



# Carbon Management Assessment (CMA)

Noritake Lanka Porcelain (PVT) Ltd

## **ROOFTOP SOLAR PROJECT**

Noritake Lanka Porcelain (Pvt) Ltd,  
Warakamura,  
Matale,  
Sri Lanka.



Project Title	<i>Noritake Lanka Porcelain (Pvt) Ltd -Rooftop Solar Project</i>
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Project proponent/s	<i>Noritake Lanka Porcelain (Pvt) Ltd,</i>
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# 1. Description of Project Activity

## 1.1. Introduction of Project Activity

### Summary Description of Technologies/Measures

Noritake produces the world's finest Porcelain Ware, Bone China, Stoneware & flatware. Since 1972, headed by Noritake Company Ltd in Japan, Noritake Lanka Porcelain has brought beauty, quality, and happiness to dinner tables worldwide. The Rooftop Solar PV Project aims to implement a comprehensive solar photovoltaic (PV) system within the Factory. The project involved the installation of high-quality solar panels, inverters, mounting structures, and other balance system components. The system has been designed to efficiently convert sunlight into electricity and feed it into the local power grid. The Solar system is based on the Net-metering concept of CEB.

Net metering is a billing mechanism that credits solar energy producers (consumers) for the electricity they add to the grid. Still, no payment will be made for the excess electricity supplied over the consumption under this scheme. For example, if the solar PV system produces more energy (kWh) than the consumption in a particular month, this excess energy flows to the grid, called banking. That consumer can use this banked energy for a maximum of ten years period. If the consumption is greater than the energy produced in a particular month, the electricity bill will be calculated for the net energy imported(used) during the period.

### Location

The project was carried out at the Noritake Lanka Porcelain (Pvt) Ltd factory locations. Factors including the availability of solar resources, the suitability of the land, and the proximity to the electricity grid infrastructure determined the selection of these specific sites.

### GHG Emission Reductions or Removals

The project's primary objective is reducing greenhouse gas (GHG) emissions by replacing conventional electricity with clean, renewable solar energy. The project aims to decrease reliance on fossil fuel-based electricity generation by utilizing solar power, thereby reducing carbon dioxide (CO<sub>2</sub>) emissions and other harmful pollutants associated with traditional power production. In a Net Metering scheme, the key is to account for the electricity that offsets grid electricity consumption, rather than the total generation.

### Scenario Before Project Implementation

Before the implementation of a rooftop solar PV project, electricity consumption was primarily met through the grid. The grid's electricity mix included coal, natural gas, oil,

hydroelectric power, or a combination of these sources, leading to the emission of greenhouse gases (GHGs) and associated environmental impacts. The reliability of the electricity supply depended on the grid's performance, and energy costs were subject to prevailing rates, which could fluctuate and be expensive. The rooftop solar PV project aimed to introduce clean, renewable energy generation, reduce GHG emissions, improve grid stability, and potentially lower electricity costs.

### Estimate of GHG Emission Reductions and Removals:

The annual average and total GHG emission reductions achieved by the Solar PV Project depend on several factors, including the installed capacity of the PV system, solar resource availability, electricity demand, and the carbon intensity of the grid electricity it replaces.

#### 1.2. Sectoral Scope and Project Type

Most of the projects proposed within Sri Lanka are classified under small-scale methodologies, particularly Type 1 - Category 1.D, which focuses on renewable power generation for the grid. This project involves the implementation of rooftop solar photovoltaic systems to generate renewable energy. It is eligible for registration under the Sri Lanka Carbon Crediting Scheme (SLCCS) following the small-scale methodologies of CDM-AMS-I. D -Version 18.0/EB 81: 2014 for grid-connected renewable energy generation under track II.

