | | |
| 1. | Sinclair | Geoff | Additional Energy Limited | 02/10/2015 -06/10/2015 | CME Activities and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 2. | Bhata | Anil | Additional Energy Limited | 02/10/2015 -06/10/2015 | CME Activities and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 3. | Jooste | Charl | Solar Capital, Head of Engineering & Technical Services | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 4. | van As | Thinus | Arup Engineer | 202/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 5. | Salaorno | Massimiliano | Monocada Constructor & Operator | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 6. | Louw | Willem | Scatec Solar, Technical Supervisor | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 7. | Rikhotso | Amos | Scatec Solar HSE coordinator | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 8. | Ramoekipa | Sazi | Scatec Solar Plant Supervisor | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |
| 9. | Mescht | Gustov | Scatec Solar Electrician | 02/10/2015 -06/10/2015 | CPA Implementation and management system | Tadashi Yoshida / Hiroshi Motokawa |

C.4. Sampling approach

As the verification team verified all electricity data through cross-checking with the Check meter's data, SCADA daily data and invoices, a sampling approach was not employed. The following monitoring parameters measured by the main meter were cross-checked:

- $EG_{\text{facility},y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/y)
- $EG_{\text{imported},y}$: Quantity of electricity imported into the power plant/ used by the power plant and supplied by the grid in year y (MWh/y)

As a result of cross-checking the monthly data in the MR and ER calculation spreadsheet with their SCADA daily data, some errors were identified as mentioned in Appendix 4 of this report. These data were appropriately corrected by the PPs.

C.4. Clarification requests, corrective action requests and forward action requests raised

| Areas of verification findings | No. of CL | No. of CAR | No. of FAR |
|--|------------------|-------------------|-------------------|
| General | | | |
| Compliance of the monitoring report with the monitoring report form | - | - | - |
| Remaining forward action requests from validation and/or previous verification | - | - | - |
| Specific-case CPA(s) considered for verification and covered in this report | - | - | - |
| Programme of activities | | | |
| Compliance of the programme implementation with the registered PoA-DD | - | - | - |
| Implementation and operation of the management system | 1 | - | - |
| Post-registration changes | | | |
| <ul style="list-style-type: none"> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline | - | - | - |
| <ul style="list-style-type: none"> Corrections | - | - | - |
| <ul style="list-style-type: none"> Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s)) | - | - | - |
| <ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline | - | - | - |
| <ul style="list-style-type: none"> Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA | - | - | - |
| <ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation activities | - | - | - |
| Component project activity(ies) | | | |
| Compliance of the CPA implementation with the included CPA design document | 2 | 1 | - |
| Post-registration changes | | | |
| <ul style="list-style-type: none"> Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline | - | - | - |
| <ul style="list-style-type: none"> Corrections | - | - | - |
| <ul style="list-style-type: none"> Changes to the start date of the crediting period | - | - | - |
| <ul style="list-style-type: none"> Inclusion of a monitoring plan to an included CPA-DD | - | - | - |
| <ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline | - | - | - |
| <ul style="list-style-type: none"> Changes to the programme design of the included CPA-DD | - | - | - |
| <ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation component project activities | - | - | - |
| Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline | - | - | - |
| Compliance of monitoring activities with the registered monitoring plan | | | |
| <ul style="list-style-type: none"> Data and parameters fixed ex ante or at renewal of crediting period | 1 | - | - |
| <ul style="list-style-type: none"> Data and parameters monitored | 1 | 2 | - |
| <ul style="list-style-type: none"> Implementation of sampling plan | - | - | - |
| Compliance with the calibration frequency requirements for | - | - | - |

| | | | |
|--|----------|----------|----------|
| measuring instruments | | | |
| Assessment of data and calculation of emission reductions or net removals | | | |
| • Calculation of baseline GHG emissions or baseline net GHG removals by sinks | 1 | 2 | - |
| • Calculation of project GHG emissions or actual net GHG removals by sinks | - | - | - |
| • Calculation of leakage GHG emissions | - | - | - |
| • Summary of calculation of GHG emission reductions or net GHG removals by sinks | - | - | - |
| • Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA | - | 1 | - |
| • Remarks on difference from estimated value in registered PDD | 1 | - | - |
| Others (please specify) | - | - | - |
| Total | 7 | 6 | 0 |

SECTION D. Internal quality control

The following are implemented in line with the procedure for internal quality control prescribed by JQA CDM Quality Manual and relevant procedures.

First, the verification team establishes the draft verification report including draft conclusion and submits the draft verification report and other documents needed for the review to the technical reviewer. The reviewer verifies appropriateness of the draft conclusion on the verification of the project activity and its procedures. Then the reviewer reports the review results to the verification team. The verification team responds to the reviewer's comments and revises the documents, if necessary. The team leader of the verification team reports the review result to the Senior Executive of JQA. Finally, the Senior Executive approves the emission reductions achieved by the CDM Project and issues the Verification and Certification Report.

SECTION E. Verification opinion

JQA has performed the 1st periodic verification of emission reductions achieved by the registered CDM PoA project "Green Power for South Africa" (Ref. 7167; registered on 14/12/2012) for the period of 01/06/2013 - 30/06/2015, under the contract with Additional Energy Limited which is the CME for the PoA, as reported in the Monitoring Report (ver. 03) dated 22/06/2016. The CME is responsible for the collection of data in accordance with the monitoring plan and for the reporting of GHG emission reductions from the implementation of the registered PoA.

The following 11 CPAs are included under the registered CDM PoA:

- 7167-0001 Scatec Solar Linde CPA-001 (SSL CPA-001),
- 7167-0002 Scatec Solar Kalkbult CPA-002 (SSK CPA-002),
- 7167-0003 AE-AMD Herbert CPA-003 (AEH CPA-003),
- 7167-0004 Erika Energy Soutpan CPA-004 (EES CPA-004),
- 7167-0005 Core Energy Witkop CPA-005 (CEW CPA-005),
- 7167-0006 Solar Capital De Aar 1 CPA-006 (SCDA1 CPA-006),
- 7167-0007 Solar Capital De Aar 3 CPA-007 (SCDA3 CPA-007),
- 7167-0008 Lesedi 74.96 MW Solar PV Project CPA-008,
- 7167-0009 Letsatsi 74.96 MW Solar PV Project CPA-009,

- 7167-0010 Scatec Solar Dreunberg CPA-010,
- 7167-0011 Boshof Solar Park CPA-011

Three CPAs of them listed above, *i.e.*, CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010, were implemented during the 1st monitoring period and the emission reductions achieved by the implementation of these three CPAs were claimed for this monitoring period. The implementation period of each CPA is as follows:

- CPA 7167-0001: 01/07/2014 – 30/06/2015
- CPA 7167-0006: 15/08/2014 – 30/06/2015
- CPA 7167-0010: 29/08/2014 – 30/06/2015

JQA has performed the verification of the above three CPAs under the registered PoA as per VVS to check whether the CDM Project is implemented and operated in accordance with the registered PDD, its monitoring plan, the applied monitoring methodologies/ tools and decisions/ rulings by Kyoto Protocol, UNFCCC, CMP and CDM-EB. The verification process includes the desk review of the relevant documents, on-site assessment including data cross-check and site inspection, resolution of CARs and CLs, preparation of Draft Verification Report, internal quality control and the final approval of Verification and Certification Report.

JQA confirms that the monitoring report is completed using the latest version 01.0 of monitoring report form which is valid at the time of making publicly available on the UNFCCC website, and the evidence and information provided by the CME are sufficient and reliable.

During the course of verification and on-site visit, the electricity data in the MR and ER calculation spreadsheet were cross-checked with the SCADA daily data and invoices. The procedures for data monitoring, recording, aggregation and calculation were also verified.

Through the resolution of six CARs and seven CLs raised in this verification, JQA confirms that the three CPAs under the registered PoA were correctly implemented and operated in accordance with the applied methodology, monitoring plan and the registered / included CPA-DDs.

In conclusion, JQA has confirmed that the three CPAs under the registered PoA result in the emission reductions of 341,254 tCO₂e during the 1st monitoring period from 01/06/2013 to 30/06/2015.

SECTION F. Certification statement

JQA has performed the 1st periodic verification of the registered PoA “Green Power for South Africa” (Ref. 7167). The PoA involves electricity generation by the utilization of wind and solar energy to displace grid electricity which is mainly supplied by centralised coal-fired power stations.

