

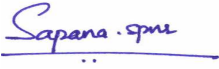


Verification and certification report form for CDM project activities

(Version 01.0)

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

VERIFICATION AND CERTIFICATION REPORT

Title of the project activity	ADES Solar and efficient stoves in Madagascar
Reference number of the project activity	GS 464
Version number of the verification and certification report	1.1
Completion date of the verification and certification report	02/08/2016
Monitoring period number and duration of this monitoring period	1 st Monitoring period, 01/01/2015 - 31/12/2015
Version number of monitoring report to which this report applies	Version 02.0, dated 29/06/2016
Crediting period of the project activity corresponding to this monitoring period	2 nd Crediting period starting 01/01/2015
Project participant(s)	ADES – Association pour le Développement de l'Energie Solaire (Madagascar) MyClimate Foundation (Switzerland)
Host Party	Madagascar
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral scope 3.1 Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)
Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the registered PDD	150,590 t CO ₂ equivalents.
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	163,057 t CO ₂ equivalents.
Name of DOE	Bureau Veritas Certification Holding (BVCH) SAS
Name, position and signature of the approver of the verification and certification report	 Ms. Sapana S. Pednekar, Quality Manager- Operations

SECTION A. Executive summary**Summary**

Bureau Veritas Certification has conducted the 1st periodic verification of the 2nd crediting period of ADES Solar and efficient stoves in Madagascar, Gold Standard Registration Reference Number GS 464, owned by ADES – Association pour le Développement de l'Energie Solaire, which is located in Madagascar, and applying the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011), on the basis of: a) UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting, b) requirements for Voluntary Offset Projects under the Gold Standard, including the applied Gold Standard methodology. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria. The Gold Standard requirements are stipulated in the GS Requirements – version 2.2 and The Gold Standard Toolkit version 2.2.

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions, and consisted of the following three phases: i) desk review of the project design, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in the validated and registered project design documents. Installed equipment (efficient cook stoves) being essential for generating emission reduction run reliably. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reductions are calculated without material misstatements, and the emission reductions verified totalize 163,057 tons of CO₂e for the monitoring period.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the valid and registered project baseline, approved monitoring plan and its associated documents.

Scope:

The verification scope is defined as an independent and objective review and ex-post determination of the monitored GHG emission reductions. The verification is based on the validated and registered project design document, the monitoring report, emission reduction calculation spreadsheet, and supporting documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations; and additional requirements stated by the Gold Standard.

The verification is not meant to provide any consulting service towards the PP. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

Objective:

The objective of verification under UNFCCC CDM is to conduct a thorough, independent assessment of the registered project activities.

In carrying out its verification work, the DOE shall ensure that the project activity complies with the requirements of paragraph 62 of the CDM modalities and procedures. In particular, this assessment shall:

- (a) Ensure that the project activity has been implemented and operated as per the registered PDD or any approved revised PDD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;

- (b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with latest applicable version of the completeness checklist for requests for issuance of CERs, verifiable, and in accordance with applicable CDM requirements;
- (c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan or any revised approved monitoring plan, and the approved methodology including applicable tool(s);
- (d) Evaluate the data recorded and stored as per the monitoring methodology including applicable tool(s).

Additionally the DOE shall ensure that the project activity also complies with requirements unique to Gold Standard in particular:

- (e) The GS Monitoring plan and the additional requirements stated by the Gold Standard, including the monitoring of sustainable development indicators.

Project Description:

The Project consists of production and distribution of solar cook-stoves and efficient biomass (wood and charcoal) cook-stoves for households and commercial and institutional users in Madagascar. The project replaces traditional inefficient wood and charcoal stoves. The project achieves emissions reduction through the amount of non-renewable biomass saved. Currently the project produces 9 types of stoves namely: Solar box stove, E-solar box stove (production and distribution temporarily stopped), Solar parabolic stove, Efficient wood stove OLI-b, Efficient wood stove OLI-45b, Efficient wood stove OLI-60b, Efficient charcoal stove OLI-c, Efficient charcoal stove OLI-45c and Efficient charcoal stove OLI-60c. However, for this crediting period, efficient biomass (wood and charcoal) cook-stoves only are counted for emission reductions. Since the start of the project, usage of the stoves has evolved into four main clusters namely: wood cluster, charcoal cluster, Solar+Oli-b and Solar+Oli-c. According to the approved revised PDD version 8.3 (RefError! Reference source not found.), the project has since inception produces and sold over 40,000 stoves (93, 385 stoves as per Monitoring report version 2.0(Ref/9/)) resulting in an estimated over 370,000 tons of CO₂e emissions reductions. The project aims to expand its activities in the second crediting period and plans to produce and sell around 200,000 solar and efficient stoves in the years 2015 – 2021. The annual average estimated emission reductions over the 2nd crediting period are estimated at 269,621 tCO₂e. The project contributes to sustainable development by: Providing employment, training and awareness raising and reducing time and money spent on fuel. The project is developed and managed by ADES (Association pour le Développement de l'Energie Solaire), a Swiss NGO.

Project title:	ADES Solar and efficient stoves in Madagascar
GS ref number:	GS 464
Registration Date:	23/12/2009
Crediting Period:	01/01/2015 to 31/12/2021 (renewable)
Monitoring Period:	01/01/2015 - 31/12/2015
Project Participants:	ADES – Association pour le Développement (Host Madagascar) Foundation Myclimate - the Climate Protection Partnership (Switzerland)
Methodologies used	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)
Location of the Project:	Republic of Madagascar
GS view page:	https://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002452

The project has since registration reported emission reduction for the following monitoring periods:

First crediting: 01/01/2008 to 31/12/2014;

- a) First monitoring period (included retroactive emission reductions) 04/01/2008 – 22/12/2009
- b) Second monitoring period: 23/12/2009 to 31/12/2010
- c) Third monitoring period: 01/01/2011 to 31/12/2011
- d) Fourth monitoring period: 01/01/2012 to 31/12/2012
- e) Fifth monitoring period: 01/01/2013 to 31/12/2013
- F) Sixth monitoring period: 01/01/2014 to 31/12/2014

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

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	IR	Chirchir	James	Bureau Veritas Certification Holding (SAS)	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	Mayieko	Samuel	Bureau Veritas Certification Holding (SAS)
2.	Approver	IR	Pednekar	Sapana	Bureau Veritas Certification Holding (SAS)

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Misreporting on sales dates and stove numbers	High	Incorrect reported numbers of stoves sold and incorrect date of sale can either increase or reduce the number of technology days, a critical number in calculation of overall Emission reduction	Random selection of (17) sales receipts from copies of sales receipts for the monitoring period to be cross-checked with data on the project database.
...	Incorrect manipulation of calculation formulas in excel spread sheet	High	Misreporting of the actual emission reductions achieved even when accurate data has been posted on the project database	Desk review of the project database, excel calculation for emission reduction calculation aimed at replicating the calculations done by PP
	Incorrect values used in Field Test calculation for fuel savings	Medium	Misreporting of the actual emission reductions achieved	Desk review of monitoring usage survey reports, and PFTs conducted in 2014.

				<i>Scheduled interviews with 16 stoves end users sampled by the PP for usage monitoring surveys and PFTs conducted earlier in the year 2015 by the PP, with the objective of cross checking the results submitted for verification.</i>
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C.2. Consideration of materiality in conducting the verification

During preparation for the site visit, the above risks were identified as potential areas of materiality and appropriate responses as detailed were taken.

During the verification site visit, 16 randomly selected samples of sales receipts (eight samples from each of the sites visited) were taken for cross checking against details. No errors in data entries were noted in any of the sampled picked and from the results of interviews conducted during the site visit.

No other errors, omissions or misstatements affecting materiality were detected.

SECTION D. Means of verification

D.1. Desk review

The assessment of the project documentation provided by the project participant is based upon both quantitative and qualitative information on emission reductions. Quantitative information comprises the reported numbers in the monitoring report (MR) version 02 dated 29/06/2016 (ref /9/) and Project Database: 160201_ADES_Project_Database_2015_V01.xlsx (ref /5/). Qualitative information comprises information on internal management controls, calculation procedures, and data transfer procedures, frequency of emissions reports, and review and internal audit of calculations.

The monitoring report version 01 submitted by the project participant has been made available in the Gold Standard registry. In addition to the monitoring documentation provided by the project participants, the DOE reviews:

- (a) The registered PDD and the monitoring plan, (ref /1/);
- (b) Previous verification report (ref /2/);
- (c) The applied monitoring methodology (ref /12/);
- (d) Other information and references relevant to the project activity's resulting emission reductions (such as monitoring/usage survey report 2015(ref /7/), monitoring/usage survey data analysis (ref/3/), and sales database (ref /5/)).
- (e) Additional information and references relevant to the monitoring of sustainable development indicators (such as list of schools visits (ref /4/), employees list (ref /6/), and monitoring/usage survey report 2015 (ref /7/)).

D.2. On-site inspection

Duration of on-site inspection: 02 – 03/05/2016 and 06/05/2016				
No.	Activity performed on-site	Site location	Date	Team member
1.	Opening meeting	Majunga and Antananarivo	02& 06/05/2016	James Chirchir

2	Management interview – Project implementation status, monitoring, compliance to monitoring plan, sustainable development indicators, training and awareness, project database records and GHG Calculation, QA & QC	Majunga and Antananarivo	02& 06/05/2016	James Chirchir
3	Interview with CO2 Manager	Majunga and Antananarivo	03 & 06/05/2016	James Chirchir
4	Interviews with stove users	Majunga and Antananarivo	03 & 06/05/2016	James Chirchir
5	Interviews with schools	Majunga and Antananarivo	03 & 06/05/2016	James Chirchir
6	Close meeting	Majunga and Antananarivo	03 & 06/05/2016	James Chirchir

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Edgar M	Flury	Asst Direction National	02& 06/05/2016	Project implementation	James Chirchir
2	Faralay	R	CO2 Manager project	02&06/05/2016	Assessment of survey records and method	James Chirchir
3	Rajaomanjaka		Director	02- 03/05/2016	Project implementation	James Chirchir
4	Raherisda	Hasina	Accountant	03/05/2016	Project implementation	James Chirchir
5	Vavisoa	Francette	Animateur	03/05/2016	Project implementation	James Chirchir
6	Fanomezantaoa	Paul	Animateur	03/05/2016	Project implementation	James Chirchir
7	Aina E	Ralaivonvy	Animateur	03/05/2016	Project implementation	James Chirchir
8	EPP Avadoha		School	03/05/2016	Training program	James Chirchir
9	EPP Ambohitsa		School	03/05/2016	Training program	James Chirchir
10	Ecole Douce Anfance		School	03/05/2016	Training program	James Chirchir
11	Razanamavo	Francoise	End User	03/05/2016	- Stove usage Stove Usage	James Chirchir
12	Marie	Olga	End User	03/05/2016	- Stove benefits - Stove usage	James Chirchir
13	Rasoavazaha	Marthe	End User	03/05/2016	- Stove usage - Stove Usage	James Chirchir
14	Coeur Emmanue De Marie		School	03/05/2016	Training program	James Chirchir
15	EPP FioFio Tsiatsipy Juliema		School	03/05/2016	Training program	James Chirchir
16	Zafisoa		Re-seller	03/05/2016	Stoves sale	James Chirchir
17	Fenomamy		Re-seller	03/05/2016	Stoves sale	James Chirchir
18	Rasoananahary	Yvonne	End user	03/05/2016	- Stove usage - Stove Usage	James Chirchir
19	Tina	Francouse	End User	03/05/2016	- Stove usage - Stove benefits	James Chirchir

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20	Rasolofojaona	Joseph	End user	03/05/2016	- Stove usage - Stove benefits	James Chirchir
21	Jean	Fadol	End user	03/05/2016	- Stove benefits - Stove benefits	James Chirchir
22	Ravaonirina	Henriette	End user	03/05/2016	- Stove usage - Stove benefits	James Chirchir
23	Tina		End user	03/05/2016	- Stove benefits - Stove benefits	James Chirchir
24	Rakotomalala	Falambolationa	Animateur	03/05/2016	Project implementation	James Chirchir
25	Rabozy	Saroha		2-3/05/2016	Project implementation	James Chirchir
26	Andrianontenaina	Piessot		2-3/05/2016	Project implementation	James Chirchir
27	Rasolofomanana	Paul	Agent de security	2-3/05/2016	Project Awareness, Climate Change Education program	James Chirchir
28	Razafindrathisa	Naritiana	Chauffeur	2-3/05/2016	Project data	James Chirchir
29	Rakotodrimanana	Arnaud	Menvisier	2-3/05/2016	Project implementation	James Chirchir
30	Razafindranora	Laigurite	Animateur	06/05/2016	Project implementation	James Chirchir
31	Naomy	Andriamalala	Manager, ADES Tana	06/05/2016	Assessment of survey records and method	James Chirchir
32	Razafindrasolonomoy	Christein		06/05/2016	Assessment of survey records and method	James Chirchir
33	Raharisoanirina	Sandrine		06/05/2016	Assessment of survey records and method	James Chirchir
34	Ravaoalimoro	Alphourine	Reseller/Guide	06/05/2016	Stove sale	James Chirchir
35	Geselle		End user	06/05/2016	- Stove usage - Stove benefits	James Chirchir
36	Raveloson	Marie	End user	06/05/2016	- Stove benefits - Stove benefits	James Chirchir
37	Falisoa	Rakotomanana	End user	06/05/2016	- Stove usage - Stove benefits	James Chirchir
38	Dimbinianina	Rahalarivo	End user	06/05/2016	- Stove benefits - Stove benefits	James Chirchir
39	Randriamalefa	Mosesy	End user	06/05/2016	- Stove usage - Stove benefits	James Chirchir
40	Vola		End user	06/05/2016	- Stove benefits - Stove benefits	James Chirchir
41	Louissette		End user	06/05/2016	- Stove usage - Stove benefits	James Chirchir

D.4. Sampling approach

The assessment of records of monitoring and usage surveys during site visit was based on random sampling. The verification team employed acceptance sampling as described in CDM "Sampling and surveys for CDM project activities and programme of activities" version 04.1. The sample size and acceptance number of the 16 random samples taken was based on all conditions detailed below:

- (a) Acceptable quality level or the Level of Assurance, i.e. the proportion of discrepancies between the PP sample records and the DOE sample records (i.e. DOE field/onsite inspection results) that are acceptable (AQL). AQL = 1%
- (b) The proportion of discrepancies between the PP sample record and DOE sample records that are unacceptable, (UQL). UQL = 20%
- (c) A 10% Producer's risk: That is a 10% chance that the DOE will wrongly reject the PPs records (i.e. reject a set of records of acceptable quality)
- (d) A 20% Consumer's risk: That is 20% chance that the DOE will wrongly accept the PPs records (i.e. accept a set of records which is unacceptable)

The DOE visited 16 stove end users, 3 stove resellers and 5 schools randomly selected and held interviews with respondent to confirm the information in the questionnaires and other awareness creation records and also observe the implementation and usage of the technology

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	N/A	01	N/A
Compliance of the project implementation with the registered PDD	N/A	N/A	N/A
Post-registration changes	N/A	N/A	N/A
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	N/A	N/A	N/A
Compliance of monitoring activities with the registered monitoring plan	N/A	N/A	N/A
Compliance with the calibration frequency requirements for measuring instruments	N/A	N/A	N/A
Assessment of data and calculation of emission reductions or net removals	3	0	0
Others (please specify)	N/A	N/A	N/A
Total	3	01	0

SECTION E. Verification findings

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

Means of verification	Document review of the monitoring report submitted to the verification team by PP against the latest form available on the UNFCCC website
Findings	The PP has use version 01 of the monitoring report form. The latest version available on the UNFCCC website is version 5.1.
Conclusion	Since this is a Gold Standard project, the GS does not strictly limit the PP to use latest template in the UNFCCC website. The use of version 01 of the monitoring report is thus considered acceptable by the verification team.

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

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The following FAR was raised by Gold Standard:

Forward Action Request # 1: The PP shall carry out baseline surveys as and when institutional stoves are implemented as a part of the project.

According to PP, the institutional stoves produced and distributed have not reached a sufficient scale to be considered as part of the project and emissions reductions from these stoves have not been counted. The baseline surveys therefore have not been conducted.

The verification team considers this action taken by PP as acceptable thus FAR has been addressed for this monitoring period, but remains open for subsequent crediting periods.

E.3. Compliance of the project implementation with the registered project design document

Means of verification	Bureau Veritas Certification has performed a site visit and found that the Project has been put into operation and that the PP has continued to install energy efficient cook stoves in household in various parts of Madagascar. The project continues to produce and distribute solar and efficient biomass (wood and charcoal) stoves. Nine types are being produced and distributed (production and distribution of the E Solar box has been halted temporality). The verification team confirmed this by interviewing 16 out of 18 households sampled during the verification site visit
Findings	Compliant
Conclusion	No changes to the project design have been identified during this verification. The implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PDD. The PP has operated the Project as per the approved revised PDD. There are no changes to the monitoring organization set up and verified in the previous verification cycle. All monitoring staffs are trained and qualified for their respective roles in the operation and monitoring of the project. For confirmation, the DOE reviewed a sample of employment records (ref/6/) and contracts for sampled employees from the list and confirmed payments for the months of January, April, August and December 2015 during onsite assessment. From the assessment, the verification team confirms that the PP has implemented the Management System in line with the registered PDD. Corresponding to the paragraph 385 of VVS version 09.0, Bureau Veritas Certification can confirm that: - The implementation of the Project is consistent with the registered PDD. - The Project is operated as per the registered PDD by the PP.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

N/A

E.4.2. Corrections

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N/A

E.4.3. Changes to the start date of the crediting period

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N/A

E.4.4. Inclusion of a monitoring plan to a registered project activity

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N/A

E.4.5. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

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N/A

E.4.6. Changes to the project design of a registered project activity

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N/A

E.4.7. Types of changes specific to afforestation and reforestation project activities

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N/A

E.5. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	The verification team, through document review, site visit and interviews during site visit, has verified the monitoring plan, including the data and parameters required to be monitored, measurement procedures, monitoring frequency and QC/QA procedures as described in the registered PDD.
Findings	Compliant ;
Conclusion	The verification team can confirm that the monitoring plan is in accordance with the approved methodology (Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011)) applied by the Project, in accordance to the paragraph 388 of VVS version 09.0

E.6. Compliance of monitoring activities with the registered monitoring plan**E.6.1. Data and parameters fixed ex ante or at renewal of crediting period**

Means of verification	Document review: The following parameters were determined ex ante and are reported in the monitoring report. They have been crosschecked with values provided in the registered PDD and IPCC default values. - EF_{b,co2} - CO₂ emission factor arising from use of wood-fuel in baseline scenario (1.7472 tCO₂/t wood and 6.344 tCO₂/t charcoal) - EF_{p,co2} - CO₂ emission factor arising from use of wood-fuel in project scenario (1.7472 tCO₂/t wood and 6.344 tCO₂/t charcoal) - EF_{b,non-co2} - Non-CO₂ emission factor arising from use of wood-fuel in baseline scenario (0.1356 tCO_{2e}/t wood and 0.1563 tCO_{2e}/t charcoal). - EF_{p,non-co2} - Non-CO₂ emission factor arising from use of wood-fuel in baseline scenario (0.1356 tCO_{2e}/t wood and 0.1563 tCO_{2e}/t charcoal). - P_{b,y} - Quantity of woody biomass consumed in the baseline scenario in year (Wood scenario: 3.95 t wood/year and 0.0108 t wood/day & Charcoal scenario: 1.09 charcoal/year and 0.0030 t charcoal/day) - f_{NRB,i,y} - Non-renewability status of woody biomass fuel in scenario I during year y (72%).
Findings	Compliant

Conclusion	The verification team has assessed the application of values for the above parameters in calculation of emission reductions and confirms that the PP has applied the values correctly. Corresponding to the paragraph 392 and 393 of VVS version 09.0, Bureau Veritas Certification can confirm that: - The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. - All parameters required by the monitoring plan have been sufficiently monitored and correctly listed. The monitored data for required parameters have been verified by checking the whole information flow.
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E.6.2. Data and parameters monitored

Means of verification	The verification team performed a site visit for the verification of these parameters where interviews were conducted. In addition, document review of the project sales database, excel spreadsheet, PFT Update 2015 analysis, report, and Stove Usage survey reports was conducted.	
Findings	Compliant upon satisfactory responses by PP to raised Clarifications requests	
Conclusion	Parameter monitored	Means of verification and conclusion
	P _{p,y} - Quantity of woody biomass consumed in the project scenario during year y	The PP has applied the updated value for 2014. As per the registered PDD, it is required that this parameter be updated every two years through field tests. The last field test (PFT) was done in 2014 and the data validated in the previous verification circle. The data remains valid for this verification period. By conducting desk review of the previous verification report (Ref/2/) & site visit interviews, the verification team confirms the values as OK and acceptable
	Usage (Up,2015) - Usage rate in project scenario during year y	The PP has monitored this parameter as required. In this monitoring period, the PP carried out the usage survey together with monitoring survey in 2015. The DOE has reviewed the survey report (ref /7/) and the corresponding data (ref /3/) provided by the PP, and confirms that sampling has been done in line with the requirement of the methodology in terms of sample size and sampling method. The DOE has reviewed the statistical analysis carried out by PP, by following calculation in the spread sheets provided and confirms that the PP has correctly calculated the means and proportions. During the on site assessment, the DOE cross checked the information in a sample of 16 questionnaires against the information in the spread sheets; no discrepancies were observed. The DOE further visited 16 samples and held interviews with respondent to confirm the information in the questionnaires and also observe the implementation and usage of the technology. From the review of documents and on site assessment, the DOE confirms that the PP has monitored this parameter as required and the values applied in the ER calculations(94.5% for wood & 98.8% for charcoal) are acceptable.
	Project Technology Days (Np,2015) - Cumulative	The PP has calculated and reported this parameter as required. The values were extracted

	number of technology days in the project database for project scenario	from the Sales Force and the project Database. The verification team has reviewed the calculations of the parameter as provided in the spread sheet (ref/5/) and confirms that the value reported is correct.
	Ration(AF _{var})	As per the registered PDD, the ratio is used to account for seasonal and weekly variation of biomass fuel consumption and is calculated from the data of monitoring surveys. The verification team has reviewed the calculation of this ratio from monitoring usage analysis (Ref/3/) and confirm the value reported is correct. The following values have been applied in ER calculation. 1. Wood cluster: 0% 2. Charcoal cluster: 0%
	Similar cook stove project activities in the project area	The verification team confirms the PP's assertion regarding this parameter by reviewing project listing in the registries provided i.e Gold Standard registry, UNEP Risoe CDM Pipeline but has not found any other cook stove project activity other than the registered project activity. The DOE has also looked at the CDM registry and confirm no project covering the same geographical area and implementing the same technology has been registered.
	Incentive scheme to surrender charcoal baseline stoves	The verification team reviewed data extracted from the Sales force for the parameter and reports the same as correct. During verification site visit, the verification team was able to see the surrendered stoves and confirm the monitoring of the parameter as required.
	Review of Sustainable Development Indicators: The Sustainable Development Indicator parameters monitored on an ongoing basis included Air Quality, Quality of employment, Livelihood of the Poor, Access to affordable and clean energy services, Human/Institutional Capacity, and Quantitative employment. Monitoring of these indicators has been assessed as follows:	
	Sustainable development indicator Monitoring requirement	Means of verification and conclusion
	SD 1) Air Quality – the indicator is monitored annually and assessed based on the number of positive comments on indoor air quality. The monitoring is done through a Monitoring Survey.	The DOE has reviewed the monitoring/usage survey report (ref /7/) and data (ref /3/), followed by interviews with a sample of 16 households selected randomly from the population surveyed by the PP. The DOE has further assessed the procedures, sampling method, data entry and analysis for the Monitoring/usage surveys, as well as the qualification of the staff that carried out the surveys. The means of verification comprised a review of above references and interview with the stove end users. From this assessment, the verification team concludes that the PP has carried out the survey according to procedures set out in the approved monitoring manual and the results are acceptable. The results obtained indicate that this SD has a positive score in this monitoring period.

	SD 2) Livelihood of the Poor – the indicator is monitored annually and assessed based on a) Time and money savings achieved by the project stoves.	The PP provided a monitoring/usage report and data (ref /7/) and data (ref /3/), which has been reviewed by the verification team. In addition, the DOE conducted interviews with stove end users during site visit. The DOE confirms that the PP has monitored this SD and the results reported are acceptable. The verification team considers this indicator to have a positive score in this monitoring period.
	SD 3) Access to affordable and clean energy services – the indicator is monitored annually and assessed based on the Number of households using efficient cook stoves. Monitoring is done through sales records, usage rates and average number of household members.	The PP provided the project database (Ref/5/) which has been reviewed. From the reviewed calculations, an estimated 502, 580 persons got access to the clean energy services during the verification period. The DOE considers the SD to have a positive score in this monitoring period.
	SD 4) Human/Institutional Capacity – the indicator is monitored annually and assessed base on a) Number of women trained b) Number of schools visited and number of people reached by awareness creation.	The PP has provided a list of awareness creation activities held in 2015 (ref /4/). During on site assessment, the DOE reviewed attendance lists of training sessions for the awareness creation activities carried out in the monitoring period for children and teachers. From the assessment, the DOE confirms that the PP has monitored this SD and the results reported are acceptable. The verification team considers the indicator to have a positive score in this monitoring period.
	SD 5) Quantitative employment – the indicator is monitored annually and assessed based on the Number of jobs offered by ADES to local employees	The PP has provided a list of people receiving monthly income from the project activity (ref /6/). The DOE has reviewed the list and sampled a few employees from the list to cross check the monthly salary due to them. In addition, the verification team interviewed the sampled staff and confirmed they had job contracts with the organisation. A total of 153 locals had been employed by ADES by end of the monitoring period. From this assessment, the DOE concludes that the PP has monitored this SD and considers it to have a positive score in this monitoring period.

E.6.3. Implementation of sampling plan

Means of verification	Document review, site visit interview and review of monitoring/usage survey report
Findings	Compliant
Conclusion	A description of sampling efforts and survey for Monitoring and usage survey has been provided and reviewed. Further assessment was done during on-site assessment through interview with field officers

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Site visit interviews and document reviews. The project activity does not involve direct measurement of parameters. Measuring equipment is only used when carrying out Kitchen Tests. The measuring equipment (a digital hanging scale) used in the Aging-kitchen tests carried out for this monitoring period, was calibrated. Calibration records (ref/15/) were provided as
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	evidence.
Findings	Compliant
Conclusion	Records of calibration of weighing scales used Aging-kitchen tests were availed for review and were found to have been satisfactorily calibrated in compliance to calibration requirements. Compliance to calibration requirements was evident.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	Document review, site visit interview and review of monitoring/usage survey report
Findings	Compliant
Conclusion	Baseline emissions calculations are integrated in emissions reduction calculations in the Salesforce(refer to ADES project Database (ref /5/))

E.8.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	Document review, site visit interview and review of monitoring/usage survey report
Findings	Compliant
Conclusion	Project emissions calculations are integrated in emissions reduction calculations in the Salesforce(refer to ADES project Database (ref /5/))

E.8.3. Calculation of leakage GHG emissions

Means of verification	Document review, site visit interview and review of monitoring/usage survey report
Findings	Compliant
Conclusion	No leakage is considered according to the monitoring/usage report (ref /7/).

E.8.4. Summary of calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Document review: The details for emission reductions calculation during the monitoring period from 01/01/2015 - 31/12/2015 are provided in the ER calculation spreadsheet (ref /5/).		
Findings	Below is a summary of the calculations. $ER = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b, fuel} * (f_{NRB,b,y} * EF_{fuel, CO2} + EF_{fuel, nonCO2})) - \sum LE_{p,y}$ Total ERs₂₀₁₅ = 163,057 tCO₂e		
Conclusion	Parameter	Value	Source of value
	N _{p,2015}	Project Technology Days = Wood: 3,763,616 days = Charcoal: 18,715,577 days	Total Sales Record 2015
	U ₂₀₁₅	Cumulative Usage Rate = Wood: 94.48 % = Charcoal: 98.84 %	Usage Survey 2015
	P ₂₀₁₅	Fuel Savings = 0.0056 t wood/day-stove = 0.0016 t charcoal/day-stove	calculated from KPT 2014
	f _{NRB,b,y}	Non-renewable biomass fraction = 72.00%	CDM default value for Madagascar
	NCV	Net Caloric Value	Included in EF _{wood}
	EF _{wood, CO2}	Emission Factor = 1.7472 tCO ₂ e/t wood	IPCC 2006 default

EF _{wood, nonCO2}	Emission Factor = 0.1356 tCO ₂ e/t wood	IPCC 2006 default (CH ₄ + N ₂ O)
EF _{charcoal, CO2}	Emission Factor = 6.344 tCO ₂ e/t wood	IPCC 2006 default
EF _{charcoal, nonCO2}	Emission Factor = 0.1563 tCO ₂ e/t wood	IPCC 2006 default (CH ₄ + N ₂ O)
F _{var}	<i>Adjustment factor for variation of biomass fuel consumption= 1</i>	Usage Survey 2015
Σ LE ₂₀₁₅	Leakage LE = 0 tCO ₂ e/t year	PDD