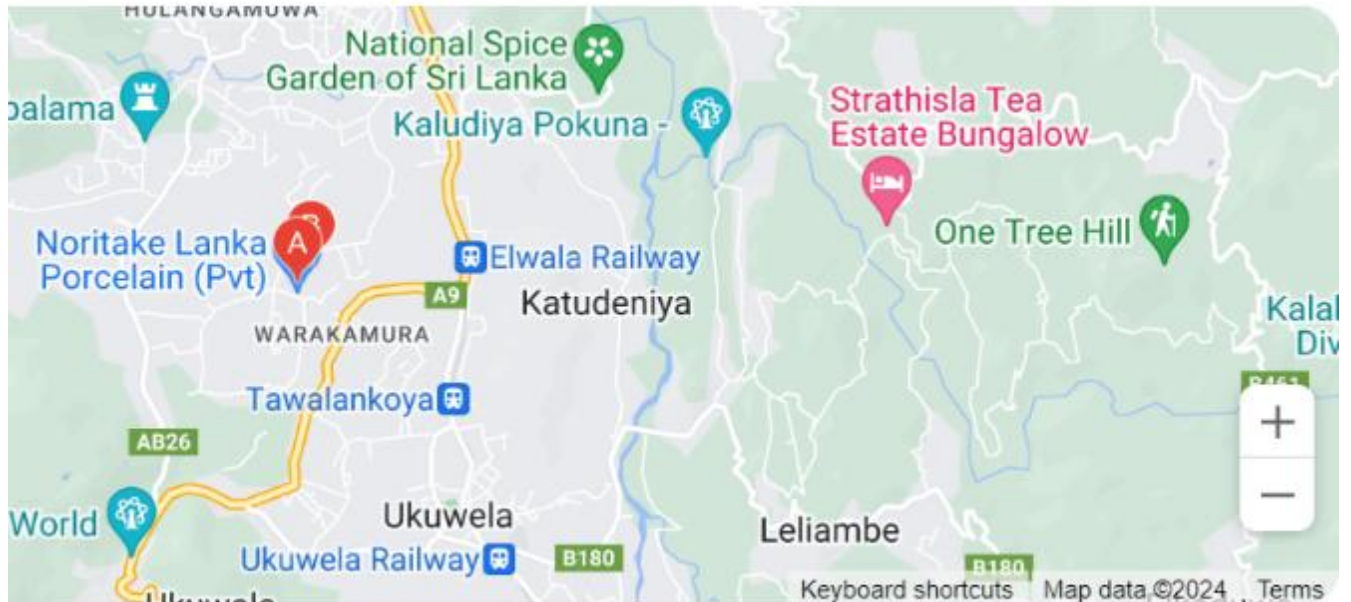
#### 1.3. Project Proponent

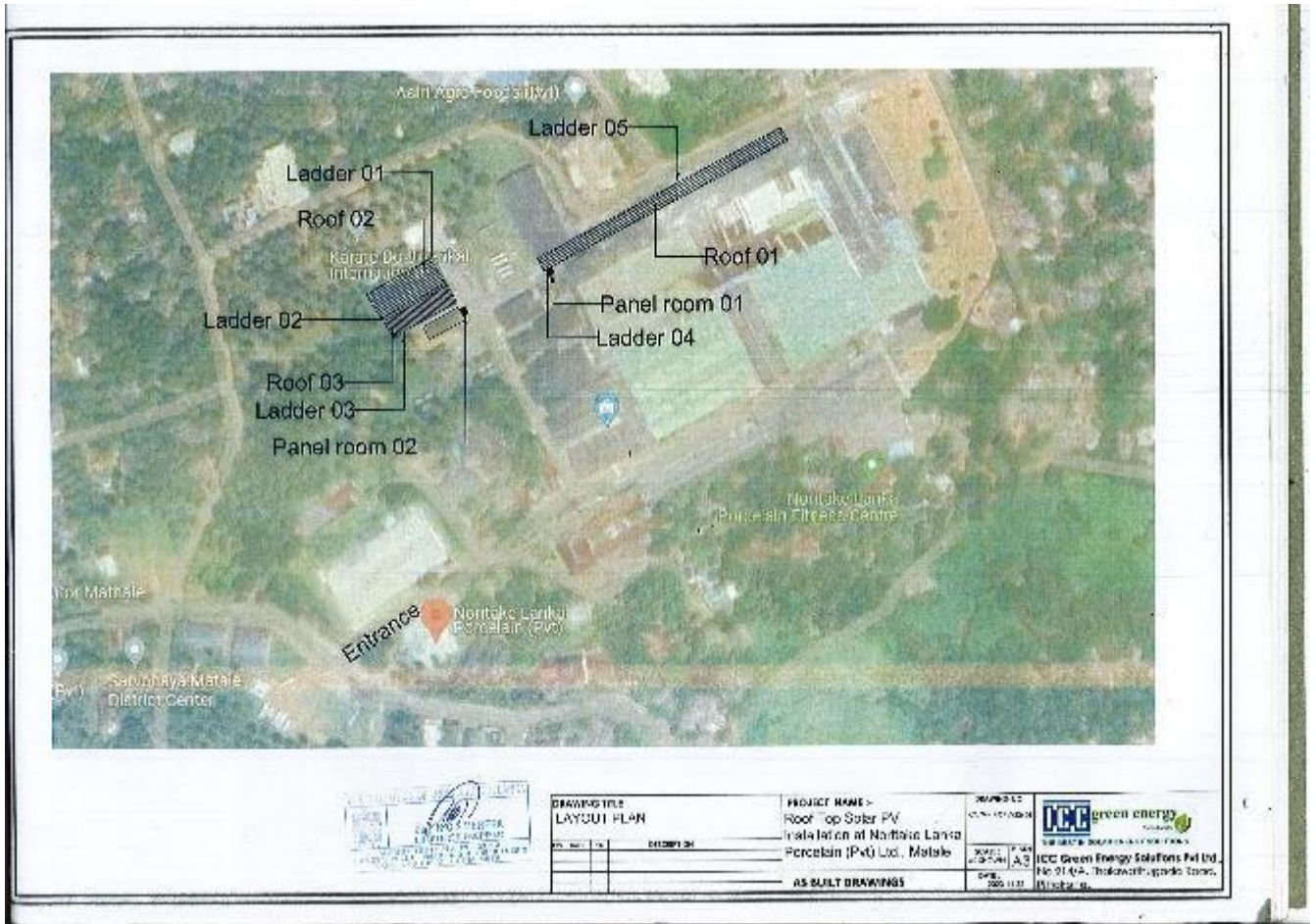
Organization Name	<i>Noritake Lanka Porcelain (Pvt) Ltd</i>
Contact Person	<i>Mr. T C Tennakoon</i>
Address	<i>Warakamura, Matale, Sri Lanka.</i>
Title	<i>Noritake Lanka Porcelain Rooftop Solar Project</i>
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#### 1.4. Location of Project Activity

Location of Project Activity	Noritake Lanka Porcelain (Pvt) Ltd
Province	Central Province
District	Matale
DS Division	Warakamura
City/Town	Matale
Community	Warakamura,
Coordinates	7°26'25"N 80°37'16"E

Locations of the sites are indicated in the following maps,





### 1.5 Project Ownership

The project is fully owned by Noritake Lanka Porcelain (Pvt.) Ltd

### 1.6 Project Findings

SITE NO	SITE LOCATION	FUND
01	Noritake Lanka Porcelain (Pvt.) Ltd	Own Investment

### 1.7 Project Start Date

SITE NO	SITE LOCATION	PROJECT START DATE
1	Noritake Lanka Porcelain (Pvt.) Ltd	03-02-2023

### 1.8. Project Commissioning Date

SITE NO	SITE LOCATION	PROJECT COMMISSIONING DATE
1	Noritake Lanka Porcelain (Pvt.) Ltd	21-08-2023

### 1.9 Project Track

The project activity aims to be registered under TRACK II, as the project was started last year but not registered with SLCCS at the beginning of the project. However, the company intends to use the carbon credits only for internal offsetting purposes

### 1.10 Project Crediting Period

The crediting period is when emission reduction credits are expected to be issued. This period initially spans over period of seven years, from 01/09/2023 to 31/08/2030, and may be renewed up to two times. Even though the project was commissioned on 21-08-2023 due to a lack of data the crediting period is considered from 01/09/2023. For each renewal, a designated operational entity recognized by SLCCS must determine and inform the Executive Board that the original project baseline remains valid or has been updated with applicable new data.

### 1.11 Scale of Project and Estimated Emission

Project Scale	
Small	✓
Large	



Year	Estimated GHG emission reductions (tCO <sub>2</sub> e)
01.09.2023- 31.08.2024	135
01.09.2024 -31.08.2025	135
01.09.2025 -31.08.2026	135
01.09.2026- 31 08.2027	135
01.09.2027 -31.08.2028	135
01.09.2028 - 31.08.2029	135
01.09. 2029 - 31.08.2030	135
Total estimated ERs	945
Total number of crediting years	07
Average annual ERs	135

**Note: Export Percentage of Solar Energy to the Grid**

The export percentage of solar energy is calculated to determine the portion of total solar energy generation submitted to the grid. Under the net metering system, not all generated energy is exported to the grid, as a portion is consumed directly on-site. Only the excess energy, after meeting internal consumption, is exported.

Calculating the average export percentage is essential for accurately assessing the energy exported to the grid and, subsequently, the emission reductions achieved. This ensures a precise calculation of carbon credits or environmental benefits associated with the project, reflecting its true contribution to offsetting fossil fuel-based energy production.

## 1.12 Description of the Project Activity

Item	Parameter	Value
PV Panel	Manufacturer/Made by	JA Solar
	Model	JAM72S30 550/MR/1500V JAM72S30 545/MR/1500V
	No of Panels Installed	550W – 720 Nos 545 W – 12 Nos
	Peak Wattage	402.5 kW
	Output voltage under rated conditions	49.90
Inverter	Manufacturer/Made by	SMA Energy
	Model and amount	STP 110-60 – qty 3 STP 50-40 – qty 1
	Total capacity	380 kWp
Cabling	DC Side Cables	4 sqmm
	AC Side Cables (inverter out cables)	70 sqmm
	AC Cables to main breaker	95 sqmm
	DC Side surge arrestor make	In built in SMA Invertor
	DC side Surge arrestor response current	
	AC side surge arrestor make	Schinder
	AC side Surge arrestor response current	20 kA
Earthing	Earth resistance	FCC Building - 7.22 ohms Raw material building - 2.38 ohms
	Solar panel earth cables	1.5 sqmm
	Cables to earth rods	35 sqmm
	DC Fuse make	SMA Energy
Over- Current Protection Device	Dc Fuse ratings	32 A
	AC side breaker make from inverter to panel	schneider
	AC side breaker rating from inverter to panel	250 A – 3 Nos 100A – 1 No
	Main breaker makes and model at the CEB connection point	schneider NXS400F
	Main breaker rating at the CEB connection point	400 A – 2 nos
Documents and Drawings	Complete final drawings	Available
	Datasheet and Manuals	Available
	Warranty certificates	Available
	Test certificates if any	Chartered Engineer certificate available

### 1.13 Conditions Before Project Initiation

Before the initiation of this project, there were no solar power plants at the Noritake factory sites. The Rooftop Solar project aims to introduce and promote the use of solar photovoltaic technology as an alternative, clean energy source. By deploying solar panels to harness solar energy, the project seeks to generate electricity without directly emitting greenhouse gases.

### 1.14 Compliance with Laws, Statutes, and Other Regulatory Frameworks

This project complies with all relevant permits and approvals, grid connection regulations, environmental regulations, building codes and standards, power purchase agreements, tax and financial regulations, and any applicable local, regional, and national laws, and statutes, within the regulatory frameworks.

### 1.15 Participation in Other GHG Programs

The project activity was not registered under any other program.

### 1.16 Other Forms of Credit

This project has not sought or received another form of GHG-related environmental credit, including renewable energy certificates.

### 1.17 Sustainable Development

The establishment of a solar PV bundle project by Noritake Lanka Porcelain (Pvt) Ltd can contribute significantly to achieving nationally stated sustainable development priorities in several ways:

**Renewable Energy Transition:** The solar PV project advances the adoption of renewable energy, supporting the transition to a low-carbon economy. This initiative aligns with sustainable development goals by promoting clean energy generation, reducing greenhouse gas emissions, and mitigating climate change.

**Energy Security and Access:** The project enhances energy security and access by generating electricity from solar energy. It provides a decentralized and reliable power source, reducing dependence on fossil fuel imports and improving energy resilience within the country. This aligns with sustainable development priorities related to energy access, affordability, and reliability.

**Economic Development and Job Creation:** The project stimulates economic development by providing employment opportunities during the construction, installation, and maintenance phases. As a renewable energy source, solar power reduces the country's reliance on

imported fossil fuels, thereby improving energy security and stabilizing energy prices. The savings generated from reduced fuel imports can be redirected towards other critical areas of the economy, such as infrastructure development, healthcare, and education. In other words, the project contributes to economic development. From driving economic growth to creating jobs and reducing energy costs, solar energy is poised to make a significant impact on the Sri Lankan economy.

**Environmental Stewardship:** Solar energy project provides a reliable and renewable source of power that can be generated locally, reducing the need for costly and environmentally damaging fossil fuel imports. This shift not only supports the nation's energy security but also aligns with global efforts to mitigate climate change and promote sustainable development.

### **Regarding monitoring and reporting,**

**Monitoring of Electricity Generation:** Comparing energy consumption to the set target regularly, and reporting the results including any variances from the targets that have been set, and Implementing management measures to correct any variances, that may have occurred,

**Reporting on Environmental Benefits:** The project may report on the estimated emissions reductions achieved. The benefits of solar energy extend beyond economic gains; they also align with Sri Lanka's sustainable development goals. Solar power supports the country's commitment to combating climate change and preserving its natural resources by reducing greenhouse gas emissions and minimizing the environmental impact of energy production.

**Socio-Economic Indicators:** Another crucial Socio-Economic benefit of solar energy is the significant savings in foreign expenditure on non-renewable fuels. Sri Lanka currently imports a substantial portion of its energy needs, which burdens the national economy heavily. By transitioning to solar power, the country can drastically reduce its dependence on imported fuels, thereby conserving foreign exchange reserves and improving the trade balance. These savings can be channeled into other vital sectors of the economy, promoting overall national development for the well-being of the citizens.

**Compliance and Regulatory Reporting:** The project may need to comply with reporting requirements set by local authorities or regulatory bodies, including reporting on energy generation, environmental compliance, and any specific sustainability indicators or targets.

#### 1.18 Leakage Management

Since this is a rooftop fixed project leakage management is not applicable.

#### 1.19 Commercially Sensitive Information

No such commercially sensitive information has been included in this project document.

## 2 Environment Impacts

### 2.1 Analysis of Environmental Impacts

Notably, solar PV projects in the country do not require an environmental impact assessment. Therefore, the project has been implemented by fulfilling the current regulations in Sri Lanka.

### 2.2 Environmental Impact Assessment

Environmental protection laws in Sri Lanka do not require rooftop Solar PV systems to obtain an environmental impact assessment report. Hence, this is not applicable.

## 3 Local Stakeholder Consultation

### 3.1 Stakeholder Consultation Process

This is a project that has been done at the company premises not at the community level, hence stakeholder consultation process is limited to the company employees. Only a cross-section of employees of the company was consulted and all of them were positive about the implementation of this project.

#### 3.1 Summary of Comments Received

The only party is the company employees and they were satisfied with the project.

#### 3.2 Consideration of Comments Received

Since the employees are very supportive of the project actions were initiated to implementation of the project.

## 4 Eligibility Criteria

### 4.1 General Criteria

Sub Section	Eligibility Criteria	Project Activity	Yes/No
4.1.1	The project activity shall be a new project, which will reduce/absorb GHG emissions or the project activity shall be a project, which was implemented on or after 2010 to offset GHG emissions within the organization.	<i>Project activity is started on 2023.02.03 as a new project designed and implemented to reduce GHG emissions.</i>	Yes
4.1.2	The project activity shall not happen in the absence of benefits received from trading Sri Lanka i (Track II)	<i>SCERs are used for in-house offset</i>	N/A
4.1.3	The project shall be implemented voluntarily by the project owner but not implemented based on legislation or regulations in the country	<i>This is a voluntary Project implemented by Noritake Porcelain.</i>	Yes
4.1.4	The project activity satisfies the environmental standards and regulations of the country	<i>The project complies with all the relevant standards and regulations in Sri Lanka.</i>	Yes
4.1.5	The project shall not have been registered under any other national or international scheme. However, if a registered project under another scheme is willing to register with SLCCS, then, such a project shall be deregistered from the other scheme in order to be eligible	<i>The project has not been registered under any other national or international scheme.</i>	Yes

4.2 Bundling Criteria; Since this is a single project, this requirement is not applicable.

## 5 Application of Methodology

### 5.1 Title and Reference of Methodology

Title: Grid-connected renewable electricity generation  
reference: AMS I.D./Version 18/EB 81:2014

### 5.2 Applicability of Methodology

The project introduced in this report is a new Solar rooftop PV project applicable under clause 4 (a) of the AMS I.D/Version 18/EB 81:2014. The project covers the installation of Solar PVs mounted on already constructed, therefore, the site comes under the applicability.

### 5.3 Project Boundary

The project's defined boundary covers both the physical location of the solar PV plants and all related structures. This includes solar PV arrays, inverters, transformers, and net metering/substation systems. The illustration below provides a visual representation of this project's scope.



When installing a solar system, a net metering device will also be installed on the side of the factory. This device measures the flow of electricity in and out between your factory and the electric grid. The grid is the larger interconnected system of wires that utility companies use to

transmit electricity to their customers.

Source	Gas	Included?	Justification/Explanation	
Baseline	Emissions of fossil fuel from each source	CO <sub>2</sub>	Yes	Main emission source
		CH <sub>4</sub>	No	Minor emission source
		N <sub>2</sub> O	No	Minor emission source
		Other	No	Minor emission source
Project	Solar power generation activity from each source	CO <sub>2</sub>	No	Minor emission source
		CH <sub>4</sub>	No	Minor emission source
		N <sub>2</sub> O	No	Minor emission source
		Other	No	Minor emission source

#### 5.4 Baseline Scenario

In the context of a solar project where the company currently obtains its energy from the national grid, the baseline scenario represents the company's existing energy situation without the solar project. The company continues to rely on electricity supplied by the national grid, which may be generated from a mix of sources, including fossil fuels, hydropower, and other renewable or non-renewable sources.

In other words, the baseline scenario for a solar project is the expected situation without the project's implementation, usually involving continued reliance on conventional energy sources like fossil fuels. In the absence of this project activity, the same amount of electricity would have been generated by the operation of existing/proposed grid-connected fossil fuel-based power plants.

It serves as a reference point to measure the project's environmental and financial benefits, such as reduced greenhouse gas emissions and cost savings.

#### 5.5 Additionality

The project is coming under the purview of Track II, and hence additionality is not applicable.

#### 5.6 Methodology Deviations

Not Applicable

## 6 Quantification of GHG Emission Reductions and Removals

### 6.1 Baseline Emissions

The baseline emission is the electrical energy baseline expressed in MWh of electricity consumed by the renewable generating unit multiplied by the grid emission factor. A baseline emission factor is calculated as a combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors are extracted by Table 9.4 and Figure 9.1: Grid Emission Factors of Sri Lanka by Energy Balance Report 2021 published by Sri Lanka Sustainable Energy Authority (Annexure -01).

The equation is as follows:

$$BE_y = EGP_{J,y} \times EF_{grid,y}$$

$BE_y$  = Baseline Emissions

$EGP_{J,y}$  = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh) emissions

$EF_{grid,y}$  = Combined margin CO<sub>2</sub> Emission factor of the grid-connected power generation in the year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>e/ MWh)

### 6.2 Project Emissions (PE<sub>y</sub>)

As the project activity is solar-based power generation, the project emissions are not applicable to the project activity as per the methodology

### 6.3 Leakage

As per the methodology, no leakage emissions are considered.

$$LE_y = 0$$

### 6.4 Net GHG Emission Reductions and Removals

Emission Reductions & Removals = Baseline Emissions – Project Emissions - Leakage Emission

Where:

Baseline Emissions represent the estimated emissions that would occur without the project or intervention.

PE<sub>y</sub> -Project Emissions represent the estimated emissions associated with the project or intervention. For most renewable energy project activities, PE<sub>y</sub> = 0.

Leakage- LE<sub>y</sub>

Solar projects do not involve using fossil fuels or other significant carbon-emitting resources. They generate electricity directly from sunlight, so no associated emissions could "leak" to other sectors or locations. Hence, LE<sub>y</sub> = 0

Since

LE<sub>y</sub> = 0; PE<sub>y</sub> = 0;

Therefore,

**Emission reduction = Baseline Emissions in year (tCO<sub>2e</sub>)**

Site No.	Location	Capacity (kWp)	Date of Commission
1	Noritake Lanka Porcelain (Pvt) Ltd	402kWp	21.08.2023

## Summary of emission reduction calculation

Parameter	Noritake	Unit
Project Capacity	402	kWp
Plant Factor	14.0	%
Average Energy Output (EG <sub>y</sub> )	191.49	MWh/Year
Grid Emission Factor (EF <sub>y</sub> )	0.7079	tCO <sub>2</sub> /MWh
Emission Reduction (ER <sub>y</sub> )	135	tCO <sub>2</sub> /Year

Year	Estimated baseline emissions or removals (tCO <sub>2</sub> e)	Estimated project emissions or removals (tCO <sub>2</sub> e)	Estimated leakage emissions (tCO <sub>2</sub> e)	Estimated net GHG emission reductions or removals (tCO <sub>2</sub> e)
01.09.2023- 31.08.2024	135	0	0	135
01.09.2024- 31.08.2025	135	0	0	135
01.09.2025 – 31.08.2026	135	0	0	135
01.09.2026- 31.08.2027	135	0	0	135
01.09.2027-31.08.2028	135	0	0	135
01.09.2028- 31.08.2029	135	0	0	135
01.09.2029- 31.08.2030	135	0	0	135
<b>Total</b>	<b>945</b>	<b>0</b>	<b>0</b>	<b>945</b>
<b>Total number of crediting years</b>	<b>07 years</b>			
<b>Annual average over the crediting period</b>	135			

## 7 Monitoring

### 7.1 Data and Parameters Available at Validation

The responsibilities of various personnel in the organization in keeping records are as follows;

Real-time monitoring software (SMA Energy) is available from 2023 September at the factory premises where the Net metering system is installed and these data can be used for validation of electricity generation.

However real-time monitoring system at Noritake Lanka Porcelain (Pvt) Ltd is monitored

by the Electrical Engineering Department where the Net Metering System is installed. This operation was started after August 2023 year and it is used to determine the actual generation based on the available real-time monitoring as an alternative verification.

No leakage effects apply to the plant's operation as the plant equipment has not moved to any other location.

Data / Parameter	Grid emission factor (EFy)
Data unit	t CO <sub>2</sub> /MWh
Description	<i>Combined margin CO<sub>2</sub> emission factor for grid-connected power generation in year y</i>
Source of data	<i>Table 9.1 Grid Emission Factor and combined margin factor of Sri Lanka by Energy Balance 2021 published by Sustainable Energy Authority</i>
Value applied	<i>0.7079 tCO<sub>2</sub>e/MWh</i>
Justification of choice of data or description of measurement methods and procedures applied	<i>The baseline emission factor is calculated as a combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors.</i>
Purpose of Data	<i>To Calculate the emission reduction</i>

## 7.2 Data and Parameters Monitored

Data / Parameter	Average Energy Output (EGy)
Data unit	MWh/year
Description	<i>Quantity of net electricity exported (fed) to the grid because of the implementation of the project during the considerable period of one year.</i>

Source of data	<i>Monthly electricity bill supplied by CEB.</i>
Description of measurement methods and procedures to be applied	<i>When the net metering connection is available the solar PV system produces more energy (kWh) than the consumption in a particular month, this excess energy flows to the grid, called export. The monthly electricity bill indicates the amount of electricity produced and fed into the grid as a result of the implementation of the project.</i>
Frequency of monitoring/recording	<i>Monthly</i>
Value applied	<i>191.49 MWh/year</i>
Monitoring equipment	<i>Energy meter</i>
QA/QC procedures to be applied	<i>The meter is properly calibrated and maintained to ensure accuracy. Testing/Calibration interval: Annually by CEB; Cross-checking of the data is done.</i>
Purpose of data	<i>Calculate baseline emission</i>
Calculation method	<i>Direct observation</i>
Comments	<i>The recorded data is checked periodically by the Factory Engineer.</i>

### 7.3 Monitoring Plan



The Noritake Solar PV Project, installed by ICC Green Energy Solutions (Pvt) Ltd, uses SMA inverters that provide access to SMA's online portal for real-time system monitoring. Monthly production details are tracked, and any performance deviations are promptly identified and reported to the CEB for rectification. A factory engineer oversees data records, ensuring their completeness and reliability, including equipment calibration and parameter recording. He also communicates with other senior factory members. Initial technical training and knowledge-sharing sessions have been conducted, with plans for additional sessions to enhance solar power generation and technical understanding.

Regarding document control, the following procedures are adhered to:

7.3.1 Documents are securely stored, either electronically or physically, with controlled access.

7.3.2 Only authorized individuals can view or modify documentation, with the required amendments.

7.3.3 All records are controlled as per the documented procedure.

7.3.4 Payments related to solar projects strictly adhered to the rules and regulations set forth by Noritake Porcelain (PVT) Ltd.

7.3.5 Document Information

## 8. Annexures

### Annexure 01: Grid Emission Factor Calculation - SLSEA Energy Balance Report – 2021

#### 9.1.1 Operating Margin

The Operating Margin (OM) is a concept which includes all power plants which can have reduced outputs due to a project. It specifically excludes 'low cost, must run' power plants, implying that with or without the project, such generation will continue. Table 9.3 gives the Simple Operating Margin (OM).

Table 9.3 – Operating Margin

	2018	2019	2020	2021
Emissions from Power Plants (t-CO <sub>2</sub> )	2,529,709.6	3,552,816.2	2,960,912	1,908,744.7
Net Electricity Generation (GWh) excluding low-cost must run power plants	3,579.2	5,006.7	4,179.3	2,498.4
Operating margin CO <sub>2</sub> emission factor (kg-CO <sub>2</sub> /kWh)				
Three-year generation based weighted average	0.7044	0.7084	0.7084	0.7208

#### 9.1.2 Build Margin

The Build Margin (BM) is a concept which attempts to foretell the happenings of a generation system in future, during the crediting period of a project, considering the recent additions to a generation system.

Table 9.4 – Build Margin

	Unit	2018	2019	2020	2021
Emissions of power plants considered for the BM	tonnes of CO <sub>2</sub>	3,508,911.2	4,266,621.5	4,111,940.3	3,922,524.3
Generation of power plants considered for the BM	GWh	4,208.8	5,101.3	5,381.3	5,863.0
Build margin emission factor	kg-CO <sub>2</sub> /kWh	0.8337	0.8364	0.7641	0.6690

#### 9.1.3 Combined Margin

The Combined Margin (CM) is a weighted average of OM and BM and is commonly known as the Grid Emission Factor (Table 9.5).

Table 9.5 – Combined Margin (kg-CO<sub>2</sub>/kWh)

	2018	2019	2020	2021
For solar, wind Projects	0.7368	0.7404	0.7224	0.7079
All other Projects; 1 <sup>st</sup> crediting period	0.7691	0.7724	0.7363	0.6949
All other Projects; 2 <sup>nd</sup> - 3 <sup>rd</sup> crediting period	0.8014	0.8044	0.7502	0.6820

The OM, BM and CM are required for the assessment of CO<sub>2</sub> emission reductions for projects claiming carbon credits under UNFCC guidelines. The GEF is indicated in Figure 9.1.



<b>Title of document</b>	<b>Carbon Management Assessment</b>
Document No	SLCCS-CMA-FRM
Document Type	Form
Business Function	Registration of Project Activity
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## Revisions

<b>Version</b>	<b>Date</b>	<b>Description</b>
01.0	06-07-2023	Initial issuance
02.0	20-01-2025	Editorial changes