The verification was performed for the three CPAs under the registered PoA to identify the compliance of the component projects with implementation and monitoring requirements. The verification was based on the registered PoA-DD, CPA--DDs and the monitoring report for this project which are provided by the CME, Additional Energy Limited, and conducted through the desk review of relevant documents, on-site inspection and interview with the CME and CPA developers to check whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and the evidences supporting the reported data were appropriately collected.

JQA has confirmed that the three CPAs under the registered PoA are appropriately implemented and operated in accordance with the monitoring methodology ACM0002 (ver. 12.3.0) and the monitoring plan of each CPA under the registered PoA. JQA hereby certifies that the emission reductions achieved in the 1st monitoring period from 01/06/2013 to 30/06/2015 by the registered CDM PoA “Green Power for South Africa” are 341,254 tCO₂e and are free from material errors, omissions or misstatements with a reasonable level of assurance. The GHG emission reductions

stated in the revised MR (ver. 03) and the revised ER calculation spreadsheet (ver. 03) are transparently and correctly calculated throughout the 1st monitoring period by applying the methodology/ tools.

The amounts of emission reductions achieved by each CPA for this monitoring period are as follows;

| CPAs (included in this request) | Emission reductions in this monitoring period | |
|------------------------------------|---|--------------------|
| | Up to 31/12/2012 | 01/01/2013 onwards |
| CPA 7167 – 0001 | -- | 86,814 |
| CPA 7167 – 0006 | -- | 134,488 |
| CPA 7167 – 0010 | -- | 119,952 |
| Total | -- | 341,254 |

SECTION G. Verification findings - General

G.1. Compliance of the monitoring report with the monitoring report form

| | |
|------------------------------|---|
| Means of verification | It is confirmed through the review of relevant documents that the monitoring report is completed using the valid version (ver. 01.0) of the CDM-PoA-MR-FORM at the time of making publicly available on the UNFCCC website, and in accordance with the instructions for filling out the monitoring report form. |
| Findings | N/A |
| Conclusion | JQA concludes that the MR is completed using the valid version of monitoring report form. Therefore, this section is closed. |

G.2. Remaining forward action requests from validation and/or previous verification

This is the 1st periodic verification of the project. Through the review of the validation reports of the registered PoA-DD and the CPA-DDs of 7167-0001, 7167-0006 and 7167-0010, it is confirmed that there are no remaining FARs from their validations.

G.3. Specific-case CPA(s) considered for verification and covered in this report

| Reference number of the specific-case CPA included in the PoA as of the end of this monitoring period | Is the specific-case CPA considered for this verification? (yes/no) | Version number of the registered PoA-DD to which the specific-case CPA complies with | Confirmation that a request for issuance including the specific-case CPA has been published for the previous monitoring period (Y/N) |
|---|---|--|--|
| 7167-0001 | Yes | Version 10 | No |
| 7167-0002 | No | Version 10 | No |
| 7167-0003 | No | Version 10 | No |
| 7167-0004 | No | Version 10 | No |
| 7167-0005 | No | Version 10 | No |
| 7167-0006 | Yes | Version 10 | No |
| 7167-0007 | No | Version 10 | No |
| 7167-0008 | No | Version 10 | No |
| 7167-0009 | No | Version 10 | No |
| 7167-0010 | Yes | Version 10 | No |
| 7167-0011 | No | Version 10 | No |

SECTION H. Verification findings – Programme of activities

H.1. Compliance of the programme implementation with the registered programme design document

| | |
|-----------------------|--|
| Means of verification | <p>The purpose of the registered PoA is to generate electricity through the utilization of wind or solar energy and to reduce the GHG emission reductions by displacing the electricity from the grid which is mainly supplied by the operation of coal-fired power stations.</p> <p>The boundary of the PoA is defined as the geographical area where large-scale CPAs included in the PoA are implemented, <i>i.e.</i>, the Republic of South Africa. Each CPA is identified uniquely with the address and GPS coordinates, which prevents incidences of double counting. The Western Cape Province has the best potential for wind energy and the Northern Cape Province has the best solar resource in the country.</p> <p>All power generated by the projects under the registered PoA is fed into the national grid and hence displaces the electricity generated from centralized coal-fired power stations. All CPAs consist of a wind or solar PV powered facilities with various capacities from small (<5 MW) to large (>100 MW) renewable energy.</p> <p>It is confirmed through the review of the relevant documents, on-site inspection and the interview with the CPA developer that CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 implemented under the registered PoA are assigned into large-scale power generation projects using solar energy which are located in the Northern/Eastern Cape Provinces of South Africa, and their capacities are in a range of 40 - 75 MW. These findings are in accordance with the description in the registered PoA.</p> <p>Through the review of technical specification of facilities (such as PV module, inverter and electricity meter) provided by the CME/CPA developers and the physical on-site inspection on 02-05/10/2015, it was confirmed that all physical features (technology, project equipment, and monitoring and metering equipment) of the CPAs under the registered PoA were in place and that the CME/CPA developer had operated and implemented as planned in the registered PoA. As per the eligibility criteria (No.4) for the inclusion of a CPA in the Green Power for South Africa PoA, the starting date of each CPA shall be after 18/11/2011, which is the start date of the PoA when the PoA-DD was first published for the global stakeholder consultation process. It is confirmed through the review of the relevant documents and the interview with the CPA developer that the start dates of three CPAs implemented under the registered PoA are all after 18/11/2011.</p> <p>The verification covers the 1st monitoring period from 01/06/2013 to 30/06/2015. Through the 1st verification of the project activity, it is confirmed that any deviations or actual changes are not identified in the implementation or operation of the registered PoA-DD.</p> <p>Through the review of the electricity data and the interview with the CME/CPA developer, it is confirmed that each CPA and its monitoring activity are implemented and operated in accordance with the registered PoA, the registered monitoring plan and the monitoring methodology/ tools. Namely, the quantity of electricity exported/ imported by the project activity is continuously measured with main and check electricity meters and daily recorded by SCADA system. The monthly electricity data measured is cross-checked with invoices issued by the grid company.</p> <p>The value of $EF_{grid,CM,y}$ (0.9721 tCO₂/MWh) is provided in each CPA-DD and PoA-DD in which this parameter was determined <i>ex-ante</i> using "Tool to calculate the emission factor for an electricity system".</p> |
|-----------------------|--|

| | |
|-------------------|--|
| | The GHG emission reductions are transparently and correctly calculated based on the methodology ACM0002 (ver. 12.3.0) and the registered PoA. JQA determines that the claimed emission reductions of 341,254 tCO ₂ e in the 1 st monitoring period are free from material errors, omissions or misstatements with a reasonable level of assurance. |
| Findings | N/A |
| Conclusion | JQA concludes that the three CPAs under the registered PoA have been operated and implemented in accordance with the description contained in the registered PoA. Thus, this section is closed. |

H.2. Implementation and operation of the management system

| | |
|------------------------------|---|
| Means of verification | <p>Additional Energy Limited is the Coordinating/Managing Entity (CME) of Green Power for South Africa Programme of Activities (PoA). Previously, Standard Bank Plc was the CME of the PoA. Additional Energy Limited was approved as the CME by the UNFCCC on 27/11/2015 and is responsible for overseeing the overall implementation of the PoA. As a CME, Additional Energy Limited has the following responsibilities:</p> <ul style="list-style-type: none"> - Coordination of the monitoring activities of CPAs included under the PoA, - Maintenance of all monitoring reports of all CPAs in accordance with record keeping systems outlined in the CDM PoA-DD, - Provision of all monitoring reports to the DOE, and - Submission of requests for issuance as agreed with project participants. <p>In accordance with the CPA Participation Agreement between CME and CPA developer, CPA developer is initially required to provide basic information on the location of the CPA, installed capacity of the power plant, technical specification of PV module and inverter, details of main and check electricity meters. It is confirmed through the review of relevant documents and the interview with the CME/CPA developer that these information are compiled in "CME Database Sheet".</p> <p>CPA developer is further requested to monitor electricity data such as $EG_{facility,y}$ and $EG_{imported,y}$ and to send them electronically to the CME on a monthly basis. The data is recorded in an Excel spreadsheet entitled "CPA specific data recording sheet" which is provided by the CME to CPA developer. The QA/QC of monitored data is performed by CPA developer according to "Procedure for PoA Data Quality Check" which is provided by the CME.</p> <p>It is confirmed through the review of relevant documents and the interview with the CME/CPA developer that the role and responsibilities of the CME/ CPA developer and data information flow are stipulated in "Monitoring Guidelines for CPA Developers" for the registered PoA, which is prepared by the CME on 19/11/2013, and that each CPA is appropriately monitored and managed in accordance with the "Monitoring Guideline" and "Procedure for PoA Data Quality Check".</p> |
| Findings | - Regarding the implementation of management system in Section B.1, CL 02 was raised and resolved as described in Table 2 of Appendix 4. |
| Conclusion | JQA concludes that the three CPAs under the registered PoA have been appropriately monitored and managed in accordance with the "Monitoring Guideline" and "Procedure for PoA Data Quality Check" which are provided by the CME. Thus, this section is closed. |

H.3. Post-registration changes**H.3.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline**

Not applicable

H.3.2. Corrections

Not applicable

H.3.3. Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))

Not applicable

H.3.4. Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline

Not applicable

H.3.5. Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA

Not applicable.

H.3.6. Types of changes specific to afforestation and reforestation activities

Not applicable

SECTION I. Verification findings – Component project activity(ies)**I.1. Compliance of the CPA implementation with the included CPA design document**

| | | |
|------------------------------|---|--|
| Means of verification | There are eleven specific CPAs (from 7167-0001 to 7167-0011) included in the registered PoA, which are all grouped into the large-scale photovoltaic (PV) projects using solar energy, at the end of the current monitoring period. Three of them (<i>i.e.</i> , 7167-0001, 7167-0006 and 7167-0010) are implemented and operated in the 1 st monitoring period as follows: | |
| | CME | Additional Energy Limited |
| | Title of the PoA | Green Power for South Africa |
| | UNFCCC registration No. | 7167 |
| | Applied methodology | ACM0002 (ver. 12.3.0) |
| | Start date of the PoA | 18/11/2011 |
| | | |
| | Title of the CPA | Scatec Solar Linde CPA-001 (SSL CPA-001) |
| | CPA reference No. | 7167-0001 |
| | Installed capacity | 39.74 MWp |
| | Date of inclusion | 14/12/2012 |
| | CPA start date | 29/05/2012 |

| | |
|--------------------------|--|
| Start date of operation | 01/07/2014 |
| CPA developer | Scatec Solar South Africa (Pty) Ltd. |
| Project scale | Large-scale |
| Location of the CPA | De Aar, Northern Cape province, South Africa |
| GPS coordinates | S30°00'07" E24°39'53" |
| CPA crediting period | 01/07/2014 – 30/06/2024 (Fixed) |
| Monitoring period of CPA | 01/07/2014 - 30/06/2015 |

| | |
|--------------------------|---|
| Title of the CPA | Solar Capital De Aar 1 CPA-006(SCDA1 CPA-006) |
| CPA reference No. | 7167-0006 |
| Installed capacity | 75 MWp |
| Date of inclusion | 16/05/2013 |
| CPA start date | 20/12/2011 |
| Start date of operation | 15/08/2014 |
| CPA developer | Solar Capital De Aar (Pty) Ltd. |
| Project scale | Large-scale |
| Location of the CPA | De Aar, Northern Cape province, South Africa |
| GPS coordinates | S30°35'35.2" E24°06'07.5" |
| CPA crediting period | 01 Mar 2014 - 29 Feb 2024 (Fixed) |
| Monitoring period of CPA | 15/08/2014 - 30/06/2015 |

| | |
|--------------------------|--|
| Title of the CPA | Scatec Solar Dreunberg CPA-010 |
| CPA reference No. | 7167-0010 |
| Installed capacity | 75 MWp |
| Date of inclusion | 16/05/2013 |
| CPA start date | 02/03/2012 |
| Start date of operation | 29/08/2014 |
| CPA developer | Scatec Solar South Africa (Pty) Ltd. |
| Project scale | Large-scale |
| Location of the CPA | Burgersdrop, Eastern Cape province, South Africa |
| GPS coordinates | S30°49'49" E26°12'40" |
| CPA crediting period | 01/07/2014 - 30/06/2024 (Fixed) |
| Monitoring period of CPA | 29/08/2014 - 30/06/2015 |

Three CPA projects implemented under the registered PoA are located in the Northern/Eastern Cape provinces of South Africa and their installed capacities are in a range of 40 – 75 MWp. The PV generation system comprises of solar PV module, DC/AC inverter, 22kV/132kV transformer, electricity meters, SCADA and Communications system and grid substation. The back-up battery system for emergency use is installed on-site to supply electricity to the measuring system. All electricity generated by the projects is fed to the national grid of South Africa - Eskom. Exported/imported electricity are continuously measured by the main/check electricity meters and continuously recorded through the SCADA system in an Excel spreadsheet entitled "CPA specific data recording sheet" provided by the CME. The electricity data aggregated on a monthly basis is reported to the CME. Each CPA project consists of only one site and is not with phased implementation, except CPA-006. CPA-006 is the 1st phase of the project with a maximum capacity of 300 MW. This project has been split up into phases on account of the capacity cap of 75 MW set by the Renewable Energy Independent Power Producer Procurement Programme of the Department of Energy in South Africa.

Through the review of technical specification of facilities provided by the CME/CPA developer and the physical on-site inspection on 02-05/10/2015, it is confirmed that all physical features (technology, project equipment, and monitoring and metering equipment) of the three CPAs under the registered PoA were in place and that the PPs had operated and implemented as planned in the registered CPA-DD. The start dates of the three CPAs were all after 18/11/2011 which is the start date of the

| | |
|-------------------|---|
| | <p>PoA, being first published for the global stakeholder consultation process.</p> <p>The verification covers the 1st monitoring period from 01/06/2013 to 30/06/2015, which is within the 10-years fixed crediting period. The change of the start date of crediting period to 01/07/2014 for CPA 7167-0001 has been approved by the UNFCCC. Refer to the following website:</p> <p>http://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/WV0J8PTF24ZODECRY51XKHSALB63QM/view</p> <p>It is confirmed that the three project activities and their monitoring activities are implemented and operated in accordance with the CPA-DDs, the registered monitoring plan and the monitoring methodology/ tools.</p> |
| Findings | <ul style="list-style-type: none"> - Regarding the start date of feeding electricity to the grid in Section D.1 for CPA 7167-0001 and CPA 7167-0010, CAR 03 was raised and resolved as described in Table 3 of Appendix 4. - Regarding the brief description of the registered PoA in Section A.1, CL 01 was raised and resolved as described in Table 2 of Appendix 4. - Regarding the relevant dates of the CPA in Section D.1, CL 03 was raised and resolved as described in Table 2 of Appendix 4. |
| Conclusion | <p>JQA concludes that the three CPAs under the registered PoA have been implemented and operated in accordance with the description contained in the registered CPA-DD. Thus, this section is closed.</p> |

I.2. Post-registration changes

I.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

Not applicable

I.2.2. Corrections

Not applicable.

I.2.3. Changes to the start date of the crediting period

Start date of crediting period for CPA 7167-0001 has been changed from 01/12/2013 to 01/07/2014. The revised crediting period for CPA 7167-0001 is 01/07/2014 – 30/06/2024. Please refer to the following UNFCCC link:

http://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/WV0J8PTF24ZODECRY51XKHSALB63QM/view

I.2.4. Inclusion of a monitoring plan to an included CPA-DD

Not applicable

I.2.5. Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline

Not applicable

I.2.6. Changes to the programme design of the included CPA-DD

Not applicable

I.2.7. Types of changes specific to afforestation and reforestation component project activities

Not applicable

I.3. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

| | |
|------------------------------|--|
| Means of verification | It is confirmed through the desk review of relevant documents that the monitoring plan in the registered CPA-DDs contains all monitoring parameters required by ACM0002 (ver. 12.3.0), <i>i.e.</i> , $EG_{\text{facility},y}$ and $EG_{\text{imported},y}$, which are used to determine emission reductions. The monitoring frequency and recording of electricity data are also specified by the methodology ACM0002, <i>i.e.</i> , Continuous measurement and at least monthly recording. |
| Findings | N/A |
| Conclusion | JQA concludes that the monitoring plan of the registered CPA-DDs fully complies with the methodology ACM0002 (ver. 12.3.0) and tools applied to the CDM Project. Thus, this section is closed. |

I.4. Compliance of monitoring activities with the registered monitoring plan**I.4.1. Data and parameters fixed ex ante or at renewal of crediting period**

| | |
|------------------------------|--|
| Means of verification | <p>It is confirmed through the review of the relevant documents that the following data and parameters fixed <i>ex-ante</i> are listed in Section G.1 of the MR, and that it is consistent with the registered CPA-DDs as follows:</p> <ul style="list-style-type: none"> - $EF_{\text{grid},\text{CM},y}$: Combined margin CO₂ emission factor for the project electricity system applicable to the wind and solar power generation in year y (0.9721 tCO₂/MWh) <p>The parameter of $EF_{\text{grid},\text{CM},y}$ (0.9721 tCO₂/MWh) is provided in each CPA-DD in which this parameter was determined <i>ex-ante</i> using "Tool to calculate the emission factor for an electricity system" at the time of validation.</p> |
| Findings | - Regarding the combined margin CO ₂ emission factor of the grid in Section G.1, CL 05 was raised and resolved as described in Table 2 of Appendix 4. |
| Conclusion | JQA concludes that the default value (0.9801 tCO ₂ /MWh) of $EF_{\text{grid},\text{CM},y}$ derived from Standardized baseline ASB0001 is not applicable to the calculation of baseline emissions as per para. 142(a) of VVS (ver. 09) and the value (0.9721 tCO ₂ /MWh) fixed <i>ex-ante</i> in the registered PoA shall be applied throughout the crediting period. . The MR (ver. 03) is revised by using the correct value of $EF_{\text{grid},\text{CM},y}$ fixed <i>ex-ante</i> in the registered PoA. Therefore, this section is closed. |

I.4.2. Data and parameters monitored

| | |
|------------------------------|---|
| Means of verification | <p>It is confirmed through the review of the relevant documents, on-site inspection and the interview with the CME/CPA developers that the following data and parameters monitored are listed in Section G.2 of the MR, and that they are consistent with the monitoring plan in the registered CPA-DDs as follows:</p> <p>(a) The monitoring plan including the measurement of electricity generated and</p> |
|------------------------------|---|

| | |
|-------------------|---|
| | <p>consumed is properly implemented by the CPA developers,</p> <p>(b) All parameters have been monitored as follows:</p> <p>(i) Project emission parameters; No parameters are included as fossil fuels are not used on-site.</p> <p>(ii) Baseline emission parameters;</p> <ul style="list-style-type: none"> - $EG_{\text{facility},y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh) - $EG_{\text{imported},y}$: Quantity of electricity imported into the power plant/used by the power plant and supplied by the grid in year y (MWh) <p>(iii) Leakage parameters: No leakage emissions are considered as per the methodology ACM0002 (ver. 12.3.0).</p> <p>(iv) Management and operational system:</p> <p>The roles and responsibilities of the CME and CPA developers, monitoring parameters and data flow are clearly described in Section F of the MR, which is fully consistent with the monitoring plan in the registered CPA-DDs. The electricity data aggregated on a monthly basis is reported to the CME who reviews and records the data in the CME database. Then, the CME calculates emission reductions and prepares Monitoring Report for the CPAs. The CME provides "Monitoring Guideline for CPA Developers" and "Procedure for PoA Data Quality Check" to the CPA developers on how the monitoring should be conducted and data to be collected with regards to the calculation of emission reductions.</p> <p>Furthermore, the training of the CDM staffs for the operation/ maintenance of the plant and data monitoring was conducted during the 1st monitoring period (01/08/2014 and 06/08/2014). It is confirmed through the review of the relevant documents and the interview with the CME/CPA developers that the management and operational system are well organized to implement the monitoring activity.</p> <p>(c) The measuring equipment (main/check electricity meters) used for monitoring is installed/ controlled/ calibrated in accordance with the monitoring plan and national standards (NRS 057: 2009). It is confirmed through the on-site inspection that the manufacturer, type, serial number, accuracy class of these meters are fully consistent with those in the MR. The main and check meters are bidirectional type which can measure both export and import electricity. All CPAs install back-up battery system for emergency use instead of grid electricity import.</p> <p>(d) Electricity data are continuously measured by the main and check meters installed at the grid transformer substation, and daily recorded and then monthly aggregated, in accordance with the monitoring plan in the registered CPA-DDs. The records of monitored data are cross-checked with the invoices issued by the grid company Eskom.</p> <p>(e) The calibration of electricity meters is conducted by each CPA developer every five years according to the national standard (NRS 057: 2009).</p> |
| Findings | <ul style="list-style-type: none"> - Regarding the purpose of data for $EG_{\text{imported},y}$ in Section G.2, CAR 01 was raised and resolved as described in Table 3 of Appendix 4. - Regarding the lack of information on electricity meter in Section G.2, CAR 02 was raised and resolved as described in Table 3 of Appendix 4. - Regarding the staff training and cross-checking of the monitored data in Section F, CL 06 was raised and resolved as described in Table 2 of Appendix 4. |
| Conclusion | JQA concludes that the monitoring activities including QA/QC procedures have been appropriately carried out in accordance with the registered monitoring plan and the methodology/ tools applied. Therefore, this section is closed. |

I.4.3. Implementation of sampling plan

| | |
|------------------------------|---|
| Means of verification | Each CPA monitors electricity data individually. Therefore, the sampling plan is not required for the CPAs. Thus this item is not applicable. |
| Findings | N/A |

| | |
|-------------------|-----|
| Conclusion | N/A |
|-------------------|-----|

1.5. Compliance with the calibration frequency requirements for measuring instruments

| | |
|------------------------------|---|
| Means of verification | <p>The applied methodology ACM0002 (ver. 12.3.0) does not specify any requirements for the calibration frequency of measuring equipment, but “Monitoring Guideline for CPA Developers” prepared by the CME states that CPA developer is responsible for calibration of the monitoring equipment, <i>i.e.</i>, electricity meters, according to National standard NRS 057: 2009 or as per the meter manufacturer’s guidelines. According to NRS 057: 2009, the calibration frequency of electricity meter with a load level of 10 MVA to <100 MVA is five years.</p> <p>The calibration certificates of electricity meters and the certificate of calibration entity are provided by the CME/CPA developers. It is confirmed that the electricity meters are calibrated by the authorized entity (Power Meter Technics (Pty) Ltd., Accreditation No. 143, valid from 31/08/2010 to 31/08/2015 and Elster Solutions (Pty) Ltd., Accreditation No. 172, valid from 31/01/2014 to 10/12/2017) which is accredited by South African National Accreditation System (SANAS).</p> <p>It is confirmed through the review of the calibration certificates that the calibration of electricity meters is to be performed every five years according to National standard NRS 057: 2009.</p> |
| Findings | N/A |
| Conclusion | JQA concludes that the calibration procedure and management of electricity meter is established by the CME/CPA developer according to National standard NRS 057: 2009. Therefore, this section is closed. |

1.6. Assessment of data and calculation of emission reductions or net removals

1.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

| | |
|------------------------------|--|
| Means of verification | <p>Trough the review of the electricity data and relevant documents, JQA has assessed the data and calculation of GHG emission reductions achieved by the three CPAs under the registered PoA.</p> <p>A complete set of electricity data for the 1st monitoring period was provided by the CME/CPA developers. The monthly electricity data in the MR and the ER calculation spreadsheet, which are measured with the main meter, are cross-checked with data measured by the check meter and following data sources:</p> <ul style="list-style-type: none"> - SCADA daily data of electricity measured by the main meter - SCADA daily data of electricity measured by the check meters - Invoices issued by the grid company Eskom <p>The quantity of net electricity supplied to the grid by the solar PV plant is calculated by the following equation:</p> $EG_{\text{facility},y} = \text{Total electricity exported to the grid} - EG_{\text{imported},y}$ <p>If the value of $EG_{\text{facility},y}$ is different among main meter, check meter and invoice, the smallest one of the three values is employed for conservativeness as the net electricity supplied to the grid.</p> <p>As per the Equations (6) and (7) of ACM0002 (ver. 12.3.0) and the registered CPA-DD, the baseline emissions from electricity generation in fossil fuel fired power plant are calculated as follows:</p> $BE_y = EG_{PJ,y} \times EF_{\text{grid,CM},y} \quad \text{----- (6)}$ <p>If the project activity is the installation of a new grid-connected renewable power</p> |
|------------------------------|--|

| | <p>plant/unit at a site where no renewable plant was operated prior to the implementation of the project activity, then:</p> $EG_{PJ,y} = EG_{facility,y} \text{ ----- (7)}$ <p>where:</p> <ul style="list-style-type: none">- BE_y : Baseline emissions in year y (tCO₂/y)- $EG_{PJ,y}$: Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)- $EF_{grid,CM,y}$: Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh).- $EG_{facility,y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh) <p>The results of baseline emissions of the three CPAs are summarized as follows:</p> <table><tr><th>CPAs</th><th>$EG_{facility,y}$ (MWh)</th><th>$EF_{grid,CM,y}$ (tCO₂/MWh)</th><th>BE_y (tCO₂e)</th></tr><tr><td>CPA 7167-0001</td><td>89,306</td><td rowspan="3">0.9721</td><td>86,814</td></tr><tr><td>CPA 7167-0006</td><td>138,349</td><td>134,488</td></tr><tr><td>CPA 7167-0010</td><td>123,396</td><td>119,952</td></tr><tr><td>Total</td><td>351,051</td><td></td><td>341,254</td></tr></table> <p>Thus, the baseline emissions for the 1st monitoring period are correctly calculated based on electricity data measured, in accordance with the formulae and methods described in the methodology ACM0002 (ver.12.3.0) and the registered CPA-DDs. The baseline GHG emissions are determined to be 341,254 tCO₂e for the 1st monitoring period.</p> | CPAs | $EG_{facility,y}$ (MWh) | $EF_{grid,CM,y}$ (tCO ₂ /MWh) | BE_y (tCO ₂ e) | CPA 7167-0001 | 89,306 | 0.9721 | 86,814 | CPA 7167-0006 | 138,349 | 134,488 | CPA 7167-0010 | 123,396 | 119,952 | Total | 351,051 | | 341,254 |
|---------------|--|--|-----------------------------|--|-----------------------------|---------------|--------|--------|--------|---------------|---------|---------|---------------|---------|---------|--------------|----------------|--|----------------|
| CPAs | $EG_{facility,y}$ (MWh) | $EF_{grid,CM,y}$ (tCO ₂ /MWh) | BE_y (tCO ₂ e) | | | | | | | | | | | | | | | | |
| CPA 7167-0001 | 89,306 | 0.9721 | 86,814 | | | | | | | | | | | | | | | | |
| CPA 7167-0006 | 138,349 | | 134,488 | | | | | | | | | | | | | | | | |
| CPA 7167-0010 | 123,396 | | 119,952 | | | | | | | | | | | | | | | | |
| Total | 351,051 | | 341,254 | | | | | | | | | | | | | | | | |
| Findings | <ul style="list-style-type: none">- Regarding the correctness of monthly electricity data and invoice data in the ER calculation spreadsheet of CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010, CAR 05 was raised and resolved as described in Table 3 of Appendix 4.- Regarding the formula and the methodology in Section H.1, CAR 06 was raised and resolved as described in Table 3 of Appendix 4.- Regarding the appropriateness of monthly electricity data and invoice data in the ER calculation spreadsheet of CPA 7167-0010, CL 07 was raised and resolved as described in Table 2 of Appendix 4. | | | | | | | | | | | | | | | | | | |
| Conclusion | JQA concludes that the baseline GHG emissions, which are defined by ACM0002 (ver. 12.3.0) and the registered CPA-DDs, are correctly calculated for the 1 st monitoring period. Therefore, this section is closed. | | | | | | | | | | | | | | | | | | |

1.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

| | |
|------------------------------|--|
| Means of verification | According to the methodology ACM0002 (ver. 12.3.0), the project emissions are zero for most renewable power generation project activities except geothermal/hydro power plants. In case where fossil fuels are used for electricity generation in the project activity, project emissions from the combustion of fossil fuels shall be accounted for. However, for the proposed CPAs under the registered PoA, back-up battery system is used as emergency power and hence any fossil fuels are not used on-site. As a result, the project emissions are regarded as zero. |
| Findings | N/A |
| Conclusion | JQA concludes that the project GHG emissions are determined as zero ($PE_y=0$) for the 1 st monitoring period, in accordance with ACM0002 (ver. 12.3.0). Therefore, this section is closed. |

I.6.3. Calculation of leakage GHG emissions

| | |
|------------------------------|--|
| Means of verification | As per the methodology ACM0002 (ver. 12.3.0), no leakage emissions are considered. |
| Findings | N/A |
| Conclusion | JQA concludes that the leakage emissions are not considered as per ACM0002. Therefore, this section is closed. |

I.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

| | |
|------------------------------|--|
| Means of verification | <p>According to Equation (11) of ACM0002 (ver. 12.3.0), the GHG emission reductions are calculated by the following equation:</p> $ER_y = BE_y - PE_y$ $= 341,254 - 0$ $= 341,254 \text{ tCO}_2\text{e}$ <p>Where:</p> <ul style="list-style-type: none"> - ER_y : Emission reductions in year y (tCO₂e) - BE_y : Baseline emissions in year y (tCO₂e) - PE_y : Project emissions in year y (tCO₂e) <p>Thus, the GHG emission reductions achieved by the project activity during the 1st monitoring period are determined as 341,254 tCO₂e.</p> |
| Findings | N/A |
| Conclusion | JQA concludes that the GHG emissions reductions, which are defined by ACM0002 (ver. 12.3.0) and the registered CPA-DDs, are correctly calculated for the 1 st monitoring period. Therefore, this section is closed. |

| Specific-case CPA reference number | Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e) | Project emissions or actual net GHG removals by sinks (tCO ₂ e) | Leakage (tCO ₂ e) | GHG emission reductions or net GHG removals by sinks (tCO ₂ e) | | |
|------------------------------------|---|--|------------------------------|---|--|--|
| | | | | Results achieved in the period up to 31 December 2012 | Results achieved in the period from 1 January 2013 onwards | Results achieved in the entire monitoring period |
| CPA 7167-0001 | 86,814 | 0 | 0 | 0 | 86,814 | 86,814 |
| CPA 7167-0006 | 134,488 | 0 | 0 | 0 | 134,488 | 134,488 |
| CPA 7167-0010 | 119,952 | 0 | 0 | 0 | 119,952 | 119,952 |
| Total | 341,254 | 0 | 0 | 0 | 341,254 | 341,254 |

I.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA

| | |
|------------------------------|--|
| Means of verification | <p>The total value estimated in <i>ex-ante</i> calculation of the three registered CPA-DDs for the 1st monitoring period is 355,260tCO₂.</p> <p>The actual GHG emission reductions achieved in the 1st monitoring period from 01/06/2013 to 30/06/2015 are 341,254 tCO₂.</p> <p>As a result, the value of actual emission reductions is 96.1 % (=341,254 tCO₂</p> |
|------------------------------|--|

| | |
|-------------------|---|
| | /355,260 tCO ₂ x 100%) of the estimate in the registered CPA-DDs. |
| Findings | N/A |
| Conclusion | JQA has confirmed that the value of actual emission reductions achieved in the 1 st monitoring period is less than the total estimates in the three registered CPA-DDs. Therefore, this section is closed. |

| Specific-case CPA reference number | Value estimated in ex ante calculation in the included specific-case CPA-DD(s) | Actual values achieved by the specific-case CPA(s) during this monitoring period |
|------------------------------------|--|--|
| CPA 7167-0001 | 82,205 | 86,814 |
| CPA 7167-0006 | 140,235 | 134,488 |
| CPA 7167-0010 | 132,820 | 119,952 |
| Total | 355,260 | 341,254 |

I.6.6. Remarks on difference from estimated value in registered PDD

| | |
|------------------------------|--|
| Means of verification | <p>As described in Section I.6.5, the actual emission reductions of CPA 7167-0001 is larger by 5.6% than the estimate in the CPA-DDs, but those of CPA 7167-0006 and CPA 7167-0010 are less than their estimates. The total emission reductions achieved by the implementation of the three CPAs is 341,254 tCO₂, which is smaller by 3.9% than the total estimates (355,260 tCO₂).</p> <p>The cause of the increase in CPA 7167-0001 is likely attributed to the weather variation (solar irradiation) during this monitoring period. The emission reductions estimated <i>ex-ante</i> were determined using Meteonorm 6.1 which is a software based on a database of ground measurements during the period of 1981-2000 at meteo stations. Therefore, the quality of the solar irradiation data depends on the available meteo stations close to the project site and some discrepancy between the estimates and the actual value would be happened.</p> <p>The quantity of electricity generated by the solar PV plant is also affected by the following factors:</p> <ul style="list-style-type: none"> - Plant availability (Ratio of operating time of the plant to the full time in a certain period) - Grid availability (availability of grid to feed electricity from a solar plant) <p>It is noted that the values of plant availability and grid availability were conservatively estimated in the registered CPA-DD. The actual plant availability was 99.9% against the planned value of 98.5% and the grid availability was 99.8% against the planned value of 95.0%. The higher performance in the actual operation of solar PV plant provided more electricity than the estimate in the CPA-DD.</p> |
| Findings | - Regarding the increase in the actual emission reductions of CPA 7167-0001, CL 04 was raised and resolved as described in Table 2 of Appendix 4. |
| Conclusion | JQA concludes that the increase in the emission reductions of CPA 7167-0001 is likely due to the integrated effects of more solar irradiation, higher performance of plant availability and grid availability in the actual operation. Therefore, it seems that the increase of 5.6% is within the reasonable range of fluctuation. |

Appendix 1. Abbreviations

| Abbreviations | Full texts |
|---------------|---|
| AC/DC | Alternative current/Direct current |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CDM PS | CDM Project Standard |
| CDM VVS | CDM Validation and Verification Standard |
| CER | Certified Emission Reduction |
| CL | Clarification Request |
| CME | Coordinating/ Managing Entity |
| COP/MOP | Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol |
| CPA | Component Project Activity |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| EB | CDM Executive Board |
| EI | External Individuals |
| ER | Emission Reductions |
| FAR | Forward Action Request |
| GHG | Greenhouse Gas |
| GPS | Global Positioning System |
| GSP | Global Stakeholder Process |
| IPCC | Intergovernmental Panel on Climate Change |
| IR | Internal Resource |
| JQA | Japan Quality Assurance Organization |
| KP | Kyoto Protocol |
| MR | Monitoring Report |
| MP | Monitoring Plan |
| OA | On-site Assessment |
| PDD | Project Design Document |
| PoA | Programme of Activities |
| PPs | Project Participants |
| PRC | Post registration changes |
| PV | Photovoltaic |
| QA/QC | Quality Assurance / Quality Control |
| SCADA | Supervisory Control And Data Acquisition |
| SV | Site visit |
| TR | Technical Review |
| UNFCCC | United Nations Framework Convention on Climate Change |

Appendix 2. Competence of team members and technical reviewers

Statement of competence



Name: Dr. Tadashi Yoshida

Qualified and authorized by Japan Quality Assurance Organization.

| Function | Date of qualification |
|-------------|-----------------------|
| Validator | 2014/12/22 |
| Verifier | 2014/12/22 |
| Team leader | 2014/12/22 |

Technical area within sectoral scopes

| | Date of qualification |
|--|-----------------------|
| TA 1.1. Thermal energy generation | 2014/12/22 |
| TA 1.2. Renewables | 2014/12/22 |
| TA 3.1. Energy demand | 2014/12/22 |
| TA 4.1. Cement and lime production | 2015/11/12 |
| TA 4.6. Other manufacturing industries | 2014/12/22 |
| TA 5.1. Chemical industry | 2014/12/22 |
| TA 10.1. Fugitive emissions from oil and gas | 2014/12/22 |
| TA 13.1. Solid waste and wastewater | 2014/12/22 |

Statement of competence



Name: Mr. Hiroshi Motokawa

Qualified and authorized by Japan Quality Assurance Organization.

| Function | Date of qualification |
|-------------|-----------------------|
| Validator | 2014/12/22 |
| Verifier | 2014/12/22 |
| Team leader | 2014/12/22 |

Technical area within sectoral scopes

| | Date of qualification |
|--|-----------------------|
| TA 1.1. Thermal energy generation | 2014/12/22 |
| TA 1.2. Renewables | 2014/12/22 |
| TA 3.1. Energy demand | 2014/12/22 |
| TA 4.1. Cement and lime production | 2014/12/22 |
| TA 4.6. Other manufacturing industries | 2014/12/22 |
| TA 13.1. Solid waste and wastewater | 2014/12/22 |

E-01-30

E-01-30

Statement of competence



Name: Mr. Koichiro Tanabe

Qualified and authorized by Japan Quality Assurance Organization.

| Function | Date of qualification |
|-------------|-----------------------|
| Validator | - |
| Verifier | 2014/12/22 |
| Team leader | 2015/3/24 |

Technical area within sectoral scopes

| | Date of qualification |
|--|-----------------------|
| TA 1.1. Thermal energy generation | 2014/12/22 |
| TA 1.2. Renewables | 2014/12/22 |
| TA 3.1. Energy demand | 2014/12/22 |
| TA 4.6. Other manufacturing industries | 2014/12/22 |
| TA 5.1. Chemical industry | 2014/12/22 |
| TA 10.1. Fugitive emissions from oil and gas | 2014/12/22 |
| TA 13.1. Solid waste and wastewater | 2014/12/22 |

E-01-30

Appendix 3. Documents reviewed or referenced

| No. | Author | Title | References to the document | Provider |
|-----|--|--|----------------------------|----------|
| 1 | Additional Energy Limited | Monitoring Report, ver. 01 and 03 | 28/08/2015 22/06/2016 | CME |
| 2 | Additional Energy Limited | ER calculation spreadsheet, ver. 01 and 03 | 28/08/2015 22/06/2016 | CME |
| 3 | Standard Bank Plc. | Registered PoA-DD, ver. 10 | 05/12/2012 | Others |
| 4 | Japan Consulting Institute (JCI) | Validation Report, Report No. JCI-CDM-VAL-11/086, Rev. No. 01 | 11/12/2012 | Others |
| 5 | Standard Bank Plc. | CPA-DD of CPA-001, ver. 8 | 05/12/2012 | Others |
| 6 | Standard Bank Plc. | CPA-DD of CPA-006, ver. 5 | 13/05/2013 | Others |
| 7 | Japan Consulting Institute (JCI) | Validation Report of CPA-006, Report No. JCI-CDM VAL 502-6, Rev. No. 00 | 15/05/2013 | Others |
| 8 | Standard Bank Plc. | CPA-DD of CPA-010, ver. 2 | 13/03/2013 | Others |
| 9 | Japan Consulting Institute (JCI) | Validation Report of CPA-010, Report No. JCI-CDM VAL 502-10, Rev. No. 00 | 26/03/2013 | Others |
| 10 | UNFCCC | Monitoring report form for CDM programme of activities (ver. 01.0) including "Attachment. Instructions for filling out the monitoring report form for CDM programme of activities" | 01/04/2015 | Others |
| 11 | UNFCCC | ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ver. 12.3.0 | 02/03/2012 | Others |
| 12 | UNFCCC | Tool to calculate the emission factor for an electricity system (ver. 02.2.1) | 29/09/2011 | Others |
| 13 | UNFCCC | Tool to calculate project or leakage CO2 emissions from fossil fuel combustion (ver. 02) | 02/08/2008 | Others |
| 14 | UNFCCC | Combined tool to identify the baseline scenario and demonstrate additionality (ver. 04.0.0) | 02/03/2012 | Others |
| 15 | UNFCCC | Tool for the demonstration and assessment of additionality (ver. 06.1.0) | 13/09/2012 | Others |
| 16 | UNFCCC | CDM project standard (ver. 09.0) | 20/02/2015 | Others |
| 17 | UNFCCC | CDM validation and verification standard (ver. 09.0) | 20/02/2015 | Others |
| 18 | National Energy Regulator of South Africa (NERSA) | Business licenses of CPA-001 | 30/10/2012 | CME |
| 19 | National Energy Regulator of South Africa (NERSA) | Business licenses of CPA-006 | 26/04/2012 | CME |
| 20 | National Energy Regulator of South Africa (NERSA) | Business licenses of CPA-010 | 30/10/2012 | CME |
| 21 | Scatec Solar SA 163(Pty) Ltd./ Sunpower energy system Spain S.L. | Layout of solar farm for CPA-001, CPA-006 and CPA-010 | -- | CME |

| | | | | |
|----|---|--|-----------------------------------|-----|
| 22 | Scatec Solar SA 163 (Pty) Ltd | Taking-Over Certificate (CPA-001) including construction start date information | 05/09/2014 | CME |
| 23 | Scatec Solar SA 163 (Pty) Ltd | Taking-Over Certificate (CPA-010) including construction start date information | 12/05/2015 | CME |
| 24 | Jinko BYD Tenesol Moncada | Manufacturer's specification of PV module for CPA-001, CPA-006 and CPA-010 | -- | CME |
| 25 | Eskom Holdings Soc Limited | Power purchase Agreement (PPA) of PV projects between CPA implementer and grid company Eskom for CPA-001, CPA-006 and CPA-010 | Nov 2012 - May 2013 | CME |
| 26 | Standard Bank | Monitoring Guidelines for CPA Developers | 19 Nov 2013 | CME |
| 27 | Standard Bank | Procedure for PoA Data Quality Check (Internal use only) | -- | CME |
| 28 | CPA developer | CME Database Sheet for CPA-001, CPA-006 and CPA-010 | -- | CME |
| 29 | CME | Record and text of CDM staff training for CPA-001, CPA-006 and CPA-010 | 01-06 Aug 2014 | CME |
| 30 | CPA developer | Electricity line diagram for CPA-001, CPA-006 and CPA-010 | -- | CME |
| 31 | Elster Landis+Gyr | Specification of electricity meter used for CPA-001, CPA-006 and CPA-010 | -- | CME |
| 32 | SABS Standards Division | NRS 057:2009- South African National Standard – Code of practice for electricity metering, including calibration frequency, accuracy class and testing of metering equipment | 2009 | CME |
| 33 | Power Meter Technics (Pty) Ltd./ Elster Solutions (Pty) Ltd. | Calibration certificates of electricity meters used for CPA-001, CPA-006 and CPA-010 | Various dates for each CPA | CME |
| 34 | South African Accreditation System (SANAS) | Certificate of accreditation (143) for Power Meter Technics (Pty) Ltd. | 31/08/2012 | CME |
| 35 | South African Accreditation System (SANAS) | Certificate of accreditation (172) for Elster Solutions (Pty) Ltd. | 31/08/2014 | CME |
| 36 | CPA developer | SCADA daily data for CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 | On-site | CME |
| 37 | CPA developer | Invoices of electricity export for CPA 7167-0001, CPA 7167-0006 and CPA 7167-0010 | 1 st monitoring period | CME |
| 38 | CPA developer | Data of solar irradiation, plant operation availability and grid availability | 1 st monitoring period | CME |
| 39 | Additional Energy Limited | CME Management System issued by Additional Energy Limited | Nov 2015 | CME |

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1 Remaining FAR from validation and/or previous verification

| | | | | |
|--|----|--------------------|-----|-------------------------|
| FAR ID | -- | Section no. | N/A | Date: DD/MM/YYYY |
| Description of FAR | | | | |
| N/A | | | | |
| CME response | | | | Date: DD/MM/YYYY |
| N/A | | | | |
| Documentation provided by the CME | | | | |
| N/A | | | | |
| DOE assessment | | | | Date: DD/MM/YYYY |
| N/A | | | | |

Table 2 CL from this verification

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CL ID | 01 | Section no. | A.1 | Date: 25/09/2015 |
| Description of CL | | | | |
| The information on the framework for the implementation of the PoA in Section A.1 is not included. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The framework for the implementation of the PoA and the role/responsibility of Additional Energy Limited as CME are appropriately added in the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| <ul style="list-style-type: none"> - CME Management System, dated November 2015 - Monitoring Guideline for CPA Developers, dated 19/11/2013. | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of relevant documents and the interview with the CME/CPA developer that the framework for the implementation of the PoA and the role/responsibility of Additional Energy Limited as a CME are appropriately added in Section A.1 of the revised MR (ver. 03). Thus, CL 01 is closed. | | | | |

| | | | | |
|--|----|--------------------|-----|-------------------------|
| CL ID | 02 | Section no. | B.1 | Date: 25/09/2015 |
| Description of CL | | | | |
| The information on the applicable provisions on the implementation of the management system in Section B.1 is not sufficient. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The record keeping system for each CPA and systems/procedures to avoid double counting are appropriately added in the revised MR (ver. 03). In line with the CDM Project Standard (ver. 03.0), the description on CME Management System developed by Additional Energy Limited as a CME is also added. | | | | |
| Documentation provided by the CME | | | | |
| <ul style="list-style-type: none"> - CME Database Sheet for CPAs, issued by CME - Procedures for PoA Data Quality Check, issued by CME - CME Management System, developed by Additional Energy Limited, November 2015 | | | | |
| DOE assessment | | | | Date: 14/12/2015 |

It is confirmed through the review of relevant documents and the interview with the CME/CPA developer that the record keeping system for each CPA and systems/procedures to avoid double counting, including the development of CME Management System, are appropriately added in Section B.1 of the revised MR (ver. 03). Thus, CL 02 is closed.

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CL ID | 03 | Section no. | D.1 | Date: 25/09/2015 |
| Description of CL | | | | |
| Although the starting date of feeding electricity into the grid is included, the relevant dates for the specific-case CPAs (e.g., construction, commissioning, continued operation periods, etc.) in Section D.1 are not clearly described. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The construction start date of each CPA is properly added in the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| - Taking-Over Certificate for each CPA | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of relevant documents and the interview with the CPA developer that the construction start date of each CPA is added in Section D.1 of the revised MR (ver. 03). Thus, CL 03 is closed. | | | | |

| | | | | |
|--|----|--------------------|-----|-------------------------|
| CL ID | 04 | Section no. | H.6 | Date: 25/09/2015 |
| Description of CL | | | | |
| The CPA implementer is requested to explain the increase in the actual emission reductions of CPA 7167-0001 in Section H.6, compared to the estimate in the CPA-DD. | | | | |
| CME response | | | | Date: 22/06/2016 |
| <p>The cause of the increase in CPA 7167-0001 is likely attributed to the weather variation (solar irradiation) during this monitoring period. The emission reductions estimated <i>ex-ante</i> were determined using Meteonorm 6.1 which is a software based on a database of ground measurements during the period of 1981-2000 at meteo stations. Therefore, the quality of the solar irradiation data depends on the available meteo stations close to the project site and some discrepancy between the estimates and the actual value would be happened.</p> <p>The quantity of electricity generated by the solar PV plant is also affected by the following factors:</p> <ul style="list-style-type: none"> - Plant availability (Ratio of operating time of the plant to the full time in a certain period) - Grid availability (availability of grid to feed electricity from a solar plant) <p>It is noted that the values of plant availability and grid availability were conservatively estimated in the registered CPA-DD. The actual plant availability was 99.9% against the planned value of 98.5% and the grid availability was 99.8% against the planned value of 95.0%. The higher performance in the actual operation of solar PV plant provided more electricity than the estimate in the CPA-DD.</p> | | | | |
| Documentation provided by the CME | | | | |
| <ul style="list-style-type: none"> - Data of solar irradiation for CPA 7167-0001 - Data of plant availability for CPA 7167-0001 - Data of grid availability for CPA 7167-0001 | | | | |
| DOE assessment | | | | Date: 23/06/2016 |
| It is confirmed through the review of relevant documents and the interview with the CPA developer that the increase in the actual emission reductions of CPA 7167-0001 is likely due to the integrated effects of more solar irradiation, higher performance of plant availability and grid availability in the actual operation. Therefore, it seems that the increase of 5.6% is within the reasonable range of fluctuation. Thus, CL 04 is closed. | | | | |

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CL ID | 05 | Section no. | G.1 | Date: 25/09/2015 |
| Description of CL | | | | |
| CME is requested to justify that Standardized baseline ASB0001 can be applicable to the CPAs under the proposed PoA in relation to the paragraph 12 of ASB0001. | | | | |
| CME response | | | | Date: 22/06/2016 |
| According to VVS (ver. 09) para. 142(a), data and parameters fixed <i>ex-ante</i> in the registered PoA shall remain fixed throughout the crediting period and hence the grid emission factors provided as a default value from Standardized baseline ASB0001 are not applicable to the calculation of baseline emissions during this monitoring period. The CME has recalculated the baseline emissions using the correct grid emission factor (0.9721 tCO ₂ /MWh) determined <i>ex-ante</i> in the registered PoA. | | | | |
| Documentation provided by the CME | | | | |
| - Revised MR (ver. 03) and ER calculation spreadsheet (ver. 03) | | | | |
| DOE assessment | | | | Date: 23/06/2016 |
| It is confirmed through the review of the revised MR (ver. 03) and ER calculation spreadsheet (ver. 03) that the baseline emissions of CPA 7671-0001, CPA 7671-0006 and CPA 7671-0010 are appropriately recalculated using the correct grid emission factor (0.9721 tCO ₂ /MWh) determined <i>ex-ante</i> in the registered PoA. Thus, CL 05 is closed. | | | | |

| | | | | |
|--|----|--------------------|---|-------------------------|
| CL ID | 06 | Section no. | F | Date: 25/09/2015 |
| Description of CL | | | | |
| The CME is requested to include the following information in Section F: 1) how the CDM staffs for each CPA was trained, 2) how the monitored data was cross-checked. | | | | |
| CME response | | | | Date: 14/12/2015 |
| Information on the CDM staff training conducted on 01/08/2014 and 06/08/2014 and the cross-checking procedures of project data as part of QA/QC procedures are provided in Section F of the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| <ul style="list-style-type: none"> - Record and text of CDM staff training for CPAs, conducted on 01/08/2014 and 06/08/2014 - Monitoring Guideline for CPA Developers, developed by the CME, dated 19/11/2013 - CME Database Sheet for CPAs, developed by the CME | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of relevant documents, on-site inspection and the interview with the CME/CPA developer that the CDM staff training was appropriately conducted on 01/08/2014 and 06/08/2014 for all CPA developers and the cross-checking of project data as part of QA/QC procedures are developed and managed by the CME. The information is added in Section F of the revised MR (ver. 03). Thus, CL 06 is closed. | | | | |

| | | | | |
|---|----|--------------------|----------------------|-------------------------|
| CL ID | 07 | Section no. | ER calculation sheet | Date: 25/09/2015 |
| Description of CL | | | | |
| The CME and CPA developer are requested to clarify the large difference in the export electricity of Sep, Oct and Nov 2014 between main meter data and its invoice for CPA 7167-0010. | | | | |
| CME response | | | | Date: 14/12/2015 |

| | |
|---|-------------------------|
| The reason for the large difference in the export electricity of Sep, Oct and Nov 2014 between main meter data and its invoice is due to error in Eskom side meter located at the substation. This has no impact on the ER calculation since ER calculation employs the lowest export value from main meter, check meter and invoice. | |
| Documentation provided by the CME | |
| <ul style="list-style-type: none"> - SCADA daily data of electricity measured by the main meter - Invoice data of CPA 7167-0010 issued by Eskom | |
| DOE assessment | Date: 14/12/2015 |
| It is confirmed through the review of relevant documents and the interview with the CME/CPA developer that the large difference in the electricity export between the main meter and invoice is due to the error in Eskom side meter and does not impact on the ER calculation since the lowest value among the main meter, check meter and invoice data is employed in the ER calculation for conservativeness. Thus, CL 07 is closed. | |

Table 3. CAR from this verification

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 01 | Section no. | G.2 | Date: 25/09/2015 |
| Description of CAR | | | | |
| The description of "Purpose of data" for $EG_{imported,y}$ in Section G.2 is not consistent with the equation given in "Calculation method" for $EF_{facility,y}$. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The description "Calculation of project emissions" is properly corrected to "Calculation of baseline emissions" for the parameter $EG_{imported,y}$ in Section G.2 of the revised MR (ver. 03), in accordance with the monitoring plan in the registered PoA. | | | | |
| Documentation provided by the CME | | | | |
| N/A | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of the monitoring plan in the registered PoA and the applied methodology ACM0002 (ver. 12.3.0) that the description of "Purpose of data" for the parameter $EG_{imported,y}$ is properly corrected in Section G.2 of the revised MR (ver. 03). Thus, CAR 02 is closed. | | | | |

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 02 | Section no. | G.2 | Date: 25/09/2015 |
| Description of CAR | | | | |
| The information on type, accuracy class, serial number, calibration frequency, date of last calibration and validity of monitoring equipment in Section G.2 is not included. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The information on type, accuracy class, serial number, calibration frequency, date of last calibration and validity of electricity meter used in the monitoring activity is added in Section G.2 of the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| <ul style="list-style-type: none"> - Manufacturer's specification of electricity meter - Calibration certificate of electricity meters used for each CPA - Certificates of accreditation for Power Meter Technics (Pty) Ltd and Elster Solutions (Pty) Ltd. - NRS 057:2009 – South African National Standard- Code of practice for electricity metering, including calibration frequency, accuracy class and testing of metering equipment. | | | | |
| DOE assessment | | | | Date: 14/12/2015 |

It is confirmed through the review of the relevant documents, on-site inspection and the interview with the CME/CPA implementer that the information on the electricity meter used for monitoring is appropriately added in Section G.2 of the revised MR (ver. 03). Thus, CAR 03 is closed.

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 03 | Section no. | H.5 | Date: 25/09/2015 |
| Description of CAR | | | | |
| The CPA implementer is requested to clarify the start date of feeding electricity to the grid. CPA 7167-0001: Different start dates are included in Section D.1 (30/05/2014) and Section H.5 (25/06/2014), which are both prior to the start date of crediting period (01/07/2014). CPA 7167-0010: Different start dates are included in Section D.1 (24/07/2014) and Section H.5 (01/08/2014), which are both prior to the commissioning date of the project (29/08/2014). | | | | |
| CME response | | | | Date: 14/12/2015 |
| The start date of feeding electricity to the grid is correctly revised to 01/07/2014 for CPA 7167-0001 and to 29/08/2014 for CPA 7167-0010, respectively, in Section D.1 of the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| - SCADA daily data for CPA 7167-0001 and CPA 7167-0010 | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of the SCADA daily data and the interview with the CME/CPA developer that the start date of feeding electricity to the grid is corrected to 01/07/2014 for CPA 7167-0001 and to 29/08/2014 for CPA 7167-0010, respectively, in Section D.1 of the revised MR (ver. 03). Thus, CAR 04 is closed. | | | | |

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 04 | Section no. | H.5 | Date: 25/09/2015 |
| Description of CAR | | | | |
| The annual GHG emission reductions estimated for each year covering this monitoring period are provided for "Value estimated in <i>ex-ante</i> calculation in the included CPA-DDs" in Section H.5. However, the total amount of the estimates for this monitoring period should be calculated in order to compare it with the actual value achieved by the three CPAs. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The PP has provided the total amount of the emission reductions for the 1 st monitoring period of each CPA in Section H.5 of the revised MR (ver. 03), which is calculated from the annual estimates of each year in the CPA-DDs. | | | | |
| Documentation provided by the CME | | | | |
| N/A | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of the CPA-DDs that the total estimates of the emission reductions for the 1 st monitoring period are correctly calculated in Section H.5 of the revised MR (ver. 03). Thus, CAR 05 is closed. | | | | |

| | | | | |
|---|----|--------------------|----------------------|-------------------------|
| CAR ID | 05 | Section no. | ER calculation sheet | Date: 25/09/2015 |
| Description of CAR | | | | |
| The following monthly data in the ER calculation spreadsheet are not consistent with their SCADA data: CPA 7167-0001: The main meter's monthly export electricity data of Aug 2014, CPA 7167-0006: The main meter's monthly export electricity data of Oct, Nov, Dec 2014 and Apr 2015, CPA 7167-0010: The check meter's monthly import electricity data of Sep 2014. | | | | |
| CME response | | | | Date: 14/12/2015 |

The following monthly data in the ER calculation spreadsheet are corrected based on their SCADA data:
CPA 7167-0001: The main meter's monthly export electricity data of Aug 2014 is corrected based on the SCADA data.
CPA 7167-0006: The main meter's monthly export electricity data of Oct, Nov, Dec 2014 and Apr 2015 are corrected based on the SCADA data.
CPA 7167-0010: The check meter's monthly import electricity data of Sep 2014 is corrected based on the SCADA data.

Documentation provided by the CME

- SCADA daily data of electricity measured by the main meter for CPA 7167-0001 and CPA 7167-0006
- SCADA daily data of electricity measured by the check meter for CPA 7167-0010

DOE assessment**Date:** 14/12/2015

It is confirmed through cross-checking with SCADA daily data that the monthly export/ import electricity data measured by the main meter and check meter in the ER calculation spreadsheet are properly corrected and complete. Thus, CAR 06 is closed.

| | | | | |
|---|----|--------------------|-----|-------------------------|
| CAR ID | 06 | Section no. | H.1 | Date: 25/09/2015 |
| Description of CAR | | | | |
| The formula and the methodology used to calculate the baseline emissions in Section H.1 are not consistent with those in Section D.6.3 of each CPA under the registered PoA. | | | | |
| CME response | | | | Date: 14/12/2015 |
| The formula and the methodology used to calculate the baseline emissions are corrected to $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ and ACM0002 (ver. 12.3.0), respectively, in Section H.1 of the revised MR (ver. 03). | | | | |
| Documentation provided by the CME | | | | |
| - Monitoring methodology ACM0002 (ver. 12.3.0) | | | | |
| DOE assessment | | | | Date: 14/12/2015 |
| It is confirmed through the review of the applied methodology ACM0002 (ver. 12.3.0) and the registered CPA-DDs that the formula and the methodology used to calculate the baseline emissions are properly corrected in Section H.1 of the revised MR (ver. 03). Thus, CAR 07 is closed. | | | | |

Table 4 FAR from this verification

| | | | | |
|--|----|--------------------|-----|-------------------------|
| FAR ID | -- | Section No. | N/A | Date: DD/MM/YYYY |
| Description of FAR | | | | |
| N/A | | | | |
| CME response | | | | Date: DD/MM/YYYY |
| N/A | | | | |
| Documentation provided by the CME | | | | |
| N/A | | | | |
| DOE assessment | | | | Date: DD/MM/YYYY |
| N/A | | | | |

- - - - -

Document information

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