NATURELINK SOLUTIONS PRIVATE LIMITED

REG.OFFICE: H. NO. 6/121/1A, PLOT NO. G-1, VAIRAGI NI WADI, NEAR DELHI GATE SURAT – 395007
Email: audit@thenaturelink.in

Verification Report
UCR ID: 098



Title	**3.787 MW bundled Rooftop Solar Projects in Gujarat, India**

Name of the project proponent and plant location			
Proponent	**Village**	**District**	**Latitude and Longitude**
M/S. Radhalaxmi Spintex Pvt. Ltd.	**Lakhdhirgadh**	**Morbi**	**22°40'12.4"N, 70°44'28.4"E**
M/S. Vivekanand Cotspin LLP	**Rangpurda**	**Mehsana**	**23°15'28.4"N, 72°20'37.3"E**
M/S. Orito Polyfab Pvt. Ltd	**Agiyol**	**Sabarkantha**	**23°33'56.6"N, 73°02'16.3"E**
M/S. Dharti Cotspin Pvt. Ltd.	**Atkot**	**Rajkot**	**22°00'52.6"N, 71°07'17.8"E**

Verified By	**Mr. Shardul Amin,** **Lead Verifier,** **Naturelink Solutions Pvt. Ltd.** **Email: audit@thenaturelink.in,** **Contact: +91- 7574804497**
Date	**16/01/2023**

COVER PAGE Project Verification Report Form (VR)	
BASIC INFORMATION	
Name of approved UCR Project Verifier / Reference No.	Naturelink Solutions Pvt Ltd.
Type of Accreditation	☐ CDM Accreditation ☐ ISO 14065 Accreditation ☒ UCR Approved Verifier
Approved UCR Scopes and GHG Sectoral scopes for Project Verification	Sectoral Scope: 01 Energy Industries
Validity of UCR approval of Verifier	May 2022 onwards
Completion date of this VR	16/01/2023
Title of the project activity	3.787 MW bundled Rooftop Solar Projects in Gujarat, India
Project reference no. (as provided by UCR Program)	098
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners, example aggregator.)	Creduce Technologies Private Limited (Aggregator)
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Shailendra Singh Rao Mobile: +91-9016850742 Address: 2-O-13,14 Housing Board Colony, Banswara, Rajasthan - 327001, India.
Country where project is located	India
Applied methodologies (Approved methodologies by UCR Standard used)	AMS-I.D.: “Grid connected renewable electricity generation”, version 18

Project Verification Criteria: Mandatory requirements to be assessed	☒ UCR Standard ☒ Applicable Approved Methodology ☐ Applicable Legal requirements /rules of the host country ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Do No Harm Test ☒ Emission Reduction calculations ☒ Monitoring Report ☒ No GHG Double Counting ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☐ Social Safeguards Standard do-no-harm criteria
Project Verifier's Confirmation: The *UCR Project Verifier* has verified the UCR project activity and therefore confirms the following:	The UCR Project Verifier Naturelink Solution Pvt. Ltd., certifies the following with respect to the UCR Project Activity "3.787 MW bundled Rooftop Solar Projects in Gujarat, India". ☒ The project aggregator has correctly described the Project Activity in the Project Concept Note 2.0 (dated 06/01/2023) including the applicability of the approved methodology A.M.S I. D and meets the methodology applicability conditions and has achieved the estimated GHG emission reductions, complies with the monitoring methodology and has calculated emission reductions estimates correctly and conservatively.

	☒ The project activity is likely to generate GHG emission reductions amounting to the estimated 12080 tCO_2e, as indicated in the monitoring report, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable UCR rules, including ISO 14064-2 and ISO 14064-3. ☒ The project activity is not likely to cause any net-harm to the environment and/or society. ☒ The project activity complies with all the applicable UCR rules and therefore recommends UCR Program to register the project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Verification Report UCR ID: 098 Date: 16/01/2023
Name of the authorised personnel of UCR Project Verifier and his/her signature with date	 Mr. Shardul Amin Lead Verifier Naturelink Solution Pvt. Ltd. Date: 16/01/2023

Project Verification Report

A. Executive Summary

The verification work has been contracted by project aggregator Creduce Technologies Pvt Ltd to perform an independent verification of its UCR project titled **"3.787 MW bundled Rooftop Solar Projects in Gujarat, India UCR approved project ID:098**, to establish number of CoUs generated by project over the crediting period from 28/05/2020 to 31/12/2022 (both days included).

Verification for the period : 28/05/2020 to 31/12/2022

In my opinion, the total GHG emission reductions over the crediting/verification period stated in the Monitoring Report (MR), submitted to me is found to be correct and in line with the UCR guidelines.

