



**Gold Standard**<sup>®</sup>  
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**TEMPLATE**

# MONITORING REPORT

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**VERSION v. 1.1**

**RELATED SUPPORT - TEMPLATE GUIDE Monitoring Report v. 1.1**

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This document contains the following Sections

Key Project Information

0 - Description of project

0 - Implementation of project

0 - Description of monitoring system applied by the project

0 - Data and parameters

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0 - Safeguards Reporting

0 - Stakeholder inputs and legal disputes

## KEY PROJECT INFORMATION

### Programme of Activity Information –

<b>GS ID of Programme</b>	GS12219
<b>Title of Programme</b>	Global Household Water Treatment Technology dissemination project
<b>Version of POA-DD applicable to this monitoring report</b>	03.0
<b>Name and GS ID of fully Validated CPA/VPAs (i.e. non-compliance check)</b>	GS12219 VPA-1 Water filter project in Dindori, Madhya Pradesh, India

### Key Project Information

<b>GS ID (s) of Project (s)</b>	GS12220
<b>Title of the project (s) covered by monitoring report</b>	GS12219 VPA-1 Water filter project in Dindori, Madhya Pradesh, India
<b>Version number of the PDD/VPA-DD (s) applicable to this monitoring report</b>	04.0
<b>Version number of the monitoring report</b>	04.0
<b>Completion date of the monitoring report</b>	11/02/2025
<b>Date of project design certification</b>	12/09/2024
<b>Date of Last Annual Report</b>	NA
<b>Monitoring period number</b>	01
<b>Duration of this monitoring period</b>	11/05/2023 to 31/01/2024 (both days included)
<b>Project Representative</b>	EKI Energy Services Limited
<b>Host Country</b>	India
<b>Activity Requirements applied</b>	<input checked="" type="checkbox"/> Community Services Activities <input type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A

<b>Methodology (ies) applied and version number</b>	METHODOLOGY FOR EMISSION REDUCTIONS FROM SAFE DRINKING WATER SUPPLY, Version: 1.0 <sup>1</sup>
<b>Product Requirements applied</b>	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A

**Table 1 - Sustainable Development Contributions Achieved**

<b>Sustainable Development Goals Targeted</b>	<b>SDG Impact</b>	<b>Amount Achieved</b>	<b>Units/ Products</b>
13 - Climate Action (mandatory)	Emission Reductions  Indicator: 13.2.2 Amount of CO <sub>2</sub> e emissions reduced by the project per year	3,155	GS-VERs
1 – No Poverty	Contribute to providing access to basic services i.e. clean drinking water solutions (Household Water Treatment units- Econeer) considered as basic service to the poor and vulnerable communities of India.  Indicator 1.4.1: Proportion of population living in households with access to basic services  Project specific Indicator: Total number of premises with at least one water filter distributed / installed under the project.	2,010	No of water filter
3 - Good Health and Well-being	Improvement in Indoor Air Quality & reduction in	100	Percent

<sup>1</sup> <https://globalgoals.goldstandard.org/429-ee-sws-emission-reductions-from-safe-drinking-water-supply/>

	<p>incidences of waterborne diseases such as skin rashes, diarrhea, foot sores, parasites, eye problems and other waterborne diseases</p> <p>Indicator 3.9.1: Mortality rate attributed to household and ambient air pollution</p> <p>Project-specific Indicator: % users reporting reduction in incidences of waterborne diseases such as skin rashes, diarrhea, foot sores, parasites, eye problems and other waterborne diseases.</p>		
4 - Quality education	<p>Increase soft skills, technical skills and awareness to safe drinking water.</p> <p>Indicator 4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.</p> <p>Project-specific indicator: number of employees who have undergone skill development training</p>	2 training	Number of soft skill program in a year.
5 - Gender equality	<p>Reduced unpaid care and domestic work for women</p> <p>Indicator 5.4.1: Proportion of time spent on unpaid domestic and care work, by sex, age, and location</p> <p>Indicator: % users reporting</p> <p>Project-specific Indicator: % Users reporting a time-saving in fuel collection after shifting to Econeer water filter.</p>	100%	%

6 – Clean Water and Sanitation	Access to improved source of water.	9,668	No of person
	Indicator 6.1.1: Proportion of population have access to improved source of water		
	Project Specific Indicator: No of people who have access the water filter.		
7 - Affordable and Clean Energy	Contribute to increasing access to clean water purification technology with installations in user households.	2,010	No of water filter
	Indicator- 7.1.2 Proportion of population with primary reliance on clean fuels and technology.		
	Project specific Indicator: Number of unique households that were provided access to clean water purification technology i.e. Econeer water filter.		
8 - Decent Work and Economic Growth	Increased employment opportunities Indicator: 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities	23	No of jobs
	Project specific Indicator: Total no of jobs created (in distribution, Monitoring & Evaluation).		
12 - Responsible Consumption and Production	The project focuses on utilizing water filters as a sustainable solution for providing safe drinking water. Throughout the project lifetime, households will consume a reduced quantity of untreated water that would otherwise require	202	tonnes of renewable biomass

boiling. Consequently, the project actively promotes sustainable consumption and production of renewable natural resources within the project area by reducing the demand for firewood used in water treatment.

Indicator 12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP

Project-specific Indicator: Reduction in consumption of renewable biomass.

15 - Life on Land

The project addresses deforestation by encouraging the use of alternative boiling methods, thereby reducing dependence on non-renewable wood fuel. This approach decreases the demand for wood, helps conserve forests, and boosts the proportion of renewable energy utilized in the region.

1,676

tonnes of non-renewable biomass

Indicator 15.2.1: Progress towards sustainable forest management.

Project-specific Indicator: Reduction in consumption of non-renewable biomass.

**Table 2 – Product Vintages**

**Amount Achieved**

Start Dates	End Dates	SDG 13
11/05/2023	31/12/2023	2,718 VERs
01/01/2024	31/01/2024	437 VERs

**Amount Achieved**

Start Dates	End Dates	SDG 1
11/05/2023	31/12/2023	2,010 water filter
01/01/2024	31/01/2024	2,010 water filter

**Amount Achieved**

Start Dates	End Dates	SDG 3
11/05/2023	31/12/2023	100 percent
01/01/2024	31/01/2024	100 percent

**Amount Achieved**

Start Dates	End Dates	SDG 4
11/05/2023	31/12/2023	2 training
01/01/2024	31/01/2024	0 training

**Amount Achieved**

Start Dates	End Dates	SDG 5
11/05/2023	31/12/2023	100 percent
01/01/2024	31/01/2024	100 percent

**Amount Achieved**

Start Dates	End Dates	SDG 6
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11/05/2023	31/12/2023	9,668 persons
01/01/2024	31/01/2024	9,668 persons

		Amount Achieved
Start Dates	End Dates	SDG 7
11/05/2023	31/12/2023	2,010 Filter
01/01/2024	31/01/2024	2,010 Filter

		Amount Achieved
Start Dates	End Dates	SDG 8
11/05/2023	31/12/2023	23 jobs
01/01/2024	31/01/2024	0 jobs

		Amount Achieved
Start Dates	End Dates	SDG 12
11/05/2023	31/12/2023	174 tonnes of renewable biomass
01/01/2024	31/01/2024	28 tonnes of renewable biomass

		Amount Achieved
Start Dates	End Dates	SDG 15
11/05/2023	31/12/2023	1,444 tonnes of non-renewable biomass
01/01/2024	31/01/2024	232 tonnes of non-renewable biomass

## SECTION A. DESCRIPTION OF PROJECT

### A.1. General description of project

The real case VPA is providing household water filtration units for marginalized households in India living in very remote areas in and around Dindori and Anuppur districts of Madhya Pradesh, India. The VPA is a part of programme of activity, which contribute to the reduction of greenhouse gases and socio-economic progress for communities who are relying on unsafe drinking water sources and thus the objective of the project is to disseminate household water treatment units for the marginalized people in Dindori and Anuppur district of Madhya Pradesh, India.

The real case VPA under the GS-POA is providing safe water treatment solutions (HWT) for marginalized households at free of cost and replace the usage of equivalent amount of fuel wood being required to boil water in traditional three stone fire or any other wood stoves which are inefficient and smoke-intensive which would have been used to make it safe for drinking purposes. The project is disseminating safe drinking water technologies (HWT units i.e. Econeer) for households.



Pre-project Scenario for drinking water



Econeer water purifier for safe drinking water

The objective of the project consists of reducing greenhouse gas emissions and providing better living conditions at households, especially improving the health of women and children by reducing indoor air pollution.

The carbon certification work and communication with implementing partners has been managed by CME i.e. EKI Energy Services Limited (EKIESL). The selection of end beneficiaries, collection of baseline and project information for monitoring and verifications has been jointly managed by EKIESL and implementing partners. The carbon revenue generated by the VPA will be used to cover the cost of water filter,

which has been distributed at free of cost as well as cost for developing the technology and implementation and monitoring cost at PoA and real case VPA level. The Managing Entity distributed 2,010 water filter in Dindori and Anuppur District of Madhya Pradesh in India.

The estimated emission reduction over 5 years of crediting period is expected to be 28,725 tCO<sub>2</sub>e and 5,745 tCO<sub>2</sub>e per year respectively, from the present real case VPA. The Project replaced anthropogenic emissions of greenhouse gases (GHG's) 3,155 tCO<sub>2</sub>e during its current monitoring period i.e., from 11/05/2023 to 31/01/2024.

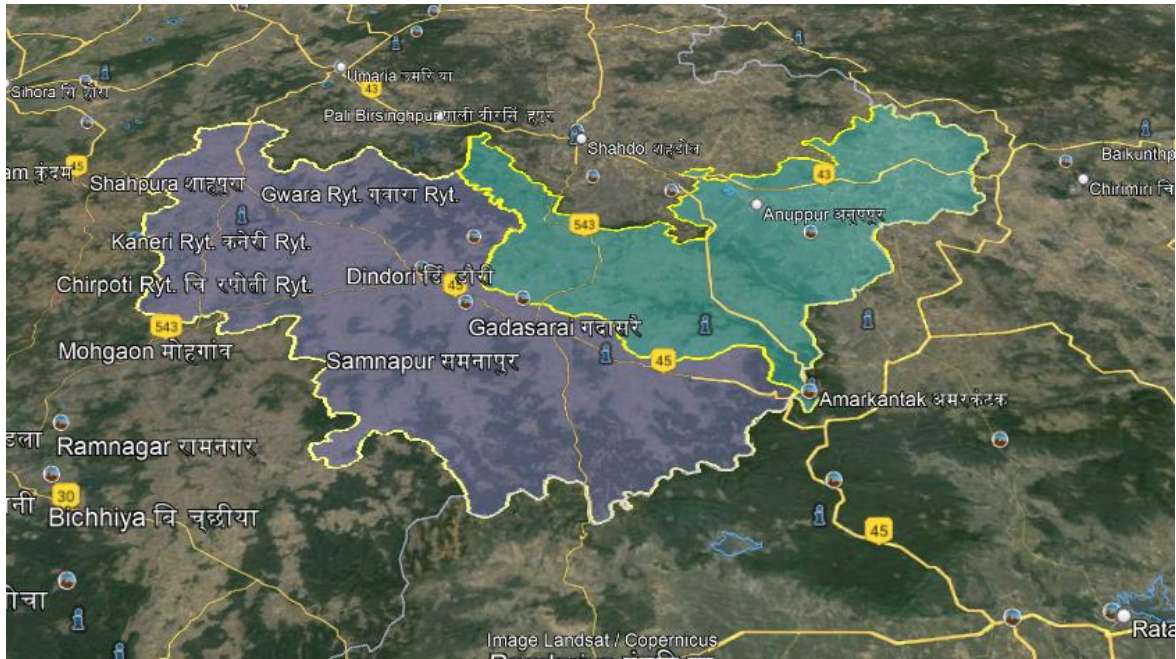
## A.2. Location of project

The geographical boundary for projects located in India. For the first VPA (real case VPA), the geographical area is in the Dindori and Anuppur District of Madhya Pradesh in India. The extreme geographic coordinates of Dindori and Anuppur district of Madhya Pradesh, India as follows:

Latitude - 23°11'52.89"N to 23°18'40.02"N  
Longitude - 81°24'13.69"E to 82° 1'24.23"E

The geographical Map of the project location and has mentioned below:





### A.3. Reference of applied methodology

The following methodologies and tools are applicable:

- a) GS Methodology "Emission reduction from safe drinking water supply<sup>2</sup>", version 1.0

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<sup>2</sup> <https://globalgoals.goldstandard.org/429-ee-sws-emission-reductions-from-safe-drinking-water-supply/>

- b) GS Methodology “Reduced emissions from cooking and heating – Technologies and Practices to displace Decentralised Thermal Energy Consumption (TPDDTEC)<sup>3</sup>”, version 4.0
- c) CDM Methodological Tool 30 “Calculation of the fraction of non-renewable biomass”, EB 115, annex 22, Version 04.0<sup>4</sup>

Gold Standard Activity Requirements “Community Services Activity Requirements”, Version 1.2, Publication Date: October 2019<sup>5</sup>

Gold Standard “GHG EMISSIONS REDUCTION & SEQUESTRATION PRODUCT REQUIREMENTS” Guideline version 2.3<sup>6</sup> Publication Date: 29/04/2024

**A.4. Crediting period of project**

Renewable crediting periods of 05 years 00 months have been opted for the voluntary (VPA). This is the first crediting period of the voluntary project activity (VPA).

Start date	11/05/2023
Crediting Period	11/05/2023-10/05/2028
Duration	5
Type	Renewable

**SECTION B. IMPLEMENTATION OF PROJECT**

**B.1. Description of implemented project**

The Household Water Filters which EKI Energy Services Limited (EKIESL) is deploying has been created and engineered by GHG Emission Reduction Technologies Private Limited. The filters use hollow-fiber membrane technology that has been utilized for years in high-precision ultra-filtration in industrial, food, water, and medicinal applications. The polymeric material is used to make hollow micro-tubes that have a straight exterior and an inside that is hollow. The tubes have minuscule pores on their walls that are no bigger than 0.1 microns in diameter. On the outside of the tubes, water enters the filtration elements. Bacteria cannot get through the micropores since they are bigger than 0.1 micron. Water alone can pass through the openings. On the outside of the tubes, pathogens like bacteria, algae, cysts, parasites, and detritus are left. Once the water passes through the filter components, the pure water is collected.

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<sup>3</sup> [https://globalgoals.goldstandard.org/standards/407\\_V4.0\\_EE\\_ICs\\_Reduced-Emissions-from-Cooking-and-Heating-TPDDTEC.pdf](https://globalgoals.goldstandard.org/standards/407_V4.0_EE_ICs_Reduced-Emissions-from-Cooking-and-Heating-TPDDTEC.pdf)  
<sup>4</sup> <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v4.0.pdf>  
<sup>5</sup> <https://globalgoals.goldstandard.org/201-ar-community-services-activity-requirements/>  
<sup>6</sup> <https://globalgoals.goldstandard.org/501-pr-ghg-emissions-reductions-sequestration/>

The pollutants that build up on the filter components can be rapidly and easily removed by backflushing the filters.

The entire filtration procedure is mechanical. There are no biological or chemical processes at play.

The VPA implements HWT technologies which are based on replacing inefficient devices or water boiling methods using traditional non-renewable woody biomass for boiling unsafe water or consuming untreated unsafe water in the baseline scenario.

The details of the project implementation are mentioned below in the table:

Sr. No.	Activity	Date
1.	Baseline survey	28/02/2023 -04/03/2023
2.	Stakeholder meeting date	10/05/2023
3.	Start date of the VPA (real case VPA)	11/05/2023
4.	Project/Monitoring survey	22/11/2023 -19/12/2023
5.	Start date of first crediting period	11/05/2023
6.	End date of first crediting period	10/05/2028

### Specifications of Econeer Filter

Cartridge Name	Gravity Filter by Econeer	
Types of filter	Hollow Fibre	
Length of Cartridge (mm)	80	
Diameter (mm)	65	
Active Surface area (m <sup>2</sup> )	0.45216 m <sup>2</sup>	
Flowrate	Operating Pressure	0.1 -0.3 Mpa
	Under Gravity (10 litres top container, 10 litres bottom container) (at 25 °C )	6 to 8 Lit/hr (depends upon quality and temperature of water).
Flow Direction	Outside – in	
Working temp	5 to 35 degree Celsius	
Claims: -	<ul style="list-style-type: none"> <li>• Bacteria - 6 Log , Virus – 2 log ,Turbidity:- Nill</li> <li>• Life of filter: 10,000 litres (depends upon the intake quality of the water).</li> <li>• Membrane module to be washed weekly or fortnightly.</li> </ul>	

- Technology Details: -  
The HWT units ultrafiltration process as it is the most efficient process in terms of productivity because of its high-water permeability particularly in the treatment of impure turbid water containing suspended particles, pathogens and other harmful microorganisms. Water purification process in which water is forced through a Semipermeable membrane with a pore size upto 0.1 micron.
- Storage Container:-
  - i. Comes with the high-grade SS container where there is no chance of regrowth of bacteria, as takes place in plastic container (present in market).



- ii. Lower part of system is the storage container which can hold up to 10 litres of Pure, Clean water for use.
- iii. A tap is attached in the lower part of system.

- Cartridge/ membrane:-

- i. **Pore size:** The pore size of the membrane determines the size of particles that can be removed. Water filter membranes can have pore sizes ranging from less than 0.1 microns to several microns. The pore size should be selected based on the specific contaminants that need to be removed.
- ii. **Material:** UF Membrane is based on polymer (polysulfone, polypropylene, cellulose acetate, polylactic acid) which is high quality hollow fibre membrane.
- iii. **Flow rate:** Its filtration rate is 6 to 8 Lit/hr (depends upon quality and temperature of water).
- iv. **Cartridge life:** Its life is up to 2 years or 10,000 litres which one is earlier.



Fig: Examples of the Water Purifier units being used in the project

The water purifier distributed in this project have a unique number, and during use, due to the quality of the water purifier itself, the project owner is responsible for the

replacement of parts and other alternative materials to maintain the normal use of the water purifier. The maintenance situation in this monitoring period such as parts replacement were carried out smoothly, without affecting the normal use of the water purifier.

#### B.1.1 Forward Action Requests

FAR1: Invitation information for category E stakeholders is missing in section B of the LSC report. Kindly check and verify.

Reply: All the stakeholder category including category E were invited during the SFR round as per GS requirement and the same has been included in the stakeholder report. The email evidence has been submitted to VVB for verify.

### **B.2. Post-Design Certification changes**

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

There has not been any temporary deviation. Hence not applicable.

B.2.2. Corrections

There is no correction in the project hence it is Not Applicable.

B.2.3. Changes to start date of crediting period

There is no change in the start date of the crediting period hence it is Not Applicable.

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

There is no change in design certified monitoring plan, applied methodology or applied standardized baseline hence it is Not Applicable.

B.2.5. Changes to project design of approved project

There is no change in the project design of approved projects hence it's not applicable.

## **SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT**

Each of the water filters have carry a unique number/QR code (serial number). The numbers are documented in the household database together with key information about the households as well as the beneficiaries.

The project proponent assesses all monitoring data and produces a monitoring report to verify the corresponding to the preceding monitoring period. This report will present the data relating to the emission reductions generated by those water filters during the

monitoring period. The purpose of the monitoring plan is to ensure successful monitoring of the emission reductions of the proposed project during its crediting period. The overall monitoring has been managed by the project implementer EKI Energy Services Ltd (EKIESL).

Activities and performance related to emissions reduction are monitored by EKIESL (CME). The CME proposed the following roles and responsibilities for data monitoring, collection, data archiving, and calibration of equipment for this VPA. The team comprises follows the below participators.

The monitoring activities involve data collection during distribution as well as usage information post-distribution. The data collected during distribution also involves information about the water filters, the end user, and the location to enable one to uniquely identify each HWT unit and avoid double counting.

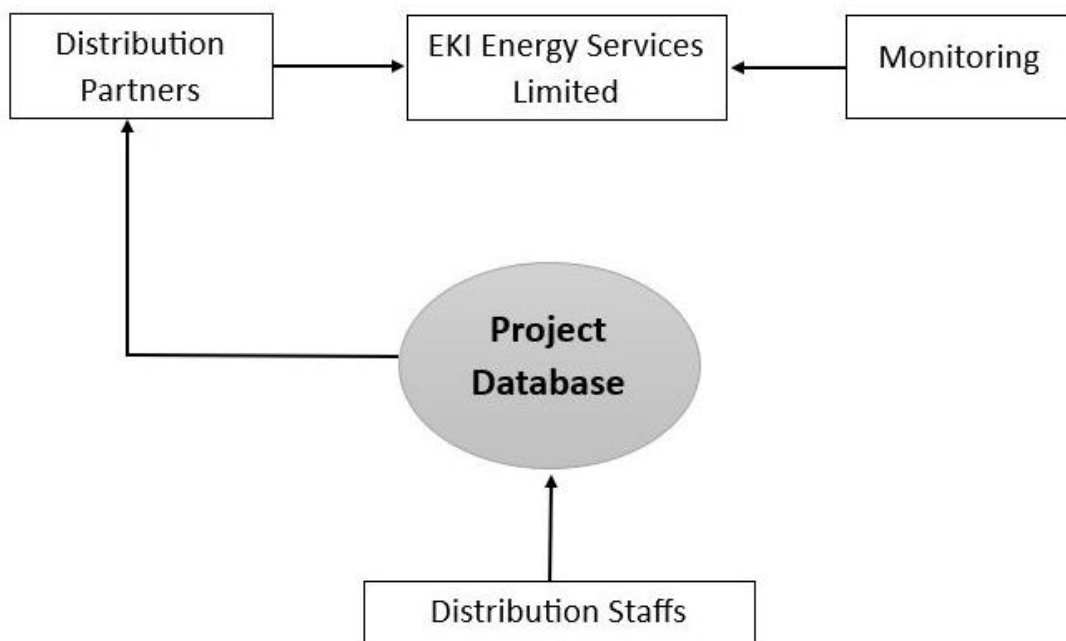
### **Repair and Maintenance –**

The team members or distribution partners of EKIESL visit the site on regular basis as well as remain in touch of the end users, to ensure that the project water filters are working in good condition. In case any water filter is found not in proper working condition, the survey team will update the maintenance department and the filter will be repaired/replaced on an immediate basis. In case a user faces any difficulty with the filter, he/she will inform the distribution agents or the EKIESL staff and immediate action will be taken to rectify the issue to ensure the uninterrupted functioning of the Water filters. Also, the emergency contact number is mentioned in the provided user manual and card by which they can communicate with the centralized customer service unit being managed by the PP.

- After the distribution of the water Filters, the monitoring team selects the samples from the distribution has been recorded on a random basis and visits the premises where these water filters are located to monitor key parameters pertinent to ER Calculation. The individuals carrying out the monitoring activities shall follow the instructions provided during training.
- Data collected and monitored has been stored electronically in a secure and retrievable manner for at least two years after the end of the project crediting period.
- Due to the non-industrial nature of the project, emergency procedures are not applicable to the project.

### **Management System**

The structure of the monitoring plan is as follows:



**Organizational Structure of the monitoring group:**

The responsibilities of each person involved are elaborated as follows:

**Group members and their responsibilities**

Entity	Responsibility
EKI Energy Services Limited	<ul style="list-style-type: none"> <li>• Consultant, prepare sampling plan,</li> <li>• Verify the monitoring work done to ensure accuracy before submission, spot check data</li> <li>• Prepare the monitoring report</li> <li>• Contacting DOE</li> <li>• Manage carbon offsets.</li> </ul>
Distribution Agency	<ul style="list-style-type: none"> <li>• Implement project</li> <li>• Manages the Project Database, in which the results of monitoring shall be summarized.</li> <li>• Collecting data to be monitored accurately, or training Field Measurement Personnel to do so.</li> <li>• Sharing monitoring data.</li> <li>• Maintains proper and continuous records of project activities and disseminated technologies, including product identification</li> <li>• Oversees maintenance of installed systems</li> </ul>
Distribution Staff	<ul style="list-style-type: none"> <li>• Insert distribution records to database.</li> </ul>
Monitoring Team	<ul style="list-style-type: none"> <li>• Conduct on the ground monitoring of end users</li> </ul>

**Data recording and archiving procedures**

- The monitored data has been recorded and electronic archived annually.

- All the data shall be kept for 2 years after end of the crediting period.
- Monitored data shall be sent to the project participant for cross-checking and inserting to database.
- EKI Energy Services Limited shall access the database and spot check data every quarter.

### QA/QC procedures

- The total units in Project Database is being cross-checked with the user agreements signed by the users.

### Training



Fig: Beneficiary awareness training program

The fields execution team works in close collaboration with the project participant to develop a training manual that clearly lays out rules and procedures for all activities related to data recording, archiving and preparation of monitoring reports. Also, CME conducted beneficiary training frequently to provide the proper awareness and guidance

### Avoiding Double Counting

The project owner is the overall data management department and all the data collected should be submitted to the project owner for the purpose of effective management. To avoid double counting, the following measures will be taken:

- (i) In order to cover more households with high-quality water purifiers, it is restricted in the project that each household can distribute one set of water purifier. After the project put into operation, the project owner arrange for relevant personnel to conduct irregular surveys on the use of the water purifier, the survey member inform the End-user that if the water purifier is damaged or parts need to be replaced, the project owner can be notified in time, and the project owner will repair and replace parts free of charge in time to ensure the water purifier in normal use. Also, each water purifier sold has a unique number with a unique naming. If the project owner uses other types

of water purifiers that are not within the project boundary, these water purifiers will not have a unique serial number that complies with this naming rule and will not be included in the calculation of emission reductions.

Therefore, only one water purifier per household is considered in the emission reduction calculation and only calculated once.

(ii) Declaration of No Double Counting by the CME was signed for the voluntary project activity (VPA).

## SECTION D. DATA AND PARAMETERS

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

The ex-ante parameters for the voluntary project activity (VPA):

#### a. Related to water quality

Data/parameter	SDWS 2: Project technology description
Unit	NA
Description	<ul style="list-style-type: none"> <li>• Vendor: GHG Reduction Technologies Pvt. Ltd.</li> <li>• Product name: Econeer</li> <li>• Technology type: Hollow Fibre</li> <li>• Performance target classification as per the WHO International Scheme to Evaluate Household Water Treatment Technologies or proof of compliance with an applicable national standard or guideline for drinking water treatment technologies: filters have been tested for filtration efficacy for the parameters E. coli, -<i>Staphylococcus Aureas</i> and Salmonella and have been found to remove the bacteria by up to 99.9%.</li> </ul>
Source of data	<ul style="list-style-type: none"> <li>• Manufacturer specifications:</li> <li>• Third-party certification (NABL certified Lab).</li> </ul>
Value(s) applied	NA
Choice of data or Measurement methods and procedures	The data applied is based on the manufacturer specifications for the filter technology used for the voluntary project activity (VPA) and third-party certification from the national standard for the host country.
Purpose of data	Confirmation on technology specifications and performance level
Additional comment	NA

Data/parameter	SDWS 4: Regulatory framework for safe water supply
Unit	NA
Description	<p>The VPA contributes to:</p> <ul style="list-style-type: none"> <li>• <b>National Water Policy (2012)<sup>7</sup>:</b> <p>The policy states in paragraph 1.2 (v) that access to safe water for drinking still continues to be a problem and 1.3 (vi) that safe water for drinking and sanitation should be considered as pre-emptive needs followed by other needs. In addition, the importance of community sensitization and utilization of water as per local availability of waters before providing water through long distance transfer is highlighted (paragraph 3.6.).</p> </li> <li>• <b>Jal Jeevan Mission JJM (2019-2024)<sup>8</sup>:</b> <p>The vision of the JJM is that every household has drinking water supply in adequate quantity of prescribed quality on regular and long-term basis at affordable service delivery charges leading to improvement in living standards of rural communities. JJM further stresses the importance of awareness raising and involvement of stakeholders (paragraph 3.3 viii.) and highlights the contribution of technological interventions for removal of contaminants where water quality is an issue (paragraph 3.4 ii.). The VPA contributes to three core aspects mentioned in the National Water Policy (2012) and the Jal Jeevan Mission (2019-2024):</p> <ol style="list-style-type: none"> <li>i. Supply of rural communities with safe drinking water (point-of-use treatment)</li> </ol> </li> </ul>

<sup>7</sup> Government of India. Ministry of Water Resources. (2012) National Water Policy. Source: [National Water Policy | Department of Water Resources, RD & GR | GoI \(jalshakti-dowr.gov.in\)](https://jalshakti-dowr.gov.in)

<sup>8</sup> Government of India. Ministry of Jalshakti. Department of Drinking Water & Sanitation. (2019-2014) Jal Jeevan Mission. Source: [https://jalshakti-ddws.gov.in/sites/default/files/JJM\\_Operational\\_Guidelines.pdf](https://jalshakti-ddws.gov.in/sites/default/files/JJM_Operational_Guidelines.pdf)

	<ul style="list-style-type: none"> <li>ii. Awareness raising on WASH aspects</li> <li>iii. Stakeholder participation in project activities</li> </ul>
Source of data	National, sub-national and local authorities
Value(s) applied	The water quality of the treated water with Project Water Filter i water quality of the treated water with Project Water Filter is in line with the national drinking water standard of India: 0 CFU E.Coli/100ml (IS 10500: 2012) <sup>9</sup> .
Choice of data or Measurement methods and procedures	Overview based on national policies and guidelines in the water sector in India.
Purpose of data	Confirmation that the project does not undermine or conflict with any national, sub-national and local regulations or guidelines for safe drinking water supply, operation and maintenance, including any tariff requirements.
Additional comment	-

Data/parameter	SWDS 5: Water sources in the project boundary
Unit	NA
Description	The water source in the project boundary and whether they are used for drinking water, and for all that are used for drinking water, classify them as improved and unimproved water source.
Source of data	Households baseline survey
Value(s) applied	<p>Unprotected well, Unprotected Spring, surface water and handpump</p> <p>As per baseline study conducted from 28/02/2023 to 04/03/2023 of 276 households below data have been found that shows the percentage of improved /unimproved water usage.</p>

<sup>9</sup> [https://cpcb.nic.in/wqm/BIS\\_Drinking\\_Water\\_Specification.pdf](https://cpcb.nic.in/wqm/BIS_Drinking_Water_Specification.pdf)

	Source	Values	Percentage	Improved/ unimproved
	Unprotected well/ Unprotected Spring/ Surface water	260	94.07%	Unimproved
	Handpump	16	5.93%	Improved
Choice of data or Measurement methods and procedures	Multiple options will be included in an open-ended questionnaire to assess the water sources within the project boundary in line with the methodology guidelines. Data will then be analyzed in excel spreadsheet to determine the percentage rates.			
Purpose of data	Analysis of the baseline water sources			
Additional comment	This has been undertaken at the start of the crediting period and shall be updated in case project boundary is getting revised/expanded to new areas through a project design change approval.			

**b. Related to emission reductions**

**SDG 13**

Data/parameter	SDWS 6: Stove technologies used in the project boundary
Unit	NA
Description	The stove type/technology used in premises in the geographical area of the project is mainly, Three-stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system
Source of data	Baseline survey
Value(s) applied	<p>The CME conducts baseline surveys to assess the different stove technologies used for cooking and boiling water by households within the geographical area of the VPA. The survey results indicate that all surveyed households are using firewood as primary cooking fuel. CME cross-verified this finding with the latest national data, specifically the CEEW report<sup>10</sup> released in 2021.</p> <p>According to the CEEW report, LPG penetration in rural areas of Madhya Pradesh is 54%. However, In Madhya Pradesh, due to high LPG refill costs, easy access to free biomass, limited LPG distributors, and the fact that the targeted households belong to the BPL (Below Poverty Line) category, the survey result in the CEEW report identified that in Madhya Pradesh, 89% of rural households with LPG connection consider LPG too expensive to meet their cooking needs. Based on this, the estimated percentage of households using LPG as the primary cooking fuel is:</p> <p><math>x_f</math> for LPG = <math>(100\% - 89\%) \times 54\% = \mathbf{5.94\%}</math>  <math>x_f</math> for wood = <math>(100\% - 5.94\%) = \mathbf{94.06\%}</math></p> <p>Considering values from CEEW report is more conservative, hence, CEEW value has been considered.</p>

<sup>10</sup> <https://www.ceew.in/sites/default/files/ires-report-on-state-of-clean-cooking-energy-access-in-india.pdf>

	<p>This approach ensures that the baseline scenario is robustly demonstrated, incorporating both primary survey data and relevant national-level insights.</p> <p>The following categories of stove types are considered for ex ante estimation:</p> <ul style="list-style-type: none"> <li>• 94.06% Three-stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system</li> <li>• 0% other conventional systems using woody biomass</li> <li>• 0% improved cookstoves (<math>\geq 20\%</math> thermal efficiency)</li> <li>• 5.94% fossil fuel combusting systems</li> </ul>
<p>Choice of data or Measurement methods and procedures</p>	<p>Baseline survey for classification of baseline stove types</p>
<p>Purpose of data</p>	<p>Assessment of baseline scenario</p>
<p>Additional comment</p>	<p>If the VPA will be implemented in different geographical locations, then the proportion of different stove types will be defined for each location, where relevant.</p>

**SDG 13**

Data/parameter	SDWS 7: Expected technical life of project technology
Unit	Treatment volume or operational hours or time
Description	The expected technical life of the individual project technology. The details include both technology/device life and filter life as it is replaceable.
Source of data	Manufacturer specifications:
Value(s) applied	Technology/device life: 15 years <sup>11</sup> Membrane life: 10,000 litres
Choice of data or Measurement methods and procedures	Manufacturer specifications
Purpose of data	Assessment of technical life against crediting period and (total crediting period $\geq$ expected technical life) inclusion of appropriate replacement mechanism as part of the project design.
Additional comment	NA

**SDG 3/ SDG 12/ SDG 13/ SDG 15**

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<sup>11</sup> As specified by the manufacturer, the product life is 15 years but the product's life may exceed 15 years if maintained properly.

Data/parameter	SDWS 8: $x_f$						
Unit	Percentage of fuel f use in target population						
Description	<p>The proportion of each different cooking fuel f used in the project boundary by end-users:</p> <ul style="list-style-type: none"> <li>- % among the target population if single fuel is used for water boiling.</li> </ul> <p>If the project covers different types of end-user’s premises (e.g. households, schools), then the fuels used in the geographical area of the project by the same types of end-users will be determined for each end-user premises type. Will undertake assessment at the start of each crediting period.</p>						
Source of data	<p>Baseline survey / Official Government publication or statistics</p> <p>CEEW report<sup>12</sup></p>						
Value(s) applied	<table border="1"> <thead> <tr> <th>Fuel Type</th> <th><math>x_f</math></th> </tr> </thead> <tbody> <tr> <td>Traditional Stove - Firewood</td> <td>94.06%</td> </tr> <tr> <td>LPG</td> <td>5.94%</td> </tr> </tbody> </table>	Fuel Type	$x_f$	Traditional Stove - Firewood	94.06%	LPG	5.94%
Fuel Type	$x_f$						
Traditional Stove - Firewood	94.06%						
LPG	5.94%						

<sup>12</sup> <https://www.ceew.in/sites/default/files/ires-report-on-state-of-clean-cooking-energy-access-in-india.pdf>

Choice of data or Measurement methods and procedures	Baseline survey
Purpose of data	To demonstrate contribution to SDG 3, SDG 12, SDG 13, SDG 15
Additional comment	Baseline survey was conducted following the requirements outlined in section B.4. Cross check was done using studies by <b>CEEW report released in 2021</b> . Details are provided in section B.4

### SDG 13

Data/parameter	SDWS 9: $EF_{b,f,CO_2}$
Unit	tCO <sub>2</sub> /TJ
Description	CO <sub>2</sub> emission factor from use of fuels in baseline scenario
Source of data	IPCC defaults
Value(s) applied	Wood: 112 tCO <sub>2</sub> /TJ <sup>13</sup> LPG: 63.1 tCO <sub>2</sub> /TJ <sup>14</sup>
Choice of data or Measurement methods and procedures	Default defined in "Methodology for Emission Reductions from Safe Drinking Water Supply" v1.0.
Purpose of data	To demonstrate contribution to SDG 13.
Additional comment	NA

### SDG 13

Data/parameter	SDWS 10: $EF_{b,f,nonCO_2}$
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<sup>13</sup> [https://globalgoals.goldstandard.org/standards/429\\_V1.0\\_EE\\_SWS\\_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf](https://globalgoals.goldstandard.org/standards/429_V1.0_EE_SWS_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf)

<sup>14</sup> [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2\\_Volume2/V2\\_2\\_Ch2\\_Stationary\\_Combustion.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf)

Unit	tCO <sub>2</sub> /TJ
Description	Non-CO <sub>2</sub> emission factor from use of fuels, in case the baseline fuel is biomass or charcoal
Source of data	IPCC defaults
Value(s) applied	AR5 GWP Wood: 9.46 tCO <sub>2</sub> e/TJ LPG: 0 tCO <sub>2</sub> e/TJ
Choice of data or Measurement methods and procedures	Default defined in "Methodology for Emission Reductions from Safe Drinking Water Supply" v1.0.
Purpose of data	To demonstrate contribution to SDG13.
Additional comment	NA

### SDG 13

Data/parameter	SDWS 11: $\eta_{wb}$
Unit	Percentage
Description	Efficiency of the baseline water boiling devices.
Source of data	As per methodology Emission Reductions from Safe drinking water supply version 1.0, the following default values of Three-stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system, that is without either a grate or a chimney: default efficiency 10%.  LPG – Literature review
Value(s) applied	Three-stone fired - 10% Gas Stove – 57% <sup>15</sup>

<sup>15</sup> <https://www.ceew.in/sites/default/files/CEEW-Roadmap-for-Access-to-Clean-Cooking-Energy-in-India-Report-31Oct19-min.pdf>

Choice of data or Measurement methods and procedures	Default defined in "Methodology for Emission Reductions from Safe Drinking Water Supply" v1.0.
Purpose of data	To demonstrate contribution to SDG13
Additional comment	NA

**SDG1/SDG6/SDG13**

Data/parameter	SDWS 12: $C_b$
Unit	Percentage
Description	Proportion of project end-users who in the baseline were already using safe water, either from an improved water source, or from a water treatment method other than boiling.
Source of data	Calculation of baseline scenario
Value(s) applied	2.22%
Choice of data or Measurement methods and procedures	Baseline survey  As per baseline survey conducted by the CME, Improved sources (Borehole or tubewell and Piped water) are 5.93% (5.56%+0.37%). 31.25% of households improved sources boils their water which means 31.25% out of 5.93% of improved sources are actually safe for drinking. Additionally, 0.37% households used some other treatment method (not boiling) to make water safe for drinking.
Purpose of data	Assessment of baseline scenario, Contribution to SDG 1, SDG 6 and SDG 13
Additional comment	NA

**SDG 13**

Data/parameter	SDWS 13: $q_i$
Unit	Liters per hour
Description	Capacity of the household water treatment technology

Source of data	Manufacturer specifications
Value(s) applied	6
Choice of data or Measurement methods and procedures	Based on manufacturer specifications.
Purpose of data	<ul style="list-style-type: none"> <li>• Assessment of water treatment technology capacity against default value of liters per person per day for premise type.</li> <li>• To demonstrate contribution to SDG13</li> </ul>
Additional comment	NA

### SDG13

Data/parameter	SDWS 21: $f_{NRB,f,y}$
Unit	Percentage
Description	Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass or charcoal
Source of data	<p>Determined by:</p> <ul style="list-style-type: none"> <li>- CDM TOOL30<sup>16</sup>, Calculation of the fraction of non-renewable biomass</li> </ul>
Value(s) applied	89.2
Choice of data or Measurement methods and procedures	Determined ex-ante CDM TOOL30, Calculation of the fraction of non-renewable biomass and fixed for a given crediting period as per "Methodology for Emission Reductions from Safe Drinking Water Supply" v1.0

<sup>16</sup> Default values endorsed by designated national authorities and approved by the CDM can be applied, if default value is valid at the time of project submission for design review.  
[http://cdm.unfccc.int/methodologies/standard\\_base/index.html](http://cdm.unfccc.int/methodologies/standard_base/index.html)

Purpose of data	Assessment of emission factor in the baseline scenario and contribution to SDG 13
Additional comment	NA

**SDG 13**

Data / Parameter	SDWS 24: $QPW_p$
Unit	L/person/day
Description	Volume of drinking water per person per day for premises type p
Source of data	Default value
Value(s) applied	4
Measurement methods and procedures	Default value as per applied methodology.
Monitoring frequency	Not Applicable
QA/QC procedures	NA
Purpose of data	To calculate the contribution to SDG13
Additional comment	NA

**SDG 13**

Data / Parameter	SDWS 30: $t_{p,y}$
Unit	Hours per day
Description	Usage time of the project technology by premises type p in year y
Source of data	Default value of applied methodology <sup>17</sup>
Value(s) applied	5

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<sup>17</sup> [https://globalgoals.goldstandard.org/standards/429\\_V1.0\\_EE\\_SWS\\_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf](https://globalgoals.goldstandard.org/standards/429_V1.0_EE_SWS_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf)

Measurement methods and procedures	Default value of applied methodology
Monitoring frequency	Annual
QA/QC procedures	NA
Purpose of data	Contribution to SDG13
Additional comment	NA

## D.2 Data and parameters monitored

Data / Parameter	SDWS 18: $M_{q,y}$
Unit	Fraction
Description	Ongoing water quality indicated as the fraction of the samples that pass microbial quality standard requirements specified in relevant microbial quality standard for drinking water of the host country. The Indian Standard Specifications for Drinking Water ( IS 10500:2015 <sup>18</sup> ) covers the microbial quality and safety of drinking water. As per the standard drinking water must not have detectable E.Coli in any 100 ml sample i.e., less than 1 Colony Forming Unit (CFU) of E.Coli /100 ml.
Source of data	Testing of the water that exits the treatment technology.
Value(s) applied	The quality of all the filtered water samples meets the Indian standards of "IS10500:2015 <sup>19</sup> ", so the modifier for the water quality used to calculate emission reductions is:  For the monitoring period from 11/05/2023 to 31/01/2024 the value of $M_{q,y} = 100\%$
Measurement methods and procedures	The water quality testing has been conducted from 22/11/2023 to 19/12/2023 during current monitoring period i.e., from 11/05/2023 to 31/01/2024. The specific process has been described in section C of this MR. <ul style="list-style-type: none"> <li>• The national drinking water standard of India (0 CFU E.Coli/100ml) will be used as a reference (IS 10500: 2012<sup>20</sup>).</li> <li>• The water quality test applies the bacterial quality standard &lt;1 cfu E.coli/100ml, and the sampling determines the proportion of pass and fail results.</li> <li>• The sampling results shall satisfy at minimum the 90/10 rule, i.e. the endpoints of the 90% confidence interval lie within +/- 10% of the estimated proportion in relative units. For example, the interval around a proportion of</li> </ul>

<sup>18</sup> <https://law.resource.org/pub/in/bis/S06/is.10500.2012.pdf>

<sup>19</sup> <https://law.resource.org/pub/in/bis/S06/is.10500.2012.pdf>

<sup>20</sup> Bureau of Indian Standards (2012) Indian Standard. Drinking Water – Specification. IS 10500 : 2012. Source: <https://law.resource.org/pub/in/bis/S06/is.10500.2012.pdf>

85% tests passed, would have to lie between 76.5% and 93.5%. A minimum sample size of 30 must be selected.

The water sample is taken at water outlet of the project water purifiers from the 129 samples and project owner Entrust a third-party testing agency-a microbiology laboratory "Excellent Bio Solution Research Private. Ltd" which is affiliated with the "National Accreditation Board for Testing and Calibration Laboratories" (NABL)<sup>21</sup> to test the water quality. From the laboratory test report, the monitoring parameters and monitoring methods are shown in the following table:

SL No	Parameters	Test Method No.
1.	Aerobic Microbial Count	IS 5402:2012 RA 2018
2.	Total Coliform count	IS 5401 (Part 1):2012 RA 2022
3.	E. Coli	IS 15185:2016 RA 2021

Monitoring frequency	Annual sampling, and the first round of testing will be conducted at least after six months from the start date.
QA/QC procedures	Laboratories used for water quality testing must be approved by local health authorities and/or have quality accreditation.
Purpose of data	Contribution to SDG6 and SDG13.
Additional comment	<p>If the proportion of samples not meeting Safe Drinking Water Quality Standards exceeds a threshold, no emission reductions can be claimed for the corresponding monitoring period.</p> <p>Thresholds:</p> <ul style="list-style-type: none"> <li>- Project or VPA year 1: 20%</li> <li>- Project or VPA year 2: 15%</li> <li>- Project or VPA year 3 or above: 10%</li> </ul> <p>When the crediting period is renewed, the year number count continues, i.e. the second crediting period would encompass year 6, year 7, year 8, etc. Additionally, when the threshold is</p>

<sup>21</sup> Refer page 471 Certificate no TC-12429 - Source: [https://nabl-india.org/nabl/file\\_download1.php?filename=202402200648-NABL-400-doc.pdf](https://nabl-india.org/nabl/file_download1.php?filename=202402200648-NABL-400-doc.pdf)

exceeded, the project shall provide an explanation for why this occurred and provide a remediation plan.

**SDG 1,3,4,5,6,7,8,12 and 13**

Data / Parameter	SDWS 19: SDG 1
Unit	No of water filter
Description	Number of Econeer water filter distributed/operational under the project as an indicator of providing access to basic services in the households. Contribute to providing access to basic services (clean cooking technology considered as basic service under access to modern energy) to the poor and vulnerable communities of India.
Source of data	Econeer water filter distribution/sales record
Value(s) applied	2010
Measurement methods and procedures	The data can be obtained from the Econeer water filter sales/distribution record.
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 1
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 3
Unit	Percent
Description	Percent of Household reporting reduction in smoke/PM emissions after they start using the water filter in project scenario.
Source of data	Monitoring Surveys data to record % users reporting a reduction in incidences of waterborne diseases such as skin rashes, diarrhea, foot sores, parasites, eye problems and other waterborne diseases.
Value(s) applied	100

Measurement methods and procedures	The value has been established based on Sampling project survey across a randomly selected number of beneficiaries conducted as per details mentioned in Section D.4 of the MR. The result has been applied to all the beneficiaries of the VPA.
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 3
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 4
Unit	training/annum
Description	Contribute to increasing vocational and relevant skills of local individuals by providing non-formal education and training on issues related to climate change, with specific skill building in operations and surveying activities related to water filter distribution and its monitoring under GS.
Source of data	Number of awareness programs/training in a year.
Value(s) applied	2
Measurement methods and procedures	Number of Awareness program/training for using project scenario
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 4
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 5
Unit	Percentage
Description	% Households reporting time saving due to reduction in time saving to collect fuel wood/ water boiling time

Source of data	Monitoring survey data for the % users reporting time-saving due to reduction in collection of fuel wood/ boiling water time in the project
Value(s) applied	100%
Measurement methods and procedures	The measurement of the parameter is based on qualitative information collected during Monitoring surveys. The end users are being asked whether they spent less time for collection of wood fuel for the boiled water.
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 5
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 6
Unit	Number of person
Description	<p>Monitor the number of Water Filter distributed /installed /operational under the VPA as an indicator of providing basic service access to number of persons.</p> <p>Further the project developer has included below parameters to ensure the compliance towards SDG 6 i.e.</p> <ul style="list-style-type: none"> <li>(i) Level of service- The water filter being distributed in the VPA are of safely managed household units as pure drinking water is available whenever needed and free from any contamination.</li> <li>(ii) Project contributions: The water being discharged from distributed water filters is easily accessible, available 24 hours in a day and on quality also it is free from any kind of contaminations.</li> </ul>
Source of data	Monitoring survey report
Value(s) applied	9,668

Measurement methods and procedures	<p>The measurement of the parameter is be based on quantitative information collected during Monitoring surveys.</p> <p>The total no of population has access to improved source of water= Total no of water filter work x Average no of members in household.</p> <p>The total no of population has access to improved source of water= Total no of water filter work x Average no of members in household.</p>
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 6
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 7
Unit	Number of water filter
Description	Number of Econeer water filter operational under the project as an indicator of providing access to basic services in the households. Contribute to providing access to basic services (clean water purification technology considered as basic service under access to modern energy) to the poor and vulnerable communities of India.
Source of data	Monitoring survey report
Value(s) applied	2,010
Measurement methods and procedures	The measurement of the parameter will be based on quantitative information collected during Monitoring surveys.
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 7
Additional comment	The data will be kept for two years after the crediting period or from last issuance.

Data / Parameter	SDWS 19: SDG 8
Unit	Number of person
Description	Total no job created

Source of data	Recording the number of employees (male/female) in the project under administrative, distribution, and management positions		
Value(s) applied	23		
	<b>Vintage</b>	<b>Period</b>	<b>Total no of Jobs created</b>
	2023	11/05/2023 to 31/12/2023	23 jobs
	2024	01/01/2024 to 31/01/2024	0 jobs
Measurement methods and procedures	NA		
Monitoring frequency	Annual		
QA/QC procedures	-		
Purpose of data	Monitoring of SDG 8		
Additional comment	The data will be kept for two years after the crediting period or from last issuance.		

Data / Parameter	SDWS 19: SDG 12			
Unit	Tonnes			
Description	Tonnes of renewable biomass saved			
Source of data	Calculated using the below formula (Refer section E.2 for detail calculation) $[Q_y * (360.83/nwb) * X_{f,wood} / 15.6 * 10^3] * (1 - f_{NRB,f,y})$			
Value(s) applied	202			
	Year	2023 (11/05/2023 to 31/12/2023)	2024 (01/01/2024 to 31/01/2024)	From 11/05/2023 to 31/01/2024
	Renewable biomass (in tonnes)	187	28	202
Measurement methods and procedures	NA			
Monitoring frequency	NA			
QA/QC procedures	-			
Purpose of data	Monitoring of SDG 12			
Additional comment	The data will be kept for two years after the crediting period or from last issuance.			

Data / Parameter	SDWS 19: SDG 15			
Unit	Tonnes			
Description	Tonnes of non-renewable biomass saved			
Source of data	Calculated using the below formula (Refer section E.2 for detail calculation) $[Qy*(360.83/nwb)*X_{f,wood}/15.6*10^3]*f_{NRB,f,y}$			
Value(s) applied	1,782			
	Year	2023 (11/05/2023 to 31/12/2023)	2024 (01/01/2024 to 31/01/2024)	From 11/05/2023 to 31/01/2024
	Non-renewable biomass (in tonnes)	1,549	232	1,782
Measurement methods and procedures	NA			
Monitoring frequency	NA			
QA/QC procedures	-			
Purpose of data	Monitoring of SDG 15			
Additional comment	The data will be kept for two years after the crediting period or from last issuance.			

Data / Parameter	SDWS 20: Water hygiene education campaigns			
Unit	NA			
Description	Hygiene campaigns carried out among project safe water end users.			
Source of data	Report of annual hygiene campaigns results			
Value(s) applied	In 2023, two water hygiene education and hygiene campaigns have been conducted on 20/11/2023 at Village: Bhaluchuwa and on 21/11/2023 at Village: Parsel Kalan during this current monitoring period and the result is as follows: the fraction of the households where safe water is found to fulfill "safely managed" is 100%, i.e., All the project users have access to safe water because they have water purifiers.			
Measurement methods and procedures	The impacts of the hygiene campaign shall be assessed using the WHO/UNICEF Joint Monitoring Programme Core questions for drinking water and hygiene to determine			

	the fraction of the households where Safe water and Hygiene practices are found to fulfill "safely managed" or "basic" requirements. In-person or telephone or by messaging (e.g. text, app) based survey shall be conduct covering all the JMP core questions for drinking water and core questions for hygiene.
Monitoring frequency	Annually
QA/QC procedures	The fraction of the households where Safe water and Hygiene practices are found to fulfill "safely managed" or "basic" requirements is expected to increase over time as a result of the hygiene campaigns.
Purpose of data	NA
Additional comment	NA

**b. Related to emission reductions**  
**SDG 13**

Data / Parameter	SDWS 22: $X_{cleanboil,y}$
Unit	Percentage
Description	Proportion of project end-users that boil safe (treated, or from safe supply) water after installation of project technology in year y. Percentage includes proportion of end-users that switched back to boiling water and proportion of end users that boil water after treatment with the project technology.
Source of data	Project Survey
Value(s) applied	0
Measurement methods and procedures	This had been confirmed from the monitoring survey performed by the CME.
Monitoring frequency	Annually
QA/QC procedures	NA
Purpose of data	Contribution to SDG13
Additional comment	NA

**SDG 13**

Data / Parameter	SDWS 25: $HN_{p,y}$
Unit	Number
Description	Number of individuals per premises type p in the project boundary in year y
Source of data	Project survey (Monitoring survey)
Value(s) applied	4.81
Measurement methods and procedures	Project survey has been done following the section 4.2 General requirements for sampling of the methodology "Emission reductions from Safe Drinking Water Supply", v.1.0
Monitoring frequency	Annual
QA/QC procedures	<p>The value applied will be cross-checked against at least one other source on the list. For cross-check purposes, sources applied will be up to 5 years old. Further, cross-check with older sources will be used provided they provide conservative results.</p> <p>As per the India's latest census report 2011<sup>22</sup> at page 70, mentioned the percentage share of households having Five members and above for Dindori is 41.4% which is most in the Madhya Pradesh. In monitoring survey CME found 4.81 person per household which is more conservative.</p>
Purpose of data	To calculate the contribution to SDG13
Additional comment	NA

**SDG1, SDG5, SDG6, SDG13**

Data / Parameter	SDWS 28: $N_{p,y}$
Unit	Number

<sup>22</sup> <https://mp.census.gov.in/hindi/pdf/census2011/HLO%20report.pdf#page=91>

Description	Accumulated number of premises type p with at least one individual project technology in year y
Source of data	Distribution records
Value(s) applied	2,010
Measurement methods and procedures	Distribution records with unique identifier of project technology and household.
Monitoring frequency	Annually
QA/QC procedures	Distribution records includes: <ul style="list-style-type: none"> <li>i. Date of sale/distribution</li> <li>ii. Geographic area of sale</li> <li>iii. Model/type of project technology sold</li> <li>iv. Quantity of project technologies sold</li> </ul> Name and telephone number, and address (if available) or other traceable indicator of premises identity and location for all end users.
Purpose of data	Contribution to SDG1, SDG 5, SDS 6, SDG13
Additional comment	NA

**SDG13**

Data / Parameter	SDWS 29: $U_{p,y}$
Unit	Percentage
Description	Usage rate of the project technology by premises type p during year y
Source of data	Usage Survey
Value(s) applied	100
Measurement methods and procedures	<p>The premises with a project technology are being surveyed to determine the usage rate of the project technology during the year following the usage survey guidelines provided in Annex -1 of the methodology "Emission reductions from Safe Drinking Water Supply", v.1.0.</p> <p>The monitoring survey has been conducted from 22/11/2023 to 19/12/2023 and found the usage rate is 100% as per usage survey guidelines provided in Annex</p>

	-1 of the methodology during current monitoring period i.e., from 11/05/2023 to 31/01/2024.
Monitoring frequency	Annually
QA/QC procedures	NA
Purpose of data	Contribution to SDG13
Additional comment	NA

**SDG12 , SDG13, SDG15**

Data / Parameter	SDWS 31: $DP_{p,y}$
Unit	Days
Description	Average days the project technology is present for end-users in the premises p in year y
Source of data	Sales or distribution records.
Value(s) applied	365
Measurement methods and procedures	Based on the sales or distribution records of "Date of sale/distribution" and ex-ante parameter "Expected technical life of project technology," for each project device how many days of the 365 days of the year it was in the premises and within its technical life has been determined. Then the average for all the project technology has been be calculate by premises type p to obtain this parameter.
Monitoring frequency	Annually
QA/QC procedures	NA
Purpose of data	Contribution to SDG12 , SDG13, SDG15
Additional comment	NA

**SDG12 , SDG13, SDG15**

Data / Parameter	SDWS 32: $DN_{p,y}$
Unit	Number

Description	Average number of individual project technologies in each project premises type p in year y
Source of data	Sales or distribution records.
Value(s) applied	1
Measurement methods and procedures	Based on the sales or distribution records of "Quantity of project technologies sold" and identifying information of buyer/recipient, calculate the average number of project devices per premises.
Monitoring frequency	NA
QA/QC procedures	NA
Purpose of data	Contribution to SDG12 , SDG13, SDG15
Additional comment	NA

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

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
NA	NA	NA

### D.4. Implementation of sampling plan

The VPA has been followed the guidelines for sampling and surveying outlined in the methodology. The latest version of CDM tools and/or guidelines referenced in the methodology shall be used: CDM Guidelines "Guidelines for sampling and surveys for CDM project activities and programmes of activities", Version 04.0<sup>23</sup>.

#### Surveys:

The surveys need to be conducted using representative and random sampling in accordance with the GS minimum sample size guidelines:

Group size	Minimum sample size
<300	30 or population size, whichever is smaller

<sup>23</sup> [https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20151023152925068/Meth\\_GC48\\_%28ver04.0%29.pdf](https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20151023152925068/Meth_GC48_%28ver04.0%29.pdf)

<b>300 to 1,000</b>	10% of group size
<b>&gt; 1000</b>	100

Minimum 90% confidence interval and a 10% margin of error requirement shall be achieved for the sampled parameters.

Total number of samples considered under the Monitoring survey is 129, which fulfils this minimum required sample size of 100 as per the table above. The sample selection is done by simple random sampling technique. Samples drawn by using the random number generator<sup>24</sup>. Local authorities were consulted throughout the process to obtain their consent and support the sampling methods.

**Usage Survey – HWT Technologies:**

- The Usage Survey guidelines for Household Water Treatment Technologies in Annex 1 of the methodology “Methodology for Emission Reductions from Safe Drinking Water Supply” v1.0<sup>25</sup> is being followed. The Usage Survey was conducted together with the Project Survey from 22/11/2023 to 19/12/2023 with a sample size of 129 households.

**Water Quality Tests:**

- The Water Quality Monitoring Guidelines for the VPA is being followed. The water quality testing is performed based on parameter SDWS18 requirements.
- The sample size is following 90/10 precision rule and a minimum sample size of 100 is being selected.
- Water samples were taken from the outlets of project water purifiers, totaling 129 samples. The project owner entrusted the testing of these samples to a third-party microbiology laboratory, "Excellent Bio Solution Research Private Ltd<sup>26</sup>" which is accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL), to assess the water quality.
- The water sample is taken where the water exits the treatment technology.
- Annual sampling; first round of testing has been conducted at least after six months from the start date.

The water quality test has been conducted between 22/11/2023 to 19/12/2023 and tested by the NABL accredited lab and has found 100% sample pass the microbial requirements.

<sup>24</sup> <https://stattrek.com/statistics/random-number-generator>

<sup>25</sup> [https://globalgoals.goldstandard.org/standards/429\\_V1.0\\_EE\\_SWS\\_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf](https://globalgoals.goldstandard.org/standards/429_V1.0_EE_SWS_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf)

<sup>26</sup> Refer Page 471, [https://nabl-india.org/nabl/file\\_download1.php?filename=202402200648-NABL-400-doc.pdf](https://nabl-india.org/nabl/file_download1.php?filename=202402200648-NABL-400-doc.pdf)

## SECTION E. CALCULATION OF SDG IMPACTS

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

#### SDG13

The detailed ex-ante calculations of estimated SDG Impacts are provided in a separate excel calculation sheet for the monitoring current period i.e., 11/05/2023 to 31/01/2024

#### SDG13

GHG Emission Reduction Calculation:

According to the applied methodology “Methodology for Emission reductions from safe drinking water supply”, version 1.0<sup>27</sup> equation 3, the baseline emission calculated as follows:

$$BE_y = Efb \times (1 - Cb - X_{cleanboil,y}) \times Q_y \times M_{q,y}$$

As per the equation 6 of the applied methodology, the quantity of safe drinking water provided by the project  $Q_y$  is determined as follows:

For HWT technology:

$$\begin{aligned} QPW_{hh,p,y} &= \min ((q_i \times t_{p,y} \times DN_{p,y}), (QPW_p \times HN_{p,y})) \\ &= \min ((6 \times 5 \times 1), (4 \times 4.81)) = \min (30, 19.24) = 19.24 \text{ L/day} \end{aligned}$$

Value applied

Parameter	Description	Value	Unit
$q_i$	Capacity of the HWT or IWT individual project technology (L/h)	6	L/h
$t_{p,y}$	Usage time of the project technology by premises type p in year y (h/day)	5	h/day
$DN_{p,y}$	Average number of individual project technologies in each project premises type p in year y	1	Number of filter/ premises
$HN_{p,y}$	Number of individuals per premises type p (e.g. household, school) in year y	4.81	Number of person/ premises

<sup>27</sup> [https://globalgoals.goldstandard.org/standards/429\\_V1.0\\_EE\\_SWS\\_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf](https://globalgoals.goldstandard.org/standards/429_V1.0_EE_SWS_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf)

$QPW_p$	Volume of drinking water per person per day for premises type p (L). Apply the default value or monitored value through water consumption field tests in the project scenario, capped at 5.5 L per person per day.	4	L/day
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As per equation 2 of the applied methodology, the specific energy required to boil water using the baseline technology ( $SE_{w,b,y}$ ) is determined as follows:

For Traditional Stove:

$$SE_{w,b,y} = 360.83/\eta_{wb}$$

$$= 360.83/10\%$$

$$= 3608.3 \text{ kJ/L}$$

For LPG:

$$SE_{w,b,y} = 360.83/\eta_{wb}$$

$$= 360.83/57\%$$

$$= 633.04 \text{ KJ/L}$$

Value applied

Parameter	Description	Value	Unit
$\eta_{wb-TSF}$	Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types.	10	%
$\eta_{wb-LPG}$	Efficiency of the LPG	57	%

As per applied methodology equation 1, the baseline emission factor shall be calculated as follows:

$$EF_b = SE_{w,b,y} \times \sum_f x_f \times (EF_{b,f,co2} \times f_{NRB,f,y} + EF_{b,f,nonco2}) \div 10^9$$

$$= 3,608.3 \times (94.06\% \times (112 \times 89.2\% + 9.46)) \div 10^9 + 633.04 \times (5.94\% \times (63.1 + 0)) \div 10^9$$

$$= 3,608.3 \times (94.06\% \times (99.904 + 9.46)) \div 10^9 + 633.04 \times (5.94\% \times (63.1)) \div 10^9$$

$$= 3,608.3 \times (94.06\% \times 109.364) \div 10^9 + 633.04 \times (5.94\% \times 63.1) \div 10^9$$

$$= 37.3 \times 10^{-5} \text{ tCO}_2\text{e/L}$$

Value applied:

Parameter	Description	Value	Unit
$SE_{w,b,y}$	Specific energy required to boil water	3608.3	kJ/L

$x_f$ - TSF	Proportion of fuel $f$ used in the baseline (fraction determined based on an energy basis)	94.06	%
$x_f$ - LPG	Proportion of fuel $f$ used in the baseline (fraction determined based on an energy basis)	5.94	%
$EF_{b,f,CO_2}$	CO <sub>2</sub> emission factor from use of fuel $f$	112	tCO <sub>2</sub> /TJ
$EF_{b,f,CO_2}$ - LPG	CO <sub>2</sub> emission factor from use of fuel $f$	63.1	tCO <sub>2</sub> /TJ
$EF_{b,f,nonCO_2}$	Non-CO <sub>2</sub> emission factor arising from use of fuel $f$ , when the baseline fuel $f$ is biomass or charcoal. This parameter is omitted when $f$ is a fossil fuel.	9.46	tCO <sub>2</sub> /TJ
$f_{NRB,f,y}$	Fractional non-renewability status of woody biomass fuel during year $y$ (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when $f$ is a fossil fuel.	89.2	%

For HWT technology:

As per equation 6 of the applied methodology, Quantity of safe drinking water provided by the project  $Q_y$  is determined as follows:

$$Q_y = \sum_p N_{p,y} \times U_{p,y} \times QPW_{hh,p,y} \times DP_{p,y}$$

Where,

Parameter	Description
$N_{p,y}$	Number of premises type $p$ with at least one project technology in year $y$
$U_{p,y}$	Usage rate of the project technology by premises type $p$ during year $y$
$QPW_{hh,p,y}$	Volume of drinking water per premises $p$ per day in year $y$
$DP_{p,y}$	Days the project technology is present for end-users in the premises $p$ in year $y$

Quantity of safe drinking water provided by the project  $Q_y$  during the monitoring period is demonstrated as follows:

Below is the calculation process in detail with an example of a water filter installed on 11-05-2023:

- For Year 2023:

Considering period from 11-05-2023 (Installation date) to 31-12-2023 (CY end date)

Date		N <sub>p,y</sub> (number)	Usage rate (U <sub>p,y</sub> )	Liter/premise/day (QPW <sub>hh,p,y</sub> )	Working days (DP <sub>p,y</sub> )
From	To				
11-05-2023	31-12-2023	1	100%	19.24	235

$$\begin{aligned}
 Q_y &= \sum_p N_{p,y} \times U_{p,y} \times QPW_{hh,p,y} \times DP_{p,y} \\
 &= 1 \times 100\% \times 19.24 \times 235 \\
 &= 4,521.40 \text{ Liter}
 \end{aligned}$$

- For Year 2024:

Considering period from 01-01-2024 (CY start date) to 31-01-2024 (MP end date)

Date		N <sub>p,y</sub> (number)	Usage rate (U <sub>p,y</sub> )	Liter/premise/day (QPW <sub>hh,p,y</sub> )	Working days (DP <sub>p,y</sub> )
From	To				
01-01-2024	31-01-2024	1	100%	19.24	31

$$\begin{aligned}
 Q_y &= \sum_p N_{p,y} \times U_{p,y} \times QPW_{hh,p,y} \times DP_{p,y} \\
 &= 1 \times 100\% \times 19.24 \times 31 \\
 &= 596.44 \text{ Liters}
 \end{aligned}$$

Hence, Total Quantity of water in Liter during current monitoring period (Q<sub>y</sub>) from 11/05/2023 to 31/01/2024.

Year	Period	Value	Unit
2023	11-05-2023 to 31-12-2023	7,442,089	Liters
2024	01-01-2024 to 31-01-2024	1,198,844	Liters

As per equation 3 of the applied methodology, the calendar year wise baseline emission calculated as follows:

Parameter	Description	Value applied for 2023	Value applied for 2024	Unit
$EF_b$	Emission factor for the use of fuel to obtain safe water in the baseline	$37.3 \times 10^{-5}$	$37.3 \times 10^{-5}$	tCO <sub>2</sub> e/L
$C_b$	Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling	2.22	2.22	%
$X_{cleanboil,y}$	Proportion of project end-users that boil safe water in the project year y	0	0	%
$Q_y$	Quantity of safe drinking water provided by the project in year y	7,442,089	1,198,844	L
$M_{q,y}$	Modifier for the water quality in year y	1	1	(fraction)

- For 2023,

$$\begin{aligned}
 BE_y &= EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_q, \\
 &= 37.3 \times 10^{-5} \times (1 - 2.22\% - 0\%) \times 7,442,089 \times 1 \\
 &= 2,718 \text{ tCO}_2\text{e (rounded down value)}
 \end{aligned}$$

- For 2024,

$$\begin{aligned}
 BE_y &= EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_q, \\
 &= 37.3 \times 10^{-5} \times (1 - 2.22\% - 0\%) \times 1,198,844 \times 1 \\
 &= 437 \text{ tCO}_2\text{e (rounded down value)}
 \end{aligned}$$

Hence, the total baseline emission is given below:

Year	Period	Value	Unit
2023	11-05-2023 to 31-12-2023	2,718	tCO <sub>2</sub> e
2024	01-01-2024 to 31-01-2024	437	tCO <sub>2</sub> e
<b>Total</b>	<b>11-05-2023 to 31-01-2024</b>	<b>3,155</b>	<b>tCO<sub>2</sub>e</b>

As the section B.6.2 in VPA-DD, the Econeer water purifiers introduced by the project require no energy input or consumables, which offered an affordable, long-term and zero emission solution for households that generally consume unsafe drinking water. Also, no fossil fuel or electricity is being used in the voluntary project activity (VPA). Thus, the project emissions,  
 $PE_y = 0 \text{ tCO}_2\text{e}$ .

As the VPA not uses electricity or fossil fuel for operation and uses a zero-emission technology i.e., gravitational water filtering through hollow fiber filters. Thus, there are no any project emissions.

As per para 3.8.1 of the applied methodology non-renewable woody biomass is not using in the project scenario. Thus, Leakage emission will be 0.

Hence,  
 $LE_y = 0 \text{ tCO}_2\text{e}$

As per para 3.9.1 eq 11 of the applied methodology, the emission reductions are calculated as follows:

- For 2023

$$\begin{aligned} ER_y &= BE_y - PE_y - LE_y \\ &= 2,718 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} \\ &= 2,718 \text{ tCO}_2\text{e} \end{aligned}$$

- For 2024

$$\begin{aligned} ER_y &= BE_y - PE_y - LE_y \\ &= 437 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} \\ &= 437 \text{ tCO}_2\text{e} \end{aligned}$$

Year	Period	BE <sub>y</sub> (tCO <sub>2</sub> e)	PE <sub>y</sub> (tCO <sub>2</sub> e)	LE <sub>y</sub> (tCO <sub>2</sub> e)	ER <sub>y</sub> (tCO <sub>2</sub> e)
2023	11-05-2023 to 31-12-2023	2,718	0	0	2,718
2024	01-01-2024 to 31-01-2024	437	0	0	437
Total	11-05-2023 to 31-01-2024	3,155	0	0	3,155

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

### SDG 1: No Poverty

From 11/05/2023 to 31/01/2024 the total number of premises with at least one water filter distributed / installed under the project is 2,010. Further this is helping the villagers to eradicate poverty as they get more time for other employment generation activities.

### **SDG 3: Good Health and Well Being**

The percentage of reduction in smoke/PM after they start using the water filter is 100%.

### **SDG 4: Quality Education**

Number of Awareness program/training for using project scenario= 2 training

### **SDG 5: Gender Equality**

Percentage household reporting time saving due to reduction in collection of fuel wood consumption/ water boiling time in project scenario = 100%

### **SDG 6 Clean Water and Sanitation**

No of person have access to improved source of water

$$= N_{p,y} * HN_{p,y}$$

$$= 2,010 \times 4.81 \text{ person}$$

$$= 9,668 \text{ person}$$

### **SDG 7 Affordable and Clean Energy**

Number of unique households that were provided access to clean water purification technology i.e. Econeer water filter is 2,010.

### **SDG 8 Decent Work and Economic Growth Project Impact**

From 11/05/2023 to 31/01/2024, 23 jobs for local people created, the percentage of employees with salaries paid at par with the average wage of India.

### **SDG 12 Responsible Consumption and Production and SDG 15 Life on Land**

From 11/05/2023 to 31/01/2024, the Reduction in consumption of renewable and non-renewable biomass is calculated by the following equations:

Reduction in consumption of renewable biomass:

$$R_{rb,y} = [Qy * (360.83/nwb-TSF) * X_{f,wood} / 15.6 * 10^3] * (1 - f_{NRB,f,y})$$

Reduction in consumption of non-renewable biomass:

$$R_{nr,y} = [Qy * (360.83/ nwb-TSF) * X_{f,wood} / 15.6 * 10^3] * f_{NRB,f,y}$$

The details of parameters, their values used in the calculations and the final results are as follows:

**SDG 12 &15 :Calculations<sup>28</sup>**

		2023	2024	Total
<b>Parameters</b>	<b>UOM</b>	<b>11-05-2023 to 31-12-2023</b>	<b>01-01-2024 to 31-01-2024</b>	11/05/2023 to 31/01/2024
Quantity of safe drinking water provided by the project $Q_y$	Litres	74,42,089	11,98,844	<b>86,40,933</b>
Energy required for boil 1 Litre of water	KJ	360.83	360.83	
NCV of wood per tonnes	KJ/KG	15,600	15,600	
Efficiency of used cookstove in the baseline scenario (nwb-TSF)	%	10.00%	10.00%	
fNRB value ( $f_{NRB,f,y}$ )	-	0.892	0.892	
Percentage of fuel f use in target population ( $X_{f,wood}$ )	%	94.06%	94.06%	
Reduction in consumption of non-renewable biomass ( $R_{nr,y}$ )	Tonnes	<b>1,444.00</b>	<b>232.00</b>	<b>1,676.00</b>
Reduction in consumption of renewable biomass ( $R_{rb,y}$ )	Tonnes	<b>174.00</b>	<b>28.00</b>	<b>202.00</b>

**SDG 13 Climate Action Project Impact**

In the current monitoring period i.e., from 11/05/2023 to 31/01/2024, the emission reduction from the voluntary project activity (VPA) is 3,155 tCO<sub>2</sub>e.

<sup>28</sup> For detail calculation refer ex-post ER sheet

### E.3. Calculation of leakage

Where relevant, leakage relating to the non-renewable woody biomass shall be assessed as follows. Other types of leakage are excluded for simplification. Leakage emissions, LE<sub>y</sub>, shall be calculated as follows:

The CME has evaluated, ex-ante, the following potential sources of leakage and provide an evidence-based description and preliminary quantification of each potential source and its relevance for the project as per para 3.8.2 of the GS methodology Emission Reductions from Safe Drinking water solutions:

a. A survey was conducted to verify if the use of non-renewable biomass has increased among the members of the population who do not participate in the project, and were previously using lower emitting energy sources. The survey showed that the NRB consumption has not increased in the non-participating members of the population and they have plenty of forest wood available in the region.

b. The purpose of the project is reducing the use of NRB otherwise used in conventional three stone fired traditional cookstoves for boiling water and instead use Household gravity-based water purifier i.e. Econeer which does not require any NRB or any other fuel for its operations. So, the project would actually help in increasing the NRB fraction in that area. Therefore, the condition that the project involves reducing the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario is not applicable, hence no leakage emissions are to be applicable for the project activity.

c. The project population and the project boundary are in the area where the annual average temperature is above 20°C. Hence there is no requirement to compensate for loss of the space heating effect of water boiling by adopting some other form of space heating or by retaining some baseline wood fuel-burning practices.

Thus, the leakage emissions can be considered as nil and can be ignored for the project activity.

Hence,

$$LE_y = 0 \text{ tCO}_2\text{e}$$

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	Emission Reductions	3,155 tCO <sub>2</sub> e	0 tCO <sub>2</sub> e	3,155 tCO <sub>2</sub> e
1	Increased access to basic services (water treatment)	0	2,010 No of water filter	2,010 No of water filter
3	Improvement in Indoor Air Quality & reduction in incidences of waterborne diseases such as skin rashes, diarrhea, foot sores,	0	100%	100%

	parasites, eye problems and other waterborne diseases			
4	Increase soft skills, technical skills and awareness to safe drinking water.	0	2 Number of soft skill program in a year.	2 Number of soft skill program in a year.
5	Reduced unpaid care and domestic work for women	0	100%	100%
6	Access to improved source of water.	0	9,668 No of person	9,668 No of person
7	Contribute to increasing access to clean water purification technology with installations in user households.	0	2,010 No of Filters	2,010 No of Filters
8	Increased employment opportunities	0	23 employment opportunity created	23 employment opportunity created
12	Responsible Consumption and Production	0	202 tonnes of renewable biomass	202 tonnes of renewable biomass
15	Life on Land	0	1,676 tonnes of non-renewable biomass	1,676 tonnes of non-renewable biomass

**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 <sup>29</sup> achieved during this monitoring period
13	4,186 tCO <sub>2</sub> e	3,155 tCO <sub>2</sub> e
1	2,010 No of water filter	2,010 No of water filter
3	100%	100%
4	1 training/annum	2 Number of soft skill program in a year.

<sup>29</sup> Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

5	100%	100%
6	9,668 No of person	9,668 No of person
7	2,010 No of Filters	2,010 No of Filters
8	4 No of jobs	23 No of jobs
12	268 tonnes of renewable biomass	202 tonnes of renewable biomass
15	2,225 tonnes of non-renewable biomass	1,676 tonnes of non-renewable biomass

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

The Emission reduction as per the VPA PDD is 5,745 tCO<sub>2</sub>e. Total days in the Monitoring Period is 266 days. So, the estimation during current monitoring period is  $5,745/365 * 266 = 4,186$  tCO<sub>2</sub>e. However, the actual emission reductions received is 3,155 tCO<sub>2</sub>e for current monitoring period which is 25% less than the estimated value for the monitoring period under consideration.

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

This is community-based project and not an afforestation and reforestation (A/R) project. Hence, this section is not applicable.

**SECTION F. SAFEGUARDS REPORTING**

As per the safeguarding Principle Assessment in Appendix-1 of the VPA-DD, there are no safeguarding principles which are to be included in the monitoring plan or hold any relevance to the voluntary project activity (VPA). Also, there are no any impact (positive/negative/slightly) for any mitigation measures, being applicable to any of the safeguarding principles. Hence, this section is not relevant.

**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.**

**Grievance/Feedback books:** The general project description as well as feedback books are available at the local office of the distribution’s partners. Feedback from stakeholders during office visits are being documented in the feedback/grievance books.

**Continuous feedback:** CME also contacts the end users on a regular basis to ensure the proper functioning of water filter, takes feedback to address grievances, and adds

more users by spreading awareness. EKI Energy Services team or the distribution team appointed by CME visits the site selection random location for this purpose and mainly records the information related to regular usage of Econeer water filter, the physical condition of filter and its parts and benefits observed by the usage of filter.

Also at ground level, each water filter units have the centralized customer support number is mentioned as well as the distribution agent with whom the beneficiary can communicate at any time and raise their issues or feedback which if found adequate are being resolved adequately.

Also, no major grievances or inputs were recorded for the current monitoring period and the end users are happy and healthy by using this water filtration units.

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

There were no stakeholder concerns or mitigation measures that arisen with the project, which would have required monitoring. Throughout the project's development and implementation phases, all stakeholder interactions were positive, and no issues necessitated mitigation. Consequently, this section is not applicable and does not contain any relevant information or actions.

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

Not Applicable as there are no contest or disputes that arisen with the project during this monitoring period.

## Revision History

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