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	Document review: The total estimated ex ante emission reductions for this monitoring period according to the PDD is 150,590 tCO ₂ e, in 2015. The corresponding actual emission reduction in the monitoring period as reported in the monitoring report and verified by the DOE is 163,057 tCO ₂ e in 2015.
Findings	An increase of 8.27% above the estimated ERs in the PDD.
Conclusion	The actual emission reductions are 8.27% more than the estimates in the registered PDD. The explanation for the difference is provided in section E.8.6 below

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	Document review: The total estimated ex ante emission reductions for this monitoring period according to the PDD is 150,590 tCO ₂ e, in 2015. The corresponding actual emission reduction in the monitoring period as reported in the monitoring report and verified by the DOE is 163,057 tCO ₂ e in 2015.
Findings	The actual emission reductions are 8.27% more than the estimates in the registered PDD.
Conclusion	The variation is due to a change in the following parameter estimates, which are deemed acceptable: a) Change in the number of stoves installed. The actual number of stoves installed (31,215 stoves) is more than estimated (20,000 stoves) in the PDD. This affected the number of technology days hence the amount of ERs. Corresponding to the paragraph 403 of VVS version 09.0, Bureau Veritas Certification can confirm that: - Data used for the determination of the emission reductions are available and monitored in accordance with the monitoring plan contained in the registered PDD. - Information and data provided in the monitoring report have been cross-checked with other sources such as, inventories, purchase records, Staff list. - Appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed. Assumptions, emission factors and default values that were applied in the calculations have been justified.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	Document review: The details for emission reductions calculation during the monitoring period is from 01/01/2015 - 31/12/2015 and are provided in the ADES project Database 2015 V01 (ref /5/)
Findings	163,057 tCO ₂ e

Conclusion	During the verification of the emission reductions, 3 Clarifications requests (CLs) and 1 corrective action request (CAR) were raised by the verification team. The CLs were addressed by the PP and the verification team reviewed and accepted the responses. The verification team has crosschecked the values and sources of data used in the calculation of ERs as well as the calculations in the spreadsheet provided and confirm they are correct.
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SECTION F. Internal quality control

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The verification report underwent an Internal Technical Review (ITR) before requesting issuance of CERs for the project activity.

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

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

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

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

The reviewer may raise Clarification Requests to the verification team and discusses these matters with Team Leader.

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

SECTION G. Verification opinion

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Bureau Veritas Certification has performed the 1st periodic verification of the 2nd crediting period of ADES Solar and efficient stoves in Madagascar, Gold Standard Reference Number GS 464, which is located in Madagascar, and applying the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011). The verification was performed based on the requirements for Voluntary Offset Projects under the Gold Standard and the requirements set by CDM and relevant guidance provided by CMP and the CDM Executive Board.

The verification consisted of the following three phases: i) desk review of the project design, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of ADES – Association pour le Développement de l'Energie Solaire and Myclimate Foundation is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions of the project, on the basis set out within the monitoring plan contained in the registered PDD. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification has verified the project Monitoring Report version 02 dated 29/06/2016 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as described in the validated and registered project design documents. Installed equipment being essential for generating emission reductions run reliably and are calibrated appropriately. The monitoring system is in place and the Project is generating GHG emission reductions as a Gold Standard VER project.

Bureau Veritas Certification can confirm that the GHG emission reductions are calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the validated and registered project baseline, approved monitoring plan and its associated documents. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, Bureau Veritas Certification confirms the following statement:

Reporting period:	01/01/2015 - 31/12/2015
Baseline emissions:	Integrated in ER calculation formula
Project emissions:	Integrated in ER calculation formula
Leakage emissions:	0 t CO ₂ equivalents
Emission Reductions:	163,057 t CO ₂ equivalents

SECTION H. Certification statement

> Bureau Veritas Certification has performed the 1st periodic verification of the 2nd crediting period of ADES Solar and efficient stoves in Madagascar, Gold Standard Reference Number GS 464, which applies the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (11/04/2011). The verification is based on the currently valid documentation of the United Nations Framework Convention on Climate Change (UNFCCC) and GS documentation.

The management of ADES – Association pour le Développement de l'Energie Solaire and MyClimate Foundation (Switzerland) is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions of the Project on the basis set out within the monitoring plan contained in the revised approved PDD. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the Project, is the responsibility of the management of the Project.

Bureau Veritas Certification has verified the Monitoring Report version 2.0 dated 29/06/2016 for the reporting period as indicated below. Bureau Veritas Certification is able to confirm that the Project is implemented as described in the revised approved project design document. Installed equipment being essential for generating emission reductions run reliably and are calibrated appropriately. The monitoring system is in place and the Project is generating GHG emission reductions as a Gold Standard VER project.

Bureau Veritas Certification is able to confirm that the GHG emission reductions are calculated without material misstatements. Our opinion relates to the Project's GHG emissions and resulting GHG emission reductions reported and related to the validated and registered project baseline, approved monitoring plan and its associated documents. Based on the verified amount of emission reductions stated in the verification report, Bureau Veritas Certification confirms the following statement:

Reporting period:	01/01/2015 to 31/12/2015
Baseline emissions:	Integrated in the ER calculation formula
Project emissions:	Integrated in the ER calculation formula
Leakage emissions:	Integrated in the ER calculation formula
Emission Reductions:	163,057 tCO ₂ equivalents.



James Chirchir
Team Leader
Date: 02/08/2016



Mr. Samuel Mayieko
Internal Technical Reviewer
Date: 02/08/2016

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
EB	CDM Executive Board
FAR	Forward Action Request
FT	Field Performance Test
GHG	Green House Gas(es)
GS	Gold Standard
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
SD	Sustainable Development Indicator
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Mr. James Chirchir , Team Leader, Climate Change Lead Verifier,

He holds a Bachelor's degree in Chemical and Process Engineering and had 4 years experience in manufacturing before joining Bureau Veritas. He is Lead Auditor in ISO 9001:2008 and ISO 14001:2004 and a trained CDM Verifier. He has conducted at least 5 CDM projects, and has been involved in the verification of GS projects including GS 464, GS 447 and GS 879 before.

Mr. Samuel Mayieko , Technical Reviewer, Climate Change Lead Verifier.

He has a degree in Physics with over 7 years experience in renewable energy and climate change out of which 5 years have been in CDM. He has been trained on CDM verification, QMS (ISO 9001) and EMS (ISO 14001), as Lead auditor. He has been involved in validation and verification of CDM and Gold Standard projects, , and has been involved in the verification of GS projects including GS 464, GS 447 and GS 879 before.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	UNFCCC	ADES Registered VER PDD version 8.3, GS ref no.GS 464	26/05/2015	GS Registry
2	Samuel Mayieko	GS_464 6 th verification Report, Revision No. 01	BVC/Kenya-VR/20/2015	DOE
3	Tobias Hoeck	Monitoring usage Analysis 2015 V01	20/01/2016	PP
4	Tobias Hoeck	ADES School visits 2015	25/01/2016	PP
5	Tobias Hoeck	ADES project Database 2015 V01	01/02/2016	PP
6	Tobias Hoeck	ADES Employees 2015	15/02/2016	PP
7	Tobias Hoeck	ADES MS US Report 2015 V01	Feb 2016	PP
8	Tobias Hoeck	ADES Monitoring report 2015 V01	25/02/2016	PP
9	Tobias Hoeck	ADES Monitoring report 2015 V02	29/06/2016	PP
10	Tobias Hoeck	ADES Stock 2015	29/06/2016	PP
11	TUV NORD	Validation Report 2 nd Crediting Period GS464 FVR	12/03/2015	GS Registry
12	GS	Technologies and Practices to Displace Decentralized Thermal Energy Consumption	(11/04/2011)	GS Registry
13	UNFCCC	Guide line on application of materiality in verifications, version 02.0	20/02/2015	UNFCCC Website
14	UNFCCC	Validation and Verification Standard Version 09.0	20/02/2015	UNFCCC Website
15	A	Certificate of metrological authorization to G+B Kalibriertechnik GmbH with the valid period	401 2013	

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

Table 1. Remaining FAR from validation and/or previous verification

FAR ID	01	Section no.	E.2	Date:	29/06/2016
Description of FAR					
The PP shall carry out baseline surveys as and when institutional stoves are implemented as a part of the project.					
Project participant response					Date: 29/06/2016
The institutional stoves produced and distributed have not reached a sufficient scale to be considered as part of the project and emissions reductions from these stoves have not been counted. The baseline surveys therefore have not been conducted.					
Documentation provided by project participant					
ADES project Database 2015 V01					
DOE assessment					Date: 8/07/2016
Action taken by PP is acceptable thus FAR has been addressed for this monitoring period, but remains open for subsequent crediting period					

Table 2. CL from this verification

CL ID	CL 01	Section no.	Date: 29/06/2016
Description of CL			
CL 01: The correctness of CO2 emission factor arising from use of wood-fuel in baseline scenario (EF _{bl.bio,co2}) = 6.344 tCO ₂ /t charcoal could not be ascertained. Please clarify			
Project participant response			Date: 29/06/2016
This value for EF _{bl.bio.co2} was already used during the first crediting period and it has been validated for the second crediting period as can be seen in the latest version of the PDD on page 58. Since a fixed baseline is applied, this value is not monitored. Thus there is no need to reassess it during verification.			
Documentation provided by project participant			
ADES Registered VER PDD version 8.3			
DOE assessment			Date: 8/07/2016
The value has been cross-checked from the validated PDD submitted to the verification team and found OK, CL 01 is close out.			

CL ID	CL 02	Section no.	Date: 29/06/2016
Description of CL			
a) A comparison between the values reported in this monitoring period and the previous period (6th cycle, refer to the monitoring report version rev 01 of 18/06/2015 show that there is a disparity in the number of stoves reported. The number of stoves reported in this monitoring period for the following years(2014(25,036 vs 22,285), 2013(16,971 vs 15,366), & 2012(10,972 vs 10,279),) are different from the numbers reported in the previous period (6th cycle) The PP is requested to clarify the disparity in these values b) During on site assessment, it was noted in the site visited(Antatanarivo and Majunga), that the numbers of stoves could not be easily reconciled and compared to the values provided in the MR. The verification team requests data summaries for the following project items(As extracted from Sales Force); i. Stoves stock holding as at 31/12/2014 ii. Total stove production for 2015(Jan – Dec 2015) iii. Number of stoves sold in 2015(Jan- Dec 2015) iv. Stoves stock holding as at 31/12/15			
Project participant response			Date: 29/06/2016
a) Response 1: It is not clear to which values the DOE is referring. The DOE is requested to specify. The total number of stoves sold by ADES is consistent in the previous period (2014) and in the current period of 2015. However, the number of stoves counted for ER is different. As mentioned under B.2 of the MR for 2015 in order to simplify the approach and reduce expenses for the monitoring field activities stoves older than 5 years and solar stoves are not counted for ER calculations. For this the number of stoves counted for ER are different in the MR 2014 and MR 2015, however with fewer stoves counted in 2015. This is a conservative approach. a) Response 2: The total number of stoves sold and reported for 2012, 2013, 2014 in the MR 2014 and in the MR 2015 are consistent (see MR 2014 pp. 7&8 and MR 2015 pp. 3&4). Please note that the latest MR for 6th cycle is version 2.1 (file name: 150721_ADES_monitoring_report_2014_V02_1.pdf). b) Extracted data has been provided to the DOE with explanations			

Documentation provided by project participant	
ADES Stock 2015	
DOE assessment	Date: 8/07/2016
a) <i>The data contained in the MR vo1 only indicates the values of all the stoves produced and distributed including the stoves not counted for ER Calculations unlike the previous monitoring reports which included all the stoves produced and distributed and stoves counted for ER Calculations separately. Consistency is observed when all stoves produced and distributed are compared. CL 01 a) is thus closed out.</i> b) <i>The provided data extracted from the sales force has been reviewed by the validation team, the number of stoves indicated as sold in 2015 is considered acceptable. The CL 02 b) is closed out</i>	

CL ID	CL 03	Section no.		Date: 29/06/2016
Description of CL				
The current PDD could not be reviewed, please provide;				
Project participant response				Date: 29/06/2016
The latest PDD has been submitted to the DOE for review.				
Documentation provided by project participant				
ADES Registered VER PDD version 8.3				
DOE assessment				Date: 8/07/2016
The revised PDD has been reviewed in order to compare value projected in the PDD and the actual values attained as reported in the MR, CL03 is closed out.				

Table 3. CAR from this verification

CAR ID	01	Section no.		Date: 29/06/2016
Description of CAR				
CAR 01: The type and the length of crediting period have not been indicated.				
Project participant response				Date: 29/06/2016
Length of the second crediting period has been included on page 1 of the MR. Due to the fact that it is the second crediting period it is already clear that it is the type with renewal of crediting period and that the duration is 7 years.				
Documentation provided by project participant				
Revised Monitoring report				
DOE assessment				Date: 8/07/2016
The revised monitoring report has been reviewed and found to have addressed the above issue, Ok. CAR 01 is closed out.				

Table 4. FAR from this verification

FAR ID	01	Section No.	E.2	Date: 8/07/2016
Description of FAR				
N/A				
Project participant response				Date: 8/07/2016
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: 8/07/2016
N/A				

APPENDIX A: CDM PROJECT VERIFICATION PROTOCOL (Rev 08.2)

Table 1 Verification requirements based on VVS version 09.0 (EB 79 Annex 3), PS version 09.0 (EB 79 Annex 4), PCP version 07.0 (EB 79 Annex 5), and Guidelines for completing the Monitoring Report Form version 03.2 (EB 70 Annex 11)

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
Part I Cover Page					
(a) Is the title of the project activity provided?	MR		Provided as: ADES Solar and efficient stoves in Madagascar	OK	OK
(b) Is the reference number of the project activity provided?	MR		Provided as: GS 464	OK	OK
(c) Is the version number of the monitoring report indicated?	MR		Indicated as: version 1.0	OK	OK
(d) Is the completion date of the monitoring report provided in DD/MM/YYYY format?	MR		Provided as: 25 February 2016	OK	OK
(e) Is the registration date of the project activity provided in DD/MM/YYYY format?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(f) Are the monitoring period number and duration of this monitoring period (first and last days included in DD/MM/YYYY format) provided?	MR		Provided as Period 1 of 2 nd Crediting period, and the date are indicated as (01/01/2015 - 31/12/2015)	OK	OK
(g) Are project participants indicated?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(h) Is the host party(ies) indicated?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(i) Are the sectoral scope(s) and applied methodology(ies) indicated?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(j) Is the estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
registered PDD indicated?					
(k) Are the actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period indicated?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(l) Are the actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012 indicated (if applicable)?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
(m) Are the actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period from 1 January 2013 onwards indicated (if applicable)?	MR		Not provided. However this is not a requirement as the project is a GS project	OK	OK
Part II Monitoring Report					
A. A. Description of project activity					
A.1 Purpose and general description of project activity					
A.1.1 Is the description of the project activity to be presented in this section a brief summary of the detailed description given in the section B.1 Implementation status of the project activity?	MR		Yes, A brief description of the project activity is provided (refer to pg 1 of the MR). However this is provided in section A.1 of the MR and not in B 1. This is acceptable since the project is a GS project.	OK	OK
A.1.2 Does this description include:					
A.1.2.1 Purpose of the project activity and the measures taken for GHG emission reductions or net anthropogenic GHG removals by sinks?	MR		Yes, From the MR, the purpose of the project activity is to locally produce and distribute solar and efficient cook stoves to people in Madagascar. (refer to pg 2 of the MR)	OK	OK
A.1.2.2 Brief description of the installed technology and equipments?	MR		Yes, From the MR three types of technologies are described:	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			i. Solar thermal technologies (Solar box stove, E-solar box stove and Solar parabolic stove). The technology uses solar radiation to meet the thermal energy needs. Emission reductions from this technology are not being counted for this period. ii. Efficient wood stove (OLI-b, OLI-45b and OLI-60b). The technology burns less woody biomass to meet the same thermal energy need as the baseline technology iii. Efficient charcoal stove (OLI-c, OLI-45c (formerly OLI-G), OLI-60c). The technology burns less charcoal to meet the same thermal energy needs as the baseline stove. However, only wood and charcoal stoves have been considered for ER Calculations during this monitoring period		
A.1.2.3 Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.)?	MR		Yes, The relevant dates are indicated as follows: Start date of project activity: 27 August 2007 First crediting period: 01 January 2008 to 31 December 2014 Start date of second crediting period: 01 January 2015 First Monitoring period of 2nd crediting period: 01 January 2015	OK	OK
A.1.2.4 Total GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period?	MR		Yes, In this monitoring period it is indicated that the project achieved 163,057 tCO₂e of emission reductions. (refer to pg 1 of the MR)	OK	OK
A.2 Location of project activity					

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A.2.1 Is the information on the location of the project activity provided, including Host Party(ies), Region/State/Province, City/Town/Community, Physical/Geographical location etc.?	MR		Yes, Refer to pg 2 & 3 of the MR. Under section A.3 the location is provided as the entire country of Madagascar, Towns/cities where existing production and distribution centers are located, are indicated as follows: - Toliara (Tuléar): 23°21'S, 43°40'E - Ejeda: 24°21'S, 44°31'E - Morondava: 20°17'5"S, 44°19'3"E - Morombe: 21°44'56"S, 43°21'47"E - Majunga: 15°42'55.09"S, 46°19'8.42"E - Fianarantsoa: 21°27'12.07"S, 47°05'08.42"E - Antananarivo: 18°55'18.01"S, 47°31'05.58"E - Antsirabe: 19°51'59.97"S, 47°02'00.30"E	OK	OK
A.3 Parties and project participant(s)					
A.3.1 Is the Party(ies) and project participant(s) involved in the project activity listed in the provided table?	MR		Yes, The parties and PP are provided as: Parties: Madagascar (host) and Switzerland (Annex 1) PPs: ADES – Association pour le Développement de l'Energie Solaire and Foundation Myclimate - the Climate Protection Partnership This information is consistent with the information in the registered PDD version 08.3 dated 26/05/2015	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
A.4 Reference of applied methodology					
A.4.1 Is the exact reference (number, title, version) of the methodology(ies) indicated?	MR		Yes, refer to pg 3 section A.5 of the MR. The methodology is indicated as Gold standard Methodology “Technologies and Practices to Displace Decentralized Thermal Energy Consumption - 11/04/2011”.	OK	OK
A.4.2 Is the exact reference (number, title, version) of any tools and other methodologies to which the applied methodology(ies) refers indicated?	MR		N/A No tools or methodologies are referenced	OK	OK
A.5 Crediting period of project activity					
A.5.1 Are the type, start date and length of the crediting period corresponding to this monitoring period provided?	MR		Referring to pg 3 section A.7 of the MR, the start date of the crediting period is indicated as 01 January 2015. The type and the length of crediting period have not been indicated.	CAR 01	OK
B. Implementation of project activity					
B.1 Description of implemented registered project activity					
B.1.1 Is the description of the installed technology, technical processes and equipments provided, include diagrams where appropriate?	MR PS	248(a)	Yes, refer to pg 2 section A 4 Of the MR. A brief description of the technology of the installed technology is provided. The PP has not included a description of technical process and any accompanying diagram. However, this is not a requirement of GS. From the brief description and previous interaction with the project, the verification team is able to understand the technology being installed in the project activity	OK	OK
B.1.2 Is the information on the implementation and actual operation of the project activity, including relevant dates (e.g. construction, commissioning, continued operation periods,	PS	248(b)	Yes, the PP has provided the information in section B.1 of the monitoring report. In this section of the monitoring report, the PP has provided the relevant dates since the start date of the project activity, information on the actual	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
etc.) provided?			operation of the project activity and information on the impact on the applicability of the methodology. The project activity is in continuous operation. On-site assessment is has been carried out to confirm the information.		
B.1.3 Is the description of: (i) the events or situations that occurred during the monitoring period that may impact the applicability of the methodology (ii) how the issues resulting from these events or situations have been addressed provided?	PS	248(c)	It is indicated in section B.1 of the monitoring report that there are no events that occurred during this monitoring period that impacted on the applicability of the applied methodology. This was confirmed during site visit	OK	OK
B.1.4 Have the project participants addressed the FARs identified during validation or previous verification(s)?	VVS	354	During the review for the renewal of the crediting period, one "FAR: The PP shall carry out baseline surveys as and when institutional stoves are implemented as a part of the project," was raised by the GS. The project so far does not count emissions reductions from institutional cook stoves; hence it was not necessary to do baseline survey during this monitoring period. This was considered OK by the verification team.	Ok	OK
B.1.5 Have the implementation and operation of the project activity been conducted in accordance with the description contained in the registered PDD?	VVS	383	The description provided under section B1 of the MR, on the implementation status of the project activity, indicates that the project has been implemented according to the description in the registered PDD. This was also confirmed during on-site assessment.	OK	OK
B.1.6 Are all physical features of the project activity in the registered PDD in place?	VVS	384	Yes. This was confirmed during on-site assessment	OK	OK
B.1.7 Have the project participants operated the project activity as per the registered PDD or any approved revised PDD?	VVS	384	The project participant has operated the project activity as per the approved revised PDD.	OK	OK
B.1.8 Was an on-site visit conducted?	VVS	384	Yes. On-site assessment was scheduled and conducted on 2 nd , 3 rd and and 6 th May 2016	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.1.9 If an on-site visit is not conducted, is the rationale of the decision justified?	VVS	384	Not Applicable as on-site assessment was carried out	OK	OK
B.2 Post registration changes			There are no post registration changes for this project activity. Therefore section B.2 of this protocol is not applicable	OK	OK
B.2.1 Temporary deviations from registered monitoring plan or applied methodology				OK	OK
B.2.1.1 Is it indicated whether any temporary deviations have been applied during this monitoring period?	MR		Not applicable	OK	OK
B.2.1.2 Is a description of the deviation(s) in accordance with applicable provisions in the Project standard provided?	MR		Not applicable	OK	OK
B.2.1.3 Are the reasons for the deviation(s), how it deviates from the monitoring plan and/or applied methodology(ies), the duration for which the deviation(s) is(are) applicable and justification on the conservativeness of the approach included in the description?	MR		<i>Not applicable</i>	OK	OK
B.2.1.4 For deviation(s) that require prior approval by the Board, are the date of approval and reference number included in the description?	MR		Not applicable	OK	OK
B.2.2 Corrections			Not applicable	OK	OK
B.2.2.1 Is it indicated whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report?	MR		Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.2.2.2 In cases where the correction(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, are the approval date and reference number provided? Otherwise, are the version number and the completion date of the revised PDD provided?	MR		Not applicable	OK	OK
B.2.3 Permanent changes from registered monitoring plan or applied methodology			Not applicable	OK	OK
B.2.3.1 Is it indicated whether any permanent changes from the registered monitoring plan or applied methodologies have been approved during this monitoring period or submitted with this monitoring report?	MR		Not applicable	OK	OK
B.2.3.2 In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, are the approval date and reference number provided? Otherwise, are the version number and the completion date of the revised PDD provided?	MR		Not applicable	OK	OK
B.2.4 Changes to project design of registered project activity			Not applicable	OK	OK
B.2.4.1 Is it indicated whether any changes to the project design of the project activity have been approved during this monitoring period or submitted with this monitoring report?	MR		Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
B.2.4.2 In cases where the change(s) and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, are the approval date and reference number provided? Otherwise, are the version number and the completion date of the revised PDD provided?	MR		Not applicable	OK	OK
B.2.5 Changes to start date of crediting period			Not applicable	OK	OK
B.2.5.1 Is it indicated whether any changes to the start date of the crediting period have been approved during this monitoring period?	MR		Not applicable	OK	OK
B.2.5.2 In cases where the changes and the revised PDD are approved prior to the submission of this monitoring report for request for issuance, are the approval date and reference number provided?	MR		Not applicable	OK	OK
B.2.6 Types of changes specific to afforestation or reforestation project activity			Not applicable	OK	OK
B.2.6.1 Is it indicated whether any changes specific to afforestation or reforestation project activities have been applied during this monitoring period based on applicable provisions in the Project standard that do not require prior approval by the Board?	MR		Not applicable	OK	OK
B.2.6.2 If changes were applied, are the version number and the completion date of the revised PDD provided?	MR		Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
C. Description of monitoring system					
C.1 General requirements					
C.1.1 Have project participants described the monitoring system and provided line diagrams (graphical schemes) showing all relevant monitoring points?	MR PS	- 250	Section C of the MR provides a description of the monitoring system. It also refers to a Monitoring Manual, which was provided to the DOE in the previous verification cycle. The Monitoring Manual has been reviewed. From the information provided, and the nature of the project activity which deals with many individual subsystems (cook stoves), the validation team determines that a diagrams (graphical schemes) showing all relevant monitoring points is not applicable for the project activity. Other necessary monitoring activities have been adhered to.	OK	OK
C.1.2 Does this description where appropriate include data collection procedures (information flow including data generation, aggregation, recording, calculations and reporting), organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring system?	MR PS	- 250	A description of the roles and responsibilities, data collection procedures, organizational structure is provided in the Monitoring Manual. This was further confirmed during on-site assessment.	OK	OK
C.1.3 Is the monitoring plan of the project activity in accordance with the applied methodology including applicable tool(s)?	VVS	386	Yes, Monitoring plan is inline with the applied methodology ref. "Technologies and Practices to Displace Decentralized Thermal Energy Consumption - 11/04/2011". Total sales records are available (Sales force) and the project database is maintained and updated as required by the applied methodology.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
C.1.4 For monitoring aspects that are not specified in the methodology, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency), are there any issues which may enhance the level of accuracy and completeness of the monitoring plan and should bring to the attention of the Board?	VVS	387	No applicable	OK	OK
C.1.5 Has the monitoring plan been properly implemented and followed by the project participants?	VVS	390(a)	Yes	OK	OK
C.1.6 Have all parameters stated in the monitoring plan and relevant Board decisions been monitored and updated as applicable, including:	VVS	390(b)		-	-
C.1.6.1 Project emission parameters?	VVS	390(b)	The following parameters stated in the monitoring plan are reported: 1) $P_{p,y}$ - Quantity of woody biomass consumed in the project scenario during year y 2) Similar new project activity in the project area 3) Incentive scheme to surrender charcoal baseline stove 4) Usage ($Up,2015$) - Usage rate in project scenario during year y 5) Project Technology Days ($Np,2015$) - Cumulative number of technology days in the project database for project scenario 6) $Ration(AF_{var})$	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The PP has also reported on the monitoring of the total stove sales		
C.1.6.2 Baseline emission parameters?	VVS	390(b)	A fixed baseline is applied in this project activity and therefore baseline parameters are fixed and have been verified in previous verifications.	OK	OK
C.1.6.3 Leakage parameters?	VVS	390(b)	Leakage has been reported as zero according to the outcome of the leakage survey, which has been reviewed.	OK	OK
C.1.6.4 Management and operational system: the responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan?	VVS	390(b)	The responsibility and authority reported in the MR are in line with the monitoring plan. This has further been confirmed through communication with relevant personnel and also during on-site assessment.	OK	OK
D. Data and parameters					
D.1 Data and parameters fixed ex ante or at renewal of crediting period			The following parameters are fixed ex ante and are indicated in the MR: - EF_{b,co2} - CO₂ emission factor arising from use of wood-fuel in baseline scenario (1.7472 tCO₂/t wood and 6.344 tCO₂/t charcoal) - EF_{p,co2} - CO₂ emission factor arising from use of wood-fuel in project scenario (1.7472 tCO₂/t wood and 6.344 tCO₂/t charcoal) - EF_{b,non-co2} - Non-CO₂ emission factor arising from use of wood-fuel in baseline scenario (0.1356 tCO_{2e}/t wood and 0.1563 tCO_{2e}/t charcoal). - EF_{p,non-co2} - Non-CO₂ emission factor arising from use of wood-fuel in baseline scenario (0.1356 tCO_{2e}/t wood and 0.1563 tCO_{2e}/t charcoal). - P_{b,y} - Quantity of woody biomass consumed in the	CL01	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			baseline scenario in year(Wood scenario: 3.95 t wood/year and 0.0108 t wood/day & Charcoal scenario: 1.09 charcoal/year and 0.0030 t charcoal/day) $f_{NRB,i,y}$ - Non-renewability status of woody biomass fuel in scenario I during year y (72%).These parameters as reported in the MR are to be cross checked with the registered PDD. The correctness of CO2 emission factor arising from use of wood-fuel in baseline scenario ($EF_{bl.bio,co2}$) = 6.344 tCO2/t charcoal could not be ascertained. Please clarify		
D.1.1 For “Purpose of data”, is one of the following options chose: (a) Calculation of baseline emissions or baseline net GHG removals by sinks; (b) Calculation of project emissions or actual net GHG removals by sinks; (c) Calculation of leakage?	MR		Purpose of data is not stated. However this not a requirement under GS	OK	OK
D.1.2 For “Value(s) applied”, if applicable, is one table used to report multiple values referring to the same data and parameter? If necessary, are reference(s) to electronic spreadsheets used?	MR		Yes, Refer to D1 above	OK	OK
D.1.3 Is the source of data provide and/or identified?	PS	250(d)	Yes The source of data for each of the above parameter is indicated provided:	OK	OK
D.1.4 Is information about appropriate emission factors, IPCC default values and any other reference values that have been used in the calculation of GHG emission reductions or net GHG removals provided?	PS	250(g)	Yes Information on appropriate emission factors and IPCC default values has been provided. Noteworthy is the global warming potential for N2O and CH4 where values	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			applicable for second commitment period have been applied in line with CDM EB63 annex 3		
D.2 Data and parameters monitored			The following monitored parameters are reported: 1) $P_{p,y}$ - Quantity of woody biomass consumed in the project scenario during year y 2) Similar new project activity in the project area 3) Incentive scheme to surrender charcoal baseline stove 4) Usage ($U_{p,2015}$) - Usage rate in project scenario during year y 5) Project Technology Days ($N_{p,2015}$) - Cumulative number of technology days in the project database for project scenario 6) $Ration(AF_{var})$ - Adjustment factor for seasonal and weekly variation of biomass fuel consumption (F_{var})	OK	OK
D.2.1 For “Purpose of data”, is one of the following options chose: (a) Calculation of baseline emissions or baseline net GHG removals by sinks; (b) Calculation of project emissions or actual net GHG removals by sinks; (c) Calculation of leakage?	MR		Purpose of data is stated for each of the respective parameters as follows: - Total Sales Record - Calculation of stove years - $AF_{pj,i,y}$ - Project emissions calculations - $Usage_{z,y}$ - Baseline and project emissions - Similar new project activity in the project area - Avoid double counting - Incentive scheme to surrender charcoal baseline stove - Leakage emissions calculations	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl																																																																													
			- Fvar - Baseline and project emission calculation - LEy (wood) - Leakage emissions calculation - LEy (charcoal) - Leakage emissions calculation																																																																															
D.2.2 For “Value(s) of monitored parameter”, if applicable, is one table used to report multiple values referring to the same data and parameter? If necessary, are reference(s) to electronic spreadsheets used?	MR		The following are the reported values for each of the above parameters: Total sales record <table border="1"> <thead> <tr> <th>Year</th> <th colspan="6">number of stoves</th> </tr> <tr> <th>Type</th> <th>Box</th> <th>OLI-45b</th> <th>OLI-45c</th> <th>OLI-b</th> <th>OLI-c</th> <th>Parabolic</th> </tr> </thead> <tbody> <tr> <td>2008</td> <td>1384</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>54</td> </tr> <tr> <td>2009</td> <td>617</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>13</td> </tr> <tr> <td>2010</td> <td>1408</td> <td>0</td> <td>0</td> <td>567</td> <td>160</td> <td>21</td> </tr> <tr> <td>2011</td> <td>1338</td> <td>0</td> <td>225</td> <td>1103</td> <td>3728</td> <td>109</td> </tr> <tr> <td>2012</td> <td>1589</td> <td>74</td> <td>656</td> <td>1238</td> <td>6580</td> <td>146</td> </tr> <tr> <td>2013</td> <td>1318</td> <td>93</td> <td>525</td> <td>1817</td> <td>11507</td> <td>106</td> </tr> <tr> <td>2014</td> <td>594</td> <td>91</td> <td>676</td> <td>3584</td> <td>17255</td> <td>86</td> </tr> <tr> <td>2015</td> <td>471</td> <td>152</td> <td>779</td> <td>5326</td> <td>24182</td> <td>75</td> </tr> <tr> <td>TOTAL</td> <td>8248</td> <td>258</td> <td>2082</td> <td>8309</td> <td>39230</td> <td>535</td> </tr> </tbody> </table> CL: A comparison between the values reported in this monitoring period and the previous period (6th cycle, refer to the monitoring report version rev 01 of 18/06/2015 show that there is a disparity in the number of stoves reported. The number of stoves reported in this monitoring period for the following years is different from the numbers reported in the previous period (6th cycle) The PP is requested to clarify he disparity in these values	Year	number of stoves						Type	Box	OLI-45b	OLI-45c	OLI-b	OLI-c	Parabolic	2008	1384	0	0	0	0	54	2009	617	0	0	0	0	13	2010	1408	0	0	567	160	21	2011	1338	0	225	1103	3728	109	2012	1589	74	656	1238	6580	146	2013	1318	93	525	1817	11507	106	2014	594	91	676	3584	17255	86	2015	471	152	779	5326	24182	75	TOTAL	8248	258	2082	8309	39230	535	CL02	OK
Year	number of stoves																																																																																	
Type	Box	OLI-45b	OLI-45c	OLI-b	OLI-c	Parabolic																																																																												
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TOTAL	8248	258	2082	8309	39230	535																																																																												

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			b) During on site assessment, it was noted in the site visited(Antatanarivo and Majunga), that the numbers of stoves could not be easily reconciled and compared to the values provided in the MR. The verification team requests data summaries for the following items(As extracted form Sales Force); i. Stoves stock holding as at 31/12/2014 ii. Total stove production for 2015(Jan – Dec 2015) iii. Number of stoves sold in 2015(Jan- Dec 2015) iv. Stoves stock holding as at 31/12/15		
D.2.3 Are the values of the monitored parameter for the purpose of calculating GHG emission reductions or net GHG removals provided? Where data are measured continuously, are they presented using an appropriate time interval? For default values (such as an IPCC value), where it is ex post confirmed, is the most recent value applied?	PS	250(a)	Yes, refer above.		
D.2.4 Is the equipment used to monitor each parameter described, including details on accuracy class, and calibration information (frequency, date of calibration and validity), if applicable as per monitoring plan?	PS	250(b)	Not applicable.	OK	OK
D.2.5 Is the equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan, the applied methodology, the Board guidance, local/national standards, or as per the manufacturer's specification?	VVS	390(c)	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
D.2.6 Is the calibration of those measuring equipments that have an impact on the claimed emission reductions conducted by the project participants at a frequency specified in the applied monitoring methodology and/or the monitoring plan?	VVS	394	Yes. In this project activity weighing scales are used and have been calibrated before use.	OK	OK
D.2.7 If, during verification of a certain monitoring period, the calibration has been delayed and the calibration has been implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available), is the following conservative approach adopted in the calculation of emission reductions:	VVS	395	Not applicable	OK	OK
D.2.7.1 Applying the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error?	VVS	395(a)	Not applicable	OK	OK
D.2.7.2 Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment?	VVS	395(b)	Not applicable	OK	OK
D.2.8 Has the error has been applied:	VVS	396	Not applicable	OK	-
D.2.8.1 In a conservative manner, such that the adjusted measured values of the delayed calibration shall result in fewer claimed emission reductions?	VVS	396(a)	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
D.2.8.2 For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration.	VVS	396(b)	Not applicable	OK	OK
D.2.9 In cases where the results of the delayed calibration are not available, or the calibration has not been conducted at the time of verification, prior to finalizing verification, were the project participants requested to conduct the required calibration have the project participants calculated the emission reductions conservatively using the approach mentioned in item "D.2.7" above?	VVS	397	Not applicable	OK	OK
D.2.10 In cases where it is not possible for the project participants to conduct the calibration at a frequency specified by either the applied methodology, guidance provided by the Board, and/or the registered monitoring plan due to reasons beyond the control of PPs, are the requirements for post registration changes, in section 9.5 of the VVS, followed?	VVS	398	Not applicable	OK	OK
D.2.11 In cases where neither the monitoring methodology nor the monitoring plan specify any requirements for calibration frequency for measuring equipments, are the equipments calibrated either in accordance with the specifications of the local/national standards, or as per the manufacturer's specification? If neither local/national standards nor the manufacturer's specification are available, were international standards used?	VVS	399	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
D.2.12 Is it described how the parameters are measured/calculated and the measurement and recording frequency?	PS	252(c)	Yes	OK	OK
D.2.13 Are monitoring results consistently recorded as per approved frequency?	VVS	390(d)	Yes	OK	OK
D.2.14 Is the source of data (e.g. logbooks, daily records, surveys, etc.) provide and/or identified?	PS	252(d)	Yes The sources of data for the above parameters are indicated as follows: - Total Sales Record - ADES Salesforce database - Xnrb,pj,y - CDM default value for Madagascar: http://cdm.unfccc.int/DNA/fNRB/index.html - AFpj,i,y - Kitchen Test - Usagez,y - Usage survey - Incentive scheme to surrender charcoal baseline stove	OK	OK
D.2.15 Where relevant is the calculation method of the parameter provided?	PS	252(e)	No applicable.	OK	OK
D.2.16 Are the QA/QC procedures applied described (if applicable per monitoring plan)?	PS	252(f)	Yes, however refer to above CLs		
D.2.17 Have quality assurance and quality control procedures been applied in accordance with the monitoring plan or the revised monitoring plan?	VVS	390(e)	Yes, however refer to above CLs		
D.2.18 Is information about appropriate emission	PS	252(g)	Not applicable since no monitored parameters are	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
factors, IPCC default values and any other reference values that have been used in the calculation of GHG emission reductions or net GHG removals provided?			sourced from IPCC values.		
D.3 Implementation of sampling plan					
D.3.1 Is a description provided on how project participants implemented the sampling efforts and surveys for those data and parameters according to the sampling plan, Include:	MR		Yes A description of sampling efforts and survey for Monitoring and usage survey has been provided and reviewed.	OK	OK
D.3.1.1 Description of implemented sampling design?	MR		On site interviews have been used to confirm the implementation of the sampling design	OK	OK
D.3.1.2 Collected data (electronic spreadsheets may be attached and referenced)?	MR		Data spreads sheets for the Surveys and KT's have been provided	OK	OK
D.3.1.3 Analysis of the collected data?	MR		The data has been analyzed and reports generated. The reports have been reviewed	OK	OK
D.3.1.4 Demonstration on whether the required confidence/precision has been met?	MR		This has been done	OK	OK
E. Calculation of emission reductions or GHG removals by sinks					
E.1 Calculation of baseline emissions or baseline net GHG removals by sinks					
E.1.1 Are the sample calculations for all formulae used and calculation of baseline emissions or baseline net GHG removals by sinks provided, applying actual values?	MR PS	- 256(a)	No need for separate calculation of baseline emissions. Baseline emissions calculation formula is integrated in the ER calculation formula.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl										
E.1.2 Are the electronic spreadsheets to present full calculations in the monitoring report attached?	MR		Yes Pending CL 02 above		OK										
E.2 Calculation of project emissions or actual net GHG removals by sinks															
E.2.1 Are the sample calculations for all formulae used and calculation of project emissions or actual net GHG removals by sinks provided, applying actual values?	MR PS	- 256(b)	No need for separate calculation of project emissions. Project emissions calculation formula is integrated in the ER calculation formula.	OK	OK										
E.2.2 Are the electronic spreadsheets to present full calculations in the monitoring report attached?	MR		Yes Pending CL 02 above		OK										
E.3 Calculation of leakage															
E.3.1 Are the sample calculations for all formulae used and calculation of leakage provided, applying actual values?	MR PS	256(c)	No need for separate calculation of leakage emissions. Leakage emissions is integrated in the ER calculation formula.	OK	OK										
E.3.2 Are the electronic spreadsheets to present full calculations in the monitoring report attached?	MR		Refer to CL 02 above		OK										
E.4 Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks															
E.4.1 Are the results of above sections summarized and GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period presented, using the provided table?	MR PS	- 256(d)	Yes Provided as: <table><tr><td>Year (2015)</td><td>ERs (tCO2e)</td></tr><tr><td>WOOD Cluster</td><td>27,606</td></tr><tr><td>CHARCOAL Cluster</td><td>135,451</td></tr><tr><td>Leakage</td><td>-</td></tr><tr><td>TOTAL</td><td>163,057</td></tr></table>	Year (2015)	ERs (tCO2e)	WOOD Cluster	27,606	CHARCOAL Cluster	135,451	Leakage	-	TOTAL	163,057	OK	OK
Year (2015)	ERs (tCO2e)														
WOOD Cluster	27,606														
CHARCOAL Cluster	135,451														
Leakage	-														
TOTAL	163,057														

CHECKLIST QUESTION	Ref.	§	COMMENTS			Draft Concl	Final Concl						
E.4.2 Is a complete set of data for the specified monitoring period is available?	VVS	290(a)	Refer to CL 02 above				OK						
E.4.3 Has information provided in the monitoring report been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?	VVS	290(b)	Yes			OK	OK						
E.4.4 Have calculations of baseline emissions, and project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document?	VVS	290(c)	Yes			OK	OK						
E.4.5 Have any assumptions used in emission calculations been justified?	VVS	290(d)	Yes			OK	OK						
E.4.6 Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	VVS	290(e)	Yes			OK	OK						
E.5 Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD													
E.5.1 Is a comparison of actual GHG emission reductions or net anthropogenic GHG removal of the project activity achieved during this monitoring period with the estimates in the registered PDD provided?	MR PS	- 257	Yes Provided as: The current PDD could not be reviewed, please provide; <table><tr><td>Item</td><td>Values applied in ex-ante calculation of the registered CDM-PDD</td><td>Actual values reached during the monitoring period</td></tr><tr><td>Emission reductions</td><td>2015: 150,590</td><td>2015: 163,057</td></tr></table>			Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period	Emission reductions	2015: 150,590	2015: 163,057	CL 03	OK
Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period											
Emission reductions	2015: 150,590	2015: 163,057											

CHECKLIST QUESTION	Ref.	§	COMMENTS			Draft Concl	Final Concl
			(tCO2e)				
E.6 Remarks on difference from estimated value in registered PDD							
E.6.1 For any registered CDM project activity, except A/R project activities, have project participants explained the cause of any increase in the actual GHG emission reductions achieved during the current monitoring period (e.g. higher water availability, higher plant load factor, etc.), including all information (i.e. data and/or parameters) that is different from that stated in the registered PDD?	MR PS	- 258	The actual emission reductions in this monitoring period are much higher compared to the estimates in the registered PDD. An explanation for the difference has been provided as: 1. More stoves have been sold in 2015(31,215) than assumed in the PDD(20,000)			OK	OK
E.7 Actual emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards							
E.7.1 If the monitoring period starts before 31 December 2012 and ends anytime thereafter, are actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved for the following two periods provided respectively? (a) Up to 31 December 2012 (1st commitment period); (b) From 1 January 2013 onwards.	MR		This monitoring period fall in the second commitment period.			OK	OK
E.7.2 Is it ensured that the achieved GHG emission reductions or net anthropogenic GHG removals by sinks are calculated proportionally for each period? In cases where annual caps were applied in the	MR		Not applicable.			OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
calculations, is it ensured that the annual caps are pro-rated to each period?					
F. GS Requirements					
F.1 Have the social and economic impact of the project been investigated biannually and an assessment made of its contribution, positive or otherwise, to sustainable development in the area as per the frequency defined in the PDD?	GS		Monitoring of the following SDIs has been reported in the MR: SD 1) Air Quality SD 2) Livelihood of the poor SD 3) Access to affordable and clean energy services SD 4) Human and Institutional capacity SD 5) Quantitative employment The indicators have been assessed on-site through a review of records and interviews with representatives of a sample of schools visited during on site assessment.	OK	OK
F.2 Are there any changes to the key sustainable development indicators?	GS		The SDIs have been reported and observed to have a positive change	OK	OK
F.3 Were mitigation/compensation measures achieved and implemented according to the success indicators as established in the monitoring plan(s)?	GS		No applicable	OK	OK

Table 5 Resolution of Corrective Action /Clarification / Forward Action Requests

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR 01: The type and the length of crediting period have not been indicated.		Length of the second crediting period has been included on page 1 of the MR. Due to the fact that it is the second	The revised monitoring report has been reviewed and found Ok. CAR 01 is

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
		crediting period it is already clear that it is the type with renewal of crediting period and that the duration is 7 years.	closed out.
CL 01: The correctness of CO2 emission factor arising from use of wood-fuel in baseline scenario (EF _{bl.bio,co2}) = 6.344 tCO ₂ /t charcoal could not be ascertained. Please clarify		This value for EF _{bl.bio,co2} was already used during the first crediting period and it has been validated for the second crediting period as can be seen in the latest version of the PDD on page 58. Since a fixed baseline is applied, this value is not monitored. Thus there is no need to reassess it during verification.	The value has been cross-checked from the validated PDD submitted to the verification team and found OK, CL 01 is close out.
CL 02: a) A comparison between the values reported in this monitoring period and the previous period (6th cycle, refer to the monitoring report version rev 01 of 18/06/2015 show that there is a disparity in the number of stoves reported. The number of stoves reported in this monitoring period for the following years(2014(25,036 vs 22,285), 2013(16,971 vs 15,366), & 2012(10,972 vs 10,279),) are different from the numbers reported in the previous period (6th cycle) The PP is requested to clarify he disparity in these values b) During on site assessment, it was noted in the site visited(Antatanarivo and Majunga), that the numbers of stoves could not be easily reconciled and compared to the values provided in the MR. The verification team requests data summaries for the following project items(As extracted form Sales Force); v. Stoves stock holding as at 31/12/2014		a) Response 1: It is not clear to which values the DOE is referring. The DOE is requested to specify. The total number of stoves sold by ADES is consistent in the previous period (2014) and in the current period of 2015. However, the number of stoves counted for ER is different. As mentioned under B.2 of the MR for 2015 in order to simplify the approach and reduce expenses for the monitoring field activities stoves older than 5 years and solar stoves are not counted for ER calculations. For this the number of stoves counted for ER are different in the MR 2014 and MR 2015, however with fewer stoves counted in 2015. This is a conservative approach.	c) <i>The data contained in the MR vo1 only indicates the values of all the stoves produced and distributed including the stoves not counted for ER Calculations unlike the previous monitoring reports which included all the stoves produced and distributed and stoves counted for ER Calculations separately. Consistency is</i>

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
vi. Total stove production for 2015(Jan – Dec 2015) vii. Number of stoves sold in 2015(Jan- Dec 2015) viii. Stoves stock holding as at 31/12/15		a) Response 2: The total number of stoves sold and reported for 2012, 2013, 2014 in the MR 2014 and in the MR 2015 are consistent (see MR 2014 pp. 7&8 and MR 2015 pp. 3&4). Please note that the latest MR for 6th cycle is version 2.1 (file name: 150721_ADES_monitoring_report_2014_V02_1.pdf). The DOE compares the values for total stoves sold in MR 2015 (p.p. 3&4) with values for total stoves counted for ER in MR 2014 (p. 15). The DOE shall compare always the corresponding values for stoves sold and stoves counted for ER in the MR 2014 and MR 2015. The values for stoves counted for ER for the monitoring period 2015 are found in the project database 2015 (160201_ADES_Project_Database_2015_V01.xlsx, sheet stove sales). They are not listed in the MR 2015. As already mentioned under response 1, the total number of stoves counted for ER in 2012, 2013, and 2014 are different in MR 2014 and MR 2015 for the reasons mentioned under response 1.	<i>observed when all stoves produced and distributed are compared. CL 01 a) is thus closed out.</i> <i>d) The provided data extracted from the sales force has been reviewed by the validation team, the number of stoves indicated as sold in 2015 is considered acceptable. The CL 02 b) is closed out</i>

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
		b) Stock figures as requested have been retrieved from salesforce and are provided in the excel file "160629_ADES_stock_2015.xlsx".	
CL 03: The current PDD could not be reviewed, please provide;		The latest PDD has been submitted to the DOE for review.	<i>The revised PDD has been reviewed, CL03 is closed out.</i>