The GHG emission reductions were calculated on the basis of UCR Protocols which draws reference from, Standard Baseline, AMS. I. D – Grid connected renewable electricity generation (Version 18.0). Owing to the Covid pandemic, the verification was done remotely by way of video calls, phone calls and submission of documents for verification through emails.

I am able to certify that the emission reductions from the 3.787 MW Bundled Rooftop Solar Projects in Gujarat, India (UCR ID – 098) for the period 28/05/2020 to 31/12/2022 amounts to 12080 CoUs (12080 tCO2e).

Scope

The scope of the verification is the independent, objective review and ex-post determination of the monitored reductions in GHG emission by the project activity.

1. The quality of data management and records of underlying data;
2. Completeness and accuracy of calculations and baseline emission reports;
3. Proper inclusion and documentation of all project locations,
4. Correct application of offset rules for filling baseline period data gaps;
5. Other data, methods, and procedures deemed necessary to establish the accuracy of emission reductions.
6. Agreement stating Assurance to avoid double accounting for the project to be verified, along with required proof.

The project is assessed against the requirements of the UCR programme verification guidance document, UCR Standard, UCR programme manual and related rules and guidelines. Due professional care has been exercised and ethical conduct has been followed by the assessment team during the verification process. The verification report is a fair presentation of the verification activity. The validation of the project is not part of the present assignment and project deemed validated post registration by UCR.

Description of the Project

As described in the Project Concept Note (PCN), The project activity involves roof top solar plant having aggregated installed capacity of 3.787 MW. The generated electricity is used for captive consumption as per the net metering inter-connection agreement signed between the distribution licensee (UGVCL/PGVCL/DGVCL) and the rooftop solar PV project owner.

The technical specification of the project is as follows;

Parameters	**999 kW**	**998 kW**	**990 kW**	**800 kW**
Total no of photovoltaic modules	2700 Nos	2243 Nos	2640 Nos.	1844 Nos.
Rating of Photovoltaic module	370 Wp	445 Wp	375 Wp	435 Wp
Module make	Solarium	Trina Solar	Renewsys	Longi solar
Technology	Mono-PERC	Mono-PERC	Mono-PERC	Mono-PERC
No. of Invertor	8 Nos	7 Nos	10 Nos.	9 Nos.
Invertor capacity	100 kW	120 kW	82.8 kW	82.8 kW
Invertors make	ABB	GoodWe	Solaredge	Solaredge
PV Connectors	MC4	MC4	MC4	MC4

As mentioned in the monitoring report and emission reduction calculation sheet submitted for the verification, the project replaces anthropogenic emissions of greenhouse gases (GHGs) estimated to be approximately **12080 tCO_2e** for the said period under verification, there on displacing 13424 MWh amount of electricity from the generation mix of power plants connected to the Indian electricity grid, which is mainly dominated by the fossil-fuel based power plant.
The project activity is a grid-connected renewable energy generation project having a capacity of less than 15 MW. The project is a small-scale activity. The methodology applied in the Monitoring Report is verified against the A.M.S I. D “Grid connected renewable electricity generation” version 18.0.

Verified total emission reductions achieved through the project activity during the monitoring period is summarised below:

Summary of the project pctivity and ERs generated for the monitoring period	
Start date of this Monitoring Period	28/05/2020
Carbon credits claimed up to	31/12/2022

Total ERs generated (tCO_2e)	12080 tCO_2e
Leakage emission	0
Project Emission	0

B. Project Verification team, technical reviewer and approver:

No.	Role	Last name	First name	Affiliation	Involvement in		
					Doc review	Off-Site inspection	Interviews
1.	Lead Verifier & Technical Expert	Amin	Shardul	Naturelink Solution Pvt Ltd.(UCR approved Verifier)	Yes	No	Yes

C. Means of Project Verification

C.1 Desk/document review

The project documents submitted to UCR approved verifier Naturelink Solution Pvt. Ltd. was reviewed by the technical expert and by the lead verifier. The documents reviewed involves verification of the legal status of individual project owner for consistency, project-related documents like installation and commissioning of equipment used in project activity, environmental clearances from state or central pollution control board to establish and operate, monitoring related meters/parameters, equipment measuring instruments and their calibration records, to establish running of equipment for the crediting period.

The PCN is made available to the verifier post approval by UCR which is considered as validated documents and the content of validated PCN is considered a record wherever required. Further, the communication agreement made between the project owner and the project aggregator is a document of the UCR registry hence the project aggregator is treated as an authorized representative of the project owner. All the documents submitted by the project aggregator to the verifier are treated as documents submitted on behalf of the project owner.

The list of submitted documents is available in a subsequent section of this verification report under the section “Document reviewed or referenced”-section I.

C.2 On-Site inspection- Not applicable.

Date of off-site inspection: DD/MM/YYYY to DD/MM/YYYY	Not applicable as per UCR guideline site visit not conducted for this verification activity.

No.	Activity performed Off-Site	Site location	Date
1.			

C.3 Interviews:

As per UCR guidelines, the site visit was not conducted during the course of verification, and the only interview was conducted.

No.	Interview			Date	Subject
	Last name	First name	Affiliation		

1.	Kakasaniya	Chetan	Radhalaxmi Spintex	29/12/2022	Project overview, Inverter details,JMRs, and Calibration Report
2.		Dineshbhai	Orito Polyfab	29/12/2022	
3.		Sagarbhai	Dharti Cotspin	29/12/2022	
4.	Vaghela	Satish	Vivekanand Cotspin	29/12/2022	

C.4 Sampling approach: Not Applicable

C.5 Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)			
Identification and Eligibility of project type	NIL	NIL	NIL
General description of project activity	NIL	NIL	NIL
Application and selection of methodologies and standardized baselines	--	--	--
- Application of methodologies and standardized baselines	NIL	NIL	NIL
- Deviation from methodology and/or methodological tool	NIL	NIL	NIL
- Clarification on applicability of methodology, tool and/or standardized baseline	NIL	NIL	NIL
- Project boundary, sources and GHGs	NIL	NIL	NIL
- Baseline scenario	NIL	NIL	NIL
- Estimation of emission reductions or net anthropogenic removals	NIL	NIL	NIL
- Monitoring Report	NIL	NIL	NIL
Start date, crediting period and duration	1	NIL	NIL
Environmental impacts	NIL	NIL	NIL
Project Owner- Identification and communication	NIL	NIL	NIL
Others (please specify)	NIL	NIL	NIL
Total	1	NIL	NIL

D. Project Verification findings

D.1 Identification and eligibility of project type

Means of Project Verification	The project has taken reference of CDM methodology AMS-I.D, version 18 Grid Connected Renewable Electricity Generation.
Findings	1. Project activity is described through UCR-approved PCN. 2. UCR project communication agreement clearly defines the Project Proponent and Project Aggregator.
Conclusion	The UCR-approved format is used for description and the project meets the requirement of the UCR verification standard and UCR project standard. The UCR project communication agreement has been verified. Methodology referenced and applied appropriately describes the project type. The eligibility of the project aggregator is verified using UCR communication agreement, Project correctly applies the verification standard, UCR project standard, and UCR regulations. The project activity is overall meeting the requirements of the UCR verification standard and UCR project standard.

D.2 General description of project activity

Means of Project Verification	Document verification of detailed project reports, commissioning certificates, calibration reports, meter Photographs, and joint metering reading reports/electricity generation reports.
Findings	The project commissioning date is verified in accordance with the commissioning certificate.
Conclusion	The description of the project activity is verified to be as per the actual electricity generation from the solar plant based on the review of the emission reduction excel sheet, PCN, MR, commissioning certificate, DPR, and PPA.

D.3 Application and selection of methodologies and standardized baselines

D.3.1 Application of methodology and standardized baselines

Means of Project Verification	The project has taken the reference of CDM methodology A.M.S I.D. CDM website is referred to check the latest version of the methodology. For the applicability mentioned in the PCN and MR, the commissioning certificate, and detailed project report documents were referred.

Findings	The methodology applied is applicable for the project activity.
Conclusion	The methodology application is appropriate meeting the requirements of UCR and its standardized baseline. The methodology version is correct and valid. The referenced methodology is applicable to project activity.

D.3.2 Clarification on applicability of methodology, tool and/or standardized baseline

Means of Project Verification	The documents reviewed are A.M.S I. D "Grid connected renewable electricity generation" version 18, UCR Program standard, and UCR Verification Standard.
Findings	The emission factor is taken as 0.9 tCO_2/MWh as per the UCR standard.
Conclusion	It is the installation of greenfield projects that supply the electricity generated to the national grid. The emission factor considered for the calculation of the emission reductions is verified with the UCR program standard. The total installed electrical energy generation capacity of the project equipment does not exceed 15 MW thus meeting the requirement of a small-scale project.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	Letter from CPCB dated 07/03/2016 No. B-29012/ESS(CPA)/2015-16. PCN section B.4.
Findings	Project boundary is appropriately defined in PCN version 2.0 which is the physical and geographical site of powerhouse.
Conclusion	The project boundary is correctly defined in revised PCN version 2.0. GHG source is correctly identified and reported. The project meets the requirements of UCR project standard, verification standard, and methodology requirements.

D.3.4 Baseline scenario

Means of Project Verification	PCN Section B.5 and General Project Eligibility Criteria and Guidance, UCR Standard.
Findings	The declared information is correct and verified.
Conclusion	The baseline scenario is appropriately described. The conservative value for emission for each vintage year during the crediting period has been considered. The baseline scenario is in accordance with the UCR project verification standard and UCR project standard.

D.3.5 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	Meter calibration reports, joint meter reading reports, and general project eligibility criteria and guidance, UCR standard, page 4.
Findings	None.
Conclusion	The emission reduction calculation sheet attached with MR was rounded down for each vintage year. The total electricity generation from the project activity for this monitoring was 13424 MWh and hence, it avoids the **12080 tCO_2e** from releasing into the atmosphere. Monitoring parameters as reported adequately represents the parameters relevant to emission reduction calculation. The emission factor for electricity is as per UCR standards. Based on the monitoring, emission reduction is correctly calculated and reported. The monitoring report meets the requirements of UCR project verification requirements.

D.3.6 Monitoring Report

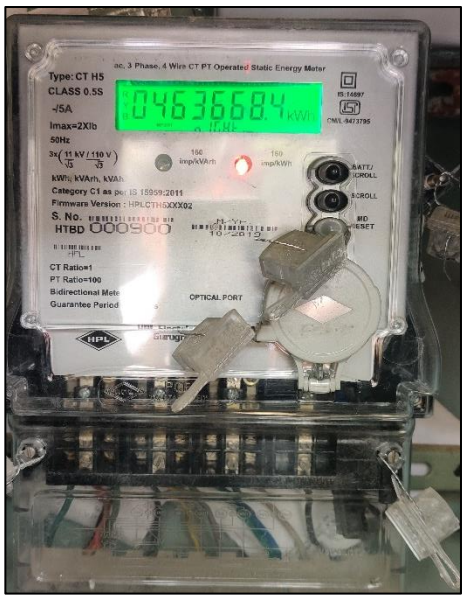
Means of Project Verification	Meter calibration reports, joint meter reading reports, and General project eligibility criteria and guidance, UCR standard, page 4. Energy Meters installed at; **M/S. Radhalaxmi Spintex Pvt. Ltd.**  **M/S. Vivekanand Cotspin LLP**



M/S. Orito Polyfab Pvt. Ltd



M/S. Dharti Cotspin Pvt. Ltd.



<table>
<tr><td>Findings</td><td>None.</td></tr>
<tr><td>Conclusion</td><td>Calibration details are mentioned in the below table;
<table>
<tr><th>Project Proponent</th><th>Meter Sr. No</th><th>Calibration Date</th></tr>
<tr><td>Radhalaxmi Spintex</td><td>X1390266</td><td>13/01/2021</td></tr>
<tr><td>Orito Polyfab</td><td>714834</td><td>04/01/2020</td></tr>
<tr><td>Vivekanand Cotspin</td><td>X1715104</td><td>13/08/2021</td></tr>
<tr><td>Dharti Cotspin</td><td>HTBD00090</td><td>28/02/2020</td></tr>
</table>

As per Central Electricity Authority (Installation and Operation of Meters) (Amendment) Regulations, 2019 clause 14 (i)-b “All Interface Meters shall be tested on-site using accredited test laboratory for routine accuracy testing at least once in five years and recalibrated if required.

The Calibration reports are verified with the available serial number of meters. The errors are within permissible limits.

The monitoring parameter reported in MR adequately represents the parameters relevant to emission reduction calculation. The calibration report ensures the accuracy of the data reported. The number of CoUs generation is calculated based on this accurately reported data. The calculation was done using an excel sheet where all the parameters were reported. The emission factor for electricity is as per UCR standard for electricity components. In the monitoring report, emission reduction calculations are correctly calculated and reported. The monitoring report meets the requirements of UCR project verification requirements.</td></tr>
</table>

D.4 Start date, crediting period, and duration

Means of Project Verification	PCN 2.0, MR, commissioning certificate, detailed project report, and JMRs documents were referred.
Findings	CL-1 was raised as the commissioning date and start date of electricity generation were found to be different
Conclusion	CL-1 is closed. The start date of the project activity is 28/05/2020 which is the earliest date from which the electricity generation was started and exported to the grid.

	Crediting period for this verification report is as per the monitoring report submitted by PP which is from 28/05/2020 to 31/12/2022.

D.5 Positive Environmental impacts

Means of Project Verification	PCN 2.0
Findings	The declared information is correct and verified.
Conclusion	The positive environmental impact meets the requirement of the UCR verification standard and UCR project standard.

D.6 Project Owner- Identification and communication

Means of Project Verification	PCN, communication agreement, MR, purchase order of solar panel, solar inverter, commissioning certificate, power purchase agreement/net metering interconnection agreement.
Findings	The declared information is correct and verified.
Conclusion	The project owner was identified through a communication agreement signed between PP and PA. Also, a legal document like a power purchase agreement/net metering interconnection agreement for captive use clearly establishes the project owner. The identification and communication correctly meet the requirement of project verification and UCR project standard.

D.7 Positive Social Impact

Means of Project Verification	The project has provided temporary employment to local people during its installation and commissioning. Also, post-commissