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TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**
VERSION **v. 1.1**
RELATED SUPPORT – **TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

KEY PROJECT INFORMATION

Programme of Activity Information

GS ID of Programme	GS 916
Title of Programme	The Breathing Space Improved Cooking Stoves Programme, India
Version of POA-DD applicable to this monitoring report	Version 5.2, dated 21/11/2012
Name and GS ID of fully Validated CPA/VPAs (i.e. non compliance check)	"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 01 Envirofit" – GS 1231 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 02 Envirofit" – GS 1029 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 03 Envirofit" – GS 1030 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 04 Envirofit" – GS 1031 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 05 Envirofit" – GS 3363 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 06 Envirofit" – GS 3364 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 07 Envirofit" – GS 3365 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 08 Envirofit" – GS 3366 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 09 Envirofit" – GS 3367 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 10 Envirofit" – GS 4291 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 11 Envirofit" – GS 5046 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 12 Envirofit" – GS 5417 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 13 Envirofit" – GS 5418

Key Project Information

GS ID (s) of Project (s)	<table><tr><th>VPA Number</th><th>GS Ref ID</th></tr><tr><td>VPA 06</td><td>GS 3364</td></tr><tr><td>VPA 07</td><td>GS 3365</td></tr><tr><td>VPA 08</td><td>GS 3366</td></tr><tr><td>VPA 09</td><td>GS 3367</td></tr><tr><td>VPA 10</td><td>GS 4291</td></tr><tr><td>VPA 11</td><td>GS 5046</td></tr></table>
Title of the project (s) covered by monitoring report	"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 06 Envirofit" – GS 3364 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 07 Envirofit" – GS 3365 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 08 Envirofit" – GS 3366 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 09 Envirofit" – GS 3367 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 10 Envirofit" – GS 4291 "The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 11 Envirofit" – GS 5046
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	<table><tr><th>VPA Number</th><th>Version Number</th></tr><tr><td>VPA 06</td><td>02</td></tr><tr><td>VPA 07</td><td>02</td></tr><tr><td>VPA 08</td><td>02</td></tr><tr><td>VPA 09</td><td>02</td></tr><tr><td>VPA 10</td><td>03.1</td></tr><tr><td>VPA 11</td><td>03.1</td></tr></table>
Version number of the monitoring report	3.0
Completion date of the monitoring report	12/04/2021
Date of project design certification	VPA 06-09 - 28/11/2014 VPA 10-11 - 06/08/2017 07/11/2019 (Date of approval of Transition Annex AA)
Date of Last Annual Report	Version 2.0 dated 30/04/2018 (Version and date of 3rd monitoring period final monitoring report submitted to GS and approved)
Monitoring period number	4th
Duration of this monitoring period	01/08/2017 to 31/07/2020, Both days inclusive
Project Representative	Envirofit International Ltd.
Host Country	India
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities

	☐ N/A
Methodology (ies) applied and version number	AMS II.G. - Energy efficiency measures in thermal applications of non-renewable biomass, version 03
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
13 Climate Action	Amount of CO_2e emissions reduced by the project per year	**2017** 71,537 **2018** 137,172 **2019** 80,865 **2020** 33,878	tCO_2e
1 No Poverty 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services **Indicator:** Number of ICS distributed under the project as an indicator of providing basic service access to households	MS#1 – 192,550 MS#2 – 149,168 MS#3 – 87,280	Number
1 No Poverty 1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services **Indicator:** % users reporting money saving due to reduction in purchased fuel consumption in project	100	%
3 Good Health and Well Being	3.9.1 - Mortality rate attributed to	100	%

3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.	household and ambient air pollution **Indicator:** % users reporting reduction in smoke/PM after shifting to ICS in project		
7 Affordable and Clean Energy 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.2 Proportion of population with primary reliance on clean fuels and technology **Indicator:** % users reporting an operational ICS in project	MS#1 – 81.8 MS#2 – 80.2 MS#3 – 79.6	%
8 Decent Work and Economic Growth 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.1Average hourly earnings of female and male employees, by occupation, age and persons with disabilities **Indicator:** Number of male / female numbers of employment created by project	MS#1 – 25 MS#2 – 10 MS#3 – 05	Number

Table 2 – Product Vintages

		Amount Achieved
Start Dates	**End Dates**	**VERs (tCO2e)**
01/08/2017	31/12/2017	71,537
01/01/2018	31/12/2018	137,172
01/01/2019	31/12/2019	80,865
01/01/2020	31/07/2020	33,878

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

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The programme is a voluntary initiative taken by Envirofit International, a social enterprise, involving dissemination of improved efficiency cook-stoves (ICS) to domestic households in India. Envirofit is the coordinating/ managing entity (CME) for the programme.

Usage of non-renewable biomass in traditional inefficient cookstoves, commonly referred as chulhas, results in decrease in carbon stock of the forests and equivalent GHG emissions as the carbon emission released from unsustainable tree cutting cannot be sequestered later.

The ICS result in better heat transfer to the cooking pot and aids complete fuel combustion (avoiding smoke, black soot and Particulate matter) as compared to that achieved in traditional cook stoves. This results in a significant reduction in non-renewable biomass consumption and level of indoor air pollution (IAP) in project households. Therefore, ICS reduce greenhouse gas emissions equivalent to the reduced consumption of biomass fuel, by virtue of their higher efficiency compared to traditional/ baseline stoves.

In the absence of project activity, the traditional inefficient cook stoves would have been used for cooking – producing substantial GHG emissions due to burning of non-renewable biomass.

VPAs included in the PoA

Title and GS reference number of the VPA	Version of the PoA-DD	Crediting period type and duration[1]	Covered in this monitoring report? (yes/no)[2]
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 01 Envirofit" – GS 1231	Version 5.2	10/07/2010 - 09/07/2020	No
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 02 Envirofit" – GS 1029	Version 5.2	10/07/2010 - 09/07/2020	No
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 03 Envirofit" – GS 1030	Version 5.2	10/07/2010 - 09/07/2020	No

[1] The start date of crediting period of the VPAs is either the commissioning date of the VPA **OR** the date two years prior to the date of inclusion of VPA in the PoA (whichever is later of the two). VPA 01-04 were registered on 10 July 2012 and VPA 05-09 were included on 28 Nov 2014. VPA 10-13 were included on 16/08/2017. The commissioning date of each VPA is mentioned in section D.1 c) below. The start date of the crediting period has been calculated accordingly.

[2] All stoves under VPA 01-05 have expired their design operational lifetime before the start of this monitoring period and hence are not generating any CERs. Hence VPA 01-05 have not been included in this monitoring report.

"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 04 Envirofit" – GS 1031	Version 5.2	10/07/2010 - 09/07/2020	No
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 05 Envirofit" – GS 3363	Version 5.2	28/11/2012 - 27/11/2022	No
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 06 Envirofit" – GS 3364	**Version 5.2**	**28/11/2012 - 27/11/2022**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 07 Envirofit" – GS 3365	**Version 5.2**	**28/11/2012 - 27/11/2022**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 08 Envirofit" – GS 3366	**Version 5.2**	**17/03/2013 - 16/03/2023**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 09 Envirofit" – GS 3367	**Version 5.2**	**30/09/2013 - 29/09/2023**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 10 Envirofit" – GS 4291	**Version 5.2**	**16/08/2015 - 15/08/2025**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 11 Envirofit" – GS 5046	**Version 5.2**	**22/09/2015 - 21/09/2025**	**Yes**
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 12 Envirofit" – GS 5417	Version 5.2	30/08/2016 - 29/08/2021	No
"The Breathing Space Improved Cooking Stoves Programme, India – VPA No. 13 Envirofit" – GS 5418	Version 5.2	08/02/2017 - 07/02/2022	No

A.2. Location of project

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The boundary for the PoA in terms of a geographical area is defined as the political boundary of India. All small-scale voluntary programme activities (SSC-VPAs) associated with this PoA will be implemented within the geographical boundary of the PoA.

Fig 2: Geographical boundary

A.3. Reference of applied methodology

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AMS II.G. - Energy efficiency measures in thermal applications of non-renewable biomass, version 03 (Sectoral Scope: 03)

A.4. Crediting period of project

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GS Ref ID	Crediting Period Start Date	Length of Crediting Period
GS 3364	28/11/2012	10 years, fixed
GS 3365	28/11/2012	10 years, fixed
GS 3366	17/03/2013	10 years, fixed
GS 3367	30/09/2013	10 years, fixed
GS 4291	16/08/2015	10 years, fixed
GS 5046	22/09/2015	10 years, fixed

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

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(a) Purpose of the specific-case VPA(s) and the measures taken for GHG emission reductions or net GHG removals by sinks;

The purpose of the VPAs is to transition away from inefficient/ traditional biomass based cooking by providing improved cooking stoves to project beneficiaries. All VPAs included in the monitoring report are identical in measure. These VPAs are small-scale VPAs and are implemented by Envirofit and involve installation of domestic improved cooking stoves (ICS) in India.

Usage of non-renewable biomass in traditional inefficient cookstoves, commonly referred as chulhas, results in decrease in carbon stock of the forests and equivalent GHG emissions as the carbon emission released from unsustainable tree cutting cannot be sequestered later.

The ICS result in better heat transfer to the cooking pot and aids complete fuel combustion (avoiding smoke, black soot and Particulate matter) as compared to that achieved in traditional cook stoves. This results in a significant reduction in non-renewable biomass consumption and level of indoor air pollution (IAP) in project households. Therefore, ICS reduce greenhouse gas emissions equivalent to the reduced consumption of biomass fuel, by virtue of their higher efficiency compared to traditional/ baseline stoves.

In the absence of project activity, the traditional inefficient cook stoves would have been used for cooking – producing substantial GHG emissions due to burning of non-renewable biomass.

(b) Description of the technology employed and installed equipment and/or infrastructure, including information requested by the eligibility criteria;

Various models of improved cookstoves have been disseminated under the included VPAs. The following table gives the summary of installations in each VPA (which matches with the approved Transition Annex AA, page 32)

VPA Number	Total number of units sold
GS 3364 VPA 06	21,517
GS 3365 VPA 07	33,397

GS 3366 VPA 08	34,128
GS 3367 VPA 09	36,888
GS 4291 VPA 10	43,299
GS 5046 VPA 11	43,284
Grand Total	**212,513**

However due to ICS ageing, many ICS are completing their design operational lifetime during the monitoring sessions in the monitoring period. Hence , the ICS credited under this monitoring period (based on their date of installation and operational lifetime) in each of the monitoring session is as given below:

For MS#1[3]			
VPA number	**G3300**	**PCS1**	**Grand Total**
GS 3364 VPA 06	6697	-	6697
GS 3365 VPA 07	33332	-	33332
GS 3366 VPA 08	8180	24003	32183
GS 3367 VPA 09	3214	33666	36880
GS 4291 VPA 10	-	41015	41015
GS 5046 VPA 11	-	42443	42443
Grand Total	**51423**	**141127**	**192550**

For MS#2			
VPA number	**G3300**	**PCS1**	**Grand Total**
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	4827	24003	28830
GS 3367 VPA 09	3214	33666	36880
GS 4291 VPA 10	-	41015	41015
GS 5046 VPA 11	-	42443	42443
Grand Total	**8041**	**141127**	**149168**

For MS#3			
VPA number	**G3300**	**PCS1**	**Grand Total**
GS 3364 VPA 06	-	-	-
GS 3365 VPA 07	-	-	-
GS 3366 VPA 08	-	-	-
GS 3367 VPA 09	2067	1755	3822
GS 4291 VPA 10	-	41015	41015
GS 5046 VPA 11	-	42443	42443
Grand Total	**2067**	**85213**	**87280**

[3] Over the monitoring period, three annual monitoring events were conducted each corresponding to an annual monitoring period (i.e. First Monitoring Session (MS#1) covering 01 Aug 2017 – 31 Jul 2018, Second Monitoring Session (MS#2) covering 01 Aug 2018 – 31 Jul 2019 and Third Monitoring Session (MS#3) covering 01 Aug 2019 – 31 Jul 2020).

Information requested by Eligibility criteria

Refer registered VPA-DD for detailed description of compliance with eligibility criteria for inclusion of a VPA in the PoA. The eligibility criteria # 1, 2, 8 and 9 relevant to the technology involved in the VPA, are discussed below:

Eligibility criteria #	Eligibility criteria requirements	Explanation for a typical VPA included in the PoA
1. Project Boundary	The VPA shall involve the distribution of ICS within the geographical boundary of India	All the stoves included in the VPAs are within India and no stoves sold outside India are included in the emission reduction calculations. Please refer the Sales database for the same (Appended in ER calculator)
2. Methodology applicability criteria	Have a maximum energy saving of 180 GWh_{th}/year.	This has already been substantiated at the time of VPA inclusion. The thermal energy savings achieved by each of the VPAs in each year under the monitoring period has been calculated and expressed in the "ER Summary" worksheet of VER calculation workbook. No VPA in any year is exceeding the methodology threshold.
2. Methodology applicability criteria	Each SSC VPA shall have a system to ensure that stoves bear logo of the PO /CME to ensure their unique association to the PoA	All ICS are provided with Envirofit Logo / product branding symbol as well as a unique serial number.
8. Intended User (Automatic additionality)	Each SSC VPA includes sale of improved cook stoves where the users of the improved cook stoves are households or communities or Small and Medium Enterprises (SMEs)	All the stove units distributed under the VPAs are domestic models only.
9. Size of individual unit (Automatic additionality)	The size of each Improved cook stove in the VPA shall not exceed 5% of the small-scale CDM threshold that is 9 GWhth energy savings per year	This has already been justified in the registered VPA-DDs. Also, the VPAs include much higher than 20 ICS units substantiating that thermal energy savings per annum per unit is much lower than 5% of methodology threshold (As at 5%, only 20 units will be eligible under each VPA).

(c) Relevant dates for the specific-case VPA(s) (e.g. construction, commissioning, continued operation periods, etc.);

VPA	Commissioning date of VPA	Monitoring period
GS 3364 VPA 06	01 Nov 2011	01 Aug 2017 – 31 July 2020
GS 3365 VPA 07	31 Aug 2012	01 Aug 2017 – 31 July 2020
GS 3366 VPA 08	17 Mar 2013	01 Aug 2017 – 31 July 2020
GS 3367 VPA 09	30 Sep 2013	01 Aug 2017 – 31 July 2020
GS 4291 VPA 10	05 May 2014	01 Aug 2017 – 31 July 2020
GS 5046 VPA 11	22 May 2015	01 Aug 2017 – 31 July 2020

The VPA is under continued operation post commissioning.

(d) Total GHG emission reductions or net GHG removals by sinks achieved in this monitoring period for the specific-case VPA(s), including information on how double counting is avoided

VPA Number	Emission Reductions tCO_2e
VPA 06	1,222
VPA 07	18,400
VPA 08	37,150
VPA 09	55,187
VPA 10	100,975
VPA 11	110,518
Total	**323,452**

B.1.1. Forward Action Requests

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Not Applicable

B.2. Post-Design Certification changes

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B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

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Temporary deviation has been sought for MS#3 due to COVID constraints. The monitoring surveys have been conducted remotely as field visits to user households was not possible. As a conservative measure, 10% additional samples have been covered to cover for remote monitoring. Also, WBTs could not be conducted in MS#3. Hence, the WBT results have been established in MS#3 based on the efficiency drop rate monitored in MS#1 and MS#2 as a conservative measure.

B.2.2. Corrections

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Not Applicable

B.2.3. Changes to start date of crediting period

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Not Applicable

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

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Not Applicable

B.2.5. Changes to project design of approved project

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Not Applicable

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

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Stage 1: Sales records - At the time of Stove sales to distributers/ retailers, used for determination of N_{all} (population)

Data Generation and Aggregation: At the time of sale of an ICS unit to a stove bulk purchaser (MFIs, SHGs, Corporates, NGOs) a "Stove Purchase invoice" is executed between Envirofit and the purchaser.

Data Recording: These sales records includes the following information

- Name of the distributer / retailer,
- Batch number of stove,
- Number of units sold,
- Date of sale

Data Calculation and reporting: The Record is maintained with the Envirofit. The installation record are screened by Envirofit to eliminate any double counting of ICS or and/or incomplete, invalid entries.

Stage 2: End user database – Sampling frame

Data Generation and Aggregation: the bulk purchasers (MFIs, SHGs, Corporates, NGOs etc.) are encouraged to collect the end user details during the sales of stoves and transfer the information to Envirofit for compilation of end user database for sampling. At the time of sale of an ICS unit to a stove user, the end user information is collected and restored at the distributer level which includes:

- The name and address of the customer
- Contact Number of customer (if available)
- The model type and date of ICS purchase

Stage 3: Sampling Surveys and test – determine efficiency & SoF

Data Generation and Aggregation: On-site, ex-post tests and surveys have been conducted by Envirofit to determine η_{new}, SOF and discontinuation of displaced traditional cook stove on a sampling basis. Stratified random sampling was used. Random samples were picked from the sampling frame in accordance with the monitoring frequency (annual) and confidence/margin of error (95/10) stated in monitoring plan. Water boiling test (WBT) to determine η_{new} and questionnaire survey to determine SOF and continued use of displaced traditional cook-stoves were carried out on the selected sample ICS. The on-field monitoring surveys and WBTs were managed by Envirofit in-house. Monitoring staff was hired for conducting surveys and also performing water boiling tests for sampled users to expedite completion of the monitoring phase.

Over the monitoring period, three annual monitoring events were conducted each corresponding to an annual monitoring period (i.e. First Monitoring Session(MS#1) covering 01 Aug 2017 – 31 Jul 2018, Second Monitoring Session (MS#2) covering 01 Aug 2018 – 31 Jul 2019 and Third Monitoring Session (MS#3) covering 01 Aug 2019 – 31 Jul 2020). For each of these monitoring events, sampling was done at cross CPA level, using 95/10 as confidence / precision.

Data Recording: The results from the WBTs and the sampling survey were recorded by the site technicians / surveyors in the template provided by Envirofit to site technicians/ surveyors. The same were taken back from them post monitoring surveys and were converted to electronic format by Envirofit for the purpose of ER calculations. The hardcopy reports are archived at Envirofit head-office.

Data Calculation and reporting: Envirofit assessed the compliance of the sampling results for 95% confidence and 10% precision (margin of error) as required in case of biennial monitoring as per registered monitoring plan. For results of the monitoring and emission reduction calculations refer ER calculator.

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

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Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	$Q_{biomass}$
Unit	Tonnes/ year
Description	Annual average biomass consumption per appliance
Source of data	Registered PoA/VPA-DDs
Value(s) applied)	1.915
Choice of data or measurement methods and procedures	Registered PoA/VPA-DDs - Baseline surveys of biomass usage (Controlled cooking test) were performed to determine the average biomass consumption per appliance in the baseline. Further, a conservative assumption of cooking only twice a day has been used for the same.
Purpose of data	Baseline emission calculations
Additional comments	Used for calculation of B_{old} as per paragraph 7 (a) of methodology

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	$EF_{projected\_fossil\ fuel}$
Unit	tCO_2/TJ
Description	Emission factor for the substitution of non-renewable biomass by similar consumers.
Source of data	AMS-II. G version 03, page 2
Value(s) applied)	81.6

Choice of data or measurement methods and procedures	Default value as prescribed by methodology applied
Purpose of data	Baseline emission calculations
Additional comments	

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	η_{old}
Unit	Fraction
Description	Efficiency of the system being replaced
Source of data	AMS-II. G version 03
Value(s) applied)	0.1
Choice of data or measurement methods and procedures	The default value taken from the methodology AMS-II.G version 03.
Purpose of data	Baseline emission calculations
Additional comments	

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	LAF
Unit	Fraction
Description	Leakage adjustment factor
Source of data	AMS-II.G version 03
Value(s) applied)	0.95
Choice of data or measurement methods and procedures	Default value as prescribed by methodology applied
Purpose of data	Baseline emission calculations
Additional comments	

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	$NCV_{biomass}$
Unit	TJ/tonne
Description	Net Calorific Value of the non – renewable woody biomass that is substituted
Source of data	AMS – II.G ver 03, page 2
Value(s) applied)	0.015

Choice of data or measurement methods and procedures	Default value as prescribed by methodology applied
Purpose of data	Baseline emission calculations
Additional comments	

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	$f_{NRB,y}$
Unit	Fraction
Description	Fraction of biomass in year y that can be established as non-renewable using survey methods
Source of data	Global Forest Resources Assessment 2010, Country Report for India (FAO), registered PoA-DD
Value(s) applied)	Monitoring Session: MS#1 — $f_{NRB,y}$ (fraction): 0.890 MS#2 — 0.896 MS#3 — 0.902
Choice of data or measurement methods and procedures	registered PoA/VPA-DDs, ER calculator
Purpose of data	Baseline emission calculations.
Additional comments	The state-wise values of f_{NRB} have been fixed ex-ante in the PoA-DD. The f_{NRB} value is the weighted average value based on state-wise distribution of sales under each monitoring session.

D.2. Data and parameters monitored

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Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	η_{new}
Unit	Fraction
Description	Efficiency of the system being deployed as part of the project activity
Measured/calculated/default	Measured and calculated
Source of data	Ex-post Water Boiling Test records
Value(s) of monitored parameter	Monitoring Session: MS#1 — Monitored Efficiency (fraction): 0.228 MS#2 — 0.225 MS#3 — 0.223

Monitoring equipment	The CME/PO conducts Water Boiling Tests with the help of trained personnel, equipment used are thermometers, weigh scales and wood moisture content meters. The equipment used are newly purchased at the time of monitoring so that measurement are done with necessary guarantees.
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	Refer the ER workbook for calculation method
QA/QC procedures:	In case where survey results indicate that desired precision is not achieved, the lower bound of confidence interval of the parameter value has been used. All data required for verification and issuance are being backed-up and will be kept for at least two years after the end of the crediting period or the last issuance of CERs of this project, whichever occurs later.
Purpose of data:	Baseline calculations
Additional comments:	The sample size to be calculated as per the confidence / precision of 95/10 for annual monitoring. Ex-post weighted average value to be used in line with Option 2 of paragraph 6 of AMS-II. G version 03

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	N_{all}
Unit	Number
Description	Total Number of stoves credited in year y
Measured/calculated/default	Envirofit sales records
Source of data	Monitored
Value(s) of monitored parameter	Monitoring Session: Stoves considered for ER calculations MS#1: 192,550 MS#2: 149,168 MS#3: 87,280
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Continuous
Calculation method (if applicable):	--
QA/QC procedures:	--
Purpose of data:	Baseline calculations
Additional comments:	Sales records containing details of all the cook-stoves sold to bulk purchasers like dealers, distributors, retailers and NGOs within a particular SSC VPA is maintained.

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	SOF
Unit	Fraction
Description	Stove Operation Fraction - To determine only stoves that are still operating, measured ex-post through survey
Measured/calculated/default	Survey
Source of data	Survey results
Value(s) of monitored parameter	<table><tr><th>Monitoring Session</th><th>SOF (Fraction)</th></tr><tr><td>MS#1</td><td>0.818</td></tr><tr><td>MS#2</td><td>0.802</td></tr><tr><td>MS#3</td><td>0.796</td></tr></table>
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	SOF is the average fraction of stoves found operating in a VPA
QA/QC procedures:	In case where survey results indicate that desired precision is not achieved, the lower bound of confidence interval of the parameter value has been used. All data required for verification and issuance are being backed-up and will be kept for at least two years after the end of the crediting period or the last issuance of CERs of this project, whichever occurs later.
Purpose of data:	Baseline calculations
Additional comments:	

Relevant SDG Indicator	**SDG 13: Climate Action**
Data/parameter:	$D_{traditional\_stove}$
Unit	Fraction
Description	Disposal/Discontinuation of traditional cookstove
Measured/calculated/default	Ex-post monitoring survey
Source of data	Ex-post Monitoring Survey records
Value(s) of monitored parameter	<table><tr><th>Monitoring Session</th><th>$D_{traditional\_stove}$ (Fraction)</th></tr><tr><td>MS#1</td><td>0.964</td></tr><tr><td>MS#2</td><td>0.945</td></tr><tr><td>MS#3</td><td>0.944</td></tr></table>
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Annually

Calculation method (if applicable):	The sampled ICS households shall be cross checked for disposal / discontinuation of traditional cook-stove. In case it is observed that the traditional cook-stove are not disposed/ discontinued and are still in use, the fuel-wood consumption of those traditional stoves shall be excluded from $Q_{biomass}$ accordingly as per its weightage in the sample.
QA/QC procedures:	--
Purpose of data:	Baseline Calculations
Additional comments:	

Sustainable development indicators

Relevant SDG Indicator	**1.4.1 Proportion of population living in households with access to basic services**
Data/parameter:	BSA
Unit	Number
Description	Access to Basic Services (Number of ICS distributed under the project)
Measured/calculated/default	Envirofit sales records
Source of data	ICS sales record
Value(s) of monitored parameter	Monitoring Session: Stoves considered for ER calculations MS#1: 192,550 MS#2: 149,168 MS#3: 87,280
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Continuous
Calculation method (if applicable):	Not applicable
QA/QC procedures:	-
Purpose of data:	SDG 1 contribution
Additional comments:	-

Relevant SDG Indicator	**1.4.1 Proportion of population living in households with access to basic services**
Data/parameter:	HHS
Unit	%
Description	Household Savings
Measured/calculated/default	Survey
Source of data	Ex-post monitoring surveys
Value(s) of monitored parameter	100%
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Annually

Calculation method (if applicable):	% HH reporting time / money saving due to reduced fuel consumption in project determined via ex-post questionnaire-based monitoring surveys of a sample of ICS population
QA/QC procedures:	-
Purpose of data:	SDG 1 contribution
Additional comments:	-

Relevant SDG Indicator	**3.9.1 - Mortality rate attributed to household and ambient air pollution**
Data/parameter:	SPM_{HH}
Unit	%
Description	Reduction in Smoke / PM emissions
Measured/calculated/default	Measured
Source of data	Ex-post monitoring surveys
Value(s) of monitored parameter	100%
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	Ex-post questionnaire-based monitoring survey of a sample of ICS population for qualitative assessment (fraction of sampled users reporting reduction in smoke or PM) as an indicator of reduction in mortality rate attributed to household and ambient air pollution due to inefficient solid biomass fuel-based cooking
QA/QC procedures:	-
Purpose of data:	SDG 3 contribution
Additional comments:	-

Relevant SDG Indicator	**7.1.2 - Proportion of population with primary reliance on clean fuels and technology**
Data/parameter:	ACS
Unit	%
Description	Affordable and clean energy services
Measured/calculated/default	Survey
Source of data	Ex-post monitoring surveys
Value(s) of monitored parameter	Monitoring Session: Value MS#1: 81.8% MS#2: 80.2% MS#3: 79.6%
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Annually

Calculation method (if applicable):	% HH reporting operational ICS in project determined via ex-post questionnaire-based monitoring surveys of a sample of ICS population.
QA/QC procedures:	-
Purpose of data:	SDG 1 and 7 contribution
Additional comments:	-

Relevant SDG Indicator	**8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities**
Data/parameter:	QE IG
Unit	Number
Description	Quantitative employment and income generation
Measured/calculated/default	Measured
Source of data	HR records/ Sales and marketing records
Value(s) of monitored parameter	MS#1 – 25 MS#2 – 10 MS#3 – 05
Monitoring equipment	Not applicable
Measuring/reading/recording frequency:	Continuous monitoring, reporting annually
Calculation method (if applicable):	Not applicable
QA/QC procedures:	-
Purpose of data:	SDG 8 contribution
Additional comments:	-

D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
η_{new}	MS#1 – 0.228 MS#2 – 0.225 MS#3 – 0.223	0.231
N_{all}	MS#1 – 192,550 MS#2 – 149,168 MS#3 – 87,820	211,313
SOF	MS#1 – 0.818 MS#2 – 0.802 MS#3 – 0.796	0.812
$D_{traditional\_stove}$	MS#1 – 0.964 MS#2 – 0.945 MS#3 – 0.944	=0.8702 =(1-0.1298)

D.4. Implementation of sampling plan

>>

a) Description of implemented single sampling design;

- **Objectives and reliability requirements:** Sampling done at the PoA level, using 95/10 as confidence / precision.

- **Sampling Schedule:** The MS#1 (Surveys and Water Boiling Tests) were conducted during Oct-Nov 2018, the MS#2 (Surveys and Water Boiling Tests) were conducted during Oct-Nov 2019 and The MS#3 (Surveys) were conducted during Oct-Nov 2020.

- **Target Population/ Sampling Frame:** The Target population is the stoves distributed under the VPAs. The end user database of the stoves distributed under the VPAs serve as the sampling frame.

- **Sampling Method:** As per the sampling plan, sampling is based on stratified sampling approach (based on age and stove model type). The samples are chosen randomly with each stratum. Samples were selected using excel rand-between function and snapshots with date/time stamp were taken after categorising the target population as per stove model and age.

- **Sampling Size:** Determination of the sample size is elucidated in the VER calculation workbook.

The sampling parameters of interest are the following:
a) Efficiency of cook-stove
b) Stove usage Characteristics (operational fraction, discontinued use of baseline stove etc)

As these parameters are likely affected by the age and model type of a stove hence, stratified random sampling approach has been used. The stove sales have been categorized on the basis of year of sale (to account for age) and the model type for each year of sale. Thereafter, the expected mean efficiency, standard deviation to mean and expected operational fraction are estimated to determine sample size for each strata. Taking these estimated values into consideration along with their weight (% share in total sales), the sample size for the population is calculated using the following formulae:

$$n \geq \frac{z^2 \times N \times V}{(N-1) \times e^2 + z^2 \times V}$$

Where,

n	Sample size
z	Confidence value factor = 1.96 for 95% confidence level
N	Population size
V	Sampling variable
e	Relative precision = 0.05

Where V is calculated as follows

(1) For mean based parameters

$$V = \frac{SD^2}{mean^2}$$

Where,

$$mean = \frac{\sum g_i \times m_i}{N}$$

$$SD^2 = \frac{\sum g_i \times SD_i^2}{N}$$

Where

mean	weighted overall mean
SD^2	Weighted Overall Standard deviation
g_i	Size of stratum *i*
m_i	Mean of stratum *i*
SD_i^2	Standard deviation of stratum *i*
N	Size of overall population

(1) For proportion-based parameters

$$V = \frac{SD^2}{p^2}$$

Where,

$$p = \frac{\sum g_i \times p_i}{N}$$

$$SD^2 = \frac{\sum g_i \times p_i \times (1 - p_i)}{N}$$

Where

p	Overall weighted proportion
p_i	Proportion of stratum *i*

The sample size calculated is then distributed amongst the strata as per the weight of each stratum in the population and rounded up to the nearest higher integer to obtain the sample size required for the strata. Once sample size for each stratum has been calculated, samples were selected at random from the end-user database. The sales data of each stratum was arranged in the chronological order in excel, with sampling serial numbers assigned to each sale. Desired number of Random numbers were generated using the excel rand-between function for each stratum (Ranging from 1 to total number of stoves listed in the stratum) as per the minimum sample size requirements. The samples with same sampling serial number as those generated by excel were selected for monitoring. The snapshots of random numbers generated with date/time stamp were captured as objective evidence. The number of samples selected from each stratum was kept higher than minimum number required to account for non-response cases and ensure desired precision is achieved. These identified samples were distributed amongst the field team to gather response. The following table demonstrates the samples required Vs samples identified Vs sample monitored.

	Year	Stove Model	Samples required	Samples Identified	Samples Monitored
MS#1	2012	G3300	3	5	3
	2013	G3300	14	20	17
	2014	G3300	2	5	4
	2013	PCS1	8	15	12
	2014	PCS1	15	20	20
	2015	PCS1	21	25	24
	2016	PCS1	5	10	9
		Total	**68**	**100**	**89**

	Year	Stove Model	Samples required	Samples Identified	Samples Monitored
MS#2	2013	G3300	3	5	3
	2014	G3300	2	5	3
	2013	PCS1	13	15	14
	2014	PCS1	25	30	30
	2015	PCS1	35	40	36
	2016	PCS1	8	10	8
		Total	**86**	**105**	**94**

	Year	Stove Model	Samples required	Samples Identified	Samples Monitored
MS#3	2014	G3300	3	5	5
	2014	PCS1	12	15	13
	2015	PCS1	74	75	75
	2016	PCS1	17	20	17
		Total	**106**	**115**	**110**

b) Collected data (electronic spreadsheets may be attached and referenced);
Refer information presented in the sheet titled "Usage Survey Summary" and "WBT Summary" respectively in the VER Calculation workbook.

c) Analysis of the collected data;
Analysis of the data monitored through sampling revealed the following results:

Parameter	Value	Units	Relative Precision (%)	Results
η_{new}	0.228	fraction	0.23%	Ok, acceptable
η_{new}	0.225	fraction	0.30%	Ok, acceptable
η_{new}	0.223	fraction	Not Applicable	Not Applicable
SOF	0.818	fraction	9.82%	Ok, acceptable
SOF	0.802	fraction	9.85%	Ok, acceptable
SOF	0.796	fraction	9.39%	Ok, acceptable

d) Demonstration of whether the required confidence/precision has been met;
Refer above. The VER calculation spreadsheet contains calculation of relative precision. Since the relative margin of error obtained is less than 10%, the data are statistically acceptable and deemed representative of the population.

e) Demonstration of whether the samples were randomly selected and are representative of the population.
The sales data of each stratum was arranged in the chronological order in excel, with sampling serial numbers assigned to each sale. Desired number of Random numbers were generated using the excel rand-between function for each stratum (Ranging from 1 to total number of stoves listed in the stratum) as per the minimum sample size requirements. The samples with same sampling serial number as those generated by excel were selected for monitoring. The snapshots of random numbers generated with date/time stamp were captured as objective evidence. Thus, the samples identified are purely random and free from any bias.

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

>>
The tables below give the Baseline emission values for different SDGs:

SDG	SDG Impact	Baseline estimate
1 No Poverty	Number of ICS distributed under the project as an indicator of providing basic service access to households (BSA)	0

SDG	SDG Impact	Baseline estimate
1 No Poverty	% users reporting money saving due to reduction in purchased fuel consumption in project (HHS)	0

SDG	SDG Impact	Baseline estimate
3 Good Health and Well Being	% users reporting reduction in smoke/PM after shifting to ICS in project (SPM)	0

SDG	SDG Impact	Baseline estimate
7 Affordable and Clean Energy	% users reporting an operational ICS in project (ACS)	0

SDG	SDG Impact	Baseline estimate
8 Decent Work and Economic Growth	Number of male / female numbers of employment created by project (QE IG)	0

SDG	SDG Impact[4]	Baseline estimate
13 Climate Action (VPA 06)	Amount of CO2e emissions reduced by the project per year	1,222
13 Climate Action (VPA 07)		18,400
13 Climate Action (VPA 08)		37,150
13 Climate Action (VPA 09)		55,187
13 Climate Action (VPA 10)		100,975
13 Climate Action (VPA 11)		110,518
Total		323,452

E.2. Calculation of project value or estimation of project situation of each SDG Impact

>>

The tables below give the Project emission values:

SDG	SDG Impact	Project estimate
1 No Poverty	Number of ICS distributed under the project as an indicator of providing basic service access to households (BSA)	MS#1 – 192,550 MS#2 – 149,168 MS#3 – 87,280

[4] For SDG 13, AMS II.G. does not provide any calculation equation for BE_y, PE_y, or L_y separately. Instead, the methodology directly provides equation for emission reductions, without separate baseline, project, or leakage emission reduction equations.

SDG	SDG Impact	Project estimate
1 No Poverty	% users reporting money saving due to reduction in purchased fuel consumption in project (HHS)	100%

SDG	SDG Impact	Project estimate
3 Good Health and Well Being	% users reporting reduction in smoke/PM after shifting to ICS in project (SPM)	100%

SDG	SDG Impact	Project estimate
7 Affordable and Clean Energy	% users reporting an operational ICS in project (ACS)	MS#1 – 81.8% MS#2 – 80.2% MS#3 – 79.6%

SDG	SDG Impact	Project estimate
8 Decent Work and Economic Growth	Number of male / female numbers of employment created by project (QE IG)	MS#1 – 25 MS#2 – 10 MS#3 – 05

SDG	SDG Impact	Project estimate
13 Climate Action (VPA 06)	Amount of CO2e emissions reduced by the project per year	0
13 Climate Action (VPA 07)		0
13 Climate Action (VPA 08)		0
13 Climate Action (VPA 09)		0
13 Climate Action (VPA 10)		0
13 Climate Action (VPA 11)		0
Total		0

E.3. Calculation of leakage

>>

Not Applicable

E.4. Calculation of net benefits or direct calculation for each SDG Impact

>>

For SDG 1

Net Benefit (SDG 1) = $BSA_{Project} - BSA_{Baseline}$

Where:

$BSA_{Baseline}$ Number of ICS distributed in baseline

$BSA_{Project}$ Number of ICS distributed in Project

Net Benefit (SDG 1) = $HHS_{Project} - HHS_{Baseline}$

Where:

$HHS_{Project}$ % HH reporting time / money saving due to reduced fuel consumption in project

$HHS_{Baseline}$ % HH reporting time / money saving due to reduced fuel consumption in baseline

For SDG 3
Net Benefit (SDG 3) = $SPM_{HH,Project}$ – $SPM_{HH,Baseline}$

Where:
$SPM_{HH,Baseline}$ % HH reporting reduction in smoke/PM emissions while cooking on improved stove in baseline
$SPM_{HH,Project}$ % HH reporting reduction in smoke/PM emissions while cooking on improved stove in project

For SDG 7
Net Benefit (SDG 7) = $ACS_{Project}$ - $ACS_{Baseline}$

Where:
$ACS_{Baseline}$ Access to affordable and clean energy (% of operating ICS units under Baseline)
$ACS_{Project}$ Access to affordable and clean energy (% of operating ICS units under Project)

For SDG 8
Net Benefit (SDG 8) = QE $IG_{Project}$ - QE $IG_{Baseline}$

Where:
QE $IG_{Baseline}$ Quantitative Employment and income generation (Number of person (male and female) hired under Baseline)
QE $IG_{Project}$ Quantitative Employment and income generation (Number of person (male and female) hired under VPA)

For SDG 13
The methodology directly provides equation for emission reductions (without separate baseline, project or leakage emission reduction equations)

Following, para 7(a) and 13(a) of the methodology and section B.5.2, B_{old} is calculated as follows:

$$B_{old} = Q_{Biomass} \times \sum_{N_{all}}^{i} Stove\ year\ i \times SOF$$

Where,
B_{old} Quantity of woody biomass used in the absence of project activity (tonnes)
$Q_{biomass}$ Average annual biomass consumption per appliance (tonnes/ year)
SOF Stove Operation Fraction (% of stoves operating or replaced by equivalent in-service appliance) – measured ex post using survey/ user feedback.
Stove year *i* Calculated cumulative stove operation years in the monitoring period in year *i* for stove in the monitoring period
N_{all} Total number of ICS Distributed under the VPA (number)

Thus,

$B_{y,savings}$ is estimated using option 2, equation 3 of the methodology AMS-II.G version 3.

$B_{y,savings}$ = B_{old} $(1-\eta_{old}/\ \eta_{new})$

Where
η_{old} Efficiency of the system being replaced

η_{new} Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more than one type of system is being introduced by the project activity

Thus, $ER_y = B_{y,savings} * f_{NRB,y} * NCV_{biomass} * EF_{projected\_fossilfuel} * LAF$

Where:

ER_y	Emission reductions during the year y in tCO_2e
$B_{y,savings}$	Quantity of biomass that is saved in tonnes
$f_{NRB,y}$	Fraction of biomass saved by the project activity in year y that can be established as non-renewable biomass using survey methods
$NCV_{biomass}$	Net calorific value of the non-renewable biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)
$EF_{projected\_fossilfuel}$	Emission factor for the substitution of non-renewable biomass by similar Consumers (Use a value of 81.6tCO_2/TJ)
LAF	Net to gross Adjustment factor (0.95) applied in accordance with paragraph 13 and 23 of AMS-II. G version 03

The tables below give the Net benefit / emission reduction values:

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13 Climate Action (VPA 06)	Amount of CO_2e emissions reduced by the project per year	1,222	0	1,222
13 Climate Action (VPA 07)		18,400	0	18,400
13 Climate Action (VPA 08)		37,150	0	37,150
13 Climate Action (VPA 09)		55,187	0	55,187
13 Climate Action (VPA 10)		100,975	0	100,975
13 Climate Action (VPA 11)		110,518	0	110,518
Total		323,452	0	323,452

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
1 No Poverty	1.4.1 Proportion of population living in households with access to basic services **Indicator:** Number of ICS distributed under the project as an indicator of providing basic service access to households (BSA)	0	MS#1 – 192,550 MS#2 – 149,168 MS#3 – 87,280	MS#1 – 192,550 MS#2 – 149,168 MS#3 – 87,280

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
1 No Poverty	1.4.1 Proportion of population living in households with access to basic services **Indicator:** % users reporting money saving due to reduction in purchased fuel	0	100%	100%

consumption in project (HHS)

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
3 Good Health and Well Being	3.9.1 - Mortality rate attributed to household and ambient air pollution Indicator: % users reporting reduction in smoke/PM after shifting to ICS in project (SPM)	0	100%	100%

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
7 Affordable and Clean Energy	7.1.2 Proportion of population with primary reliance on clean fuels and technology Indicator: % users reporting an operational ICS in project (ACS)	0	MS#1 – 81.8% MS#2 – 80.2% MS#3 – 79.6%	MS#1 – 81.8% MS#2 – 80.2% MS#3 – 79.6%

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
8 Decent Work and Economic Growth	8.5.1Average hourly earnings of female and male employees, by occupation, age and persons with disabilities Indicator: Number of male / female numbers of employment created by project (QE IG)	0	MS#1 – 25 MS#2 – 10 MS#3 – 05	MS#1 – 25 MS#2 – 10 MS#3 – 05

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values[5] achieved during this monitoring period
13 (VPA 06)	5,787	1,222
13 (VPA 07)	24,966	18,400

[5] Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

13 (VPA 08)	52,295	37,150
13 (VPA 09)	54,798	55,187
13 (VPA 10)	117,879	100,975
13 (VPA 11)	133,133	110,518
Total	388,858	323,452

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

>>

The ex-ante estimate per VPA for the monitoring period has been calculated as follows:

= Ex-ante ER as per VPA-DD (Section D.6.4) * (Number of Days monitored / No. of days in a year)

For VPA 06

= Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020

= 13,805*153[6]/365 + 0*365[7]/365 + 0*365/365 + 0*213[8]/366

= 5,787

For VPA 07

= Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020

= 39625*153/365 + 8356*365/365 + 0*365/365 + 0*213/366

= 24,966

For VPA 08

= = Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020

= 41757*153/365 + 34722*365/365 + 69*365/365 + 0*213/366

= 52,295

For VPA 09

= Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020

= 34,065*153/365 + 33726*365/365) + 6793*365/365 + 0*213/366

= 54,798

For VPA 10

[6] No. of Days monitored in Year 2017 = 31 Dec 2017 – 01 Aug 2017 + 1 = 153 = No. of Days monitored in Year 2018 for MS#2 = No. of Days monitored in Year 2019 for MS#3

[7] No.of Days monitored in Year 2018 = 31 Dec 2018 – 01 Jan 2018 + 1 = 365 =No. of days monitored in Year 2019

[8] No. of Days monitored in Year 2020 for MS#3= 31 Jul 2020 – 01 Jan 2020 + 1 =213

= Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020
= 45,241*153/365 + 45,241*365/365 + 43,403*365/365 + 17,649*213/366
= 117,879

For VPA 11
= Ex-ante ER for Year 2017 + Ex-ante ER for Year 2018 + Ex-ante ER for Year 2019 + Ex-ante ER for Year 2020
= 45,063*153/365 + 45,063*365/365 + 45,063*365/365 + 41,441*213/366
= 133,133

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

>>
The increase in achieved ERs for VPA 09 relative to ex-ante estimate for VPA 09 is merely 0.7% higher than that estimated in VPA-DD and is deemed immaterial. This change is attributed to minor difference in the projected schedule of sales vs that achieved, in the VPA.

SECTION F. SAFEGUARDS REPORTING

>>
Safeguards reporting is not deemed applicable as there are no safeguarding principles that require any mitigative action. Refer GS4GG Transition Annex version 3.0 dated 06/11/2019.

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

>>
Not Applicable, no major comments were received

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

>>
Not Applicable

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

>>
Not Applicable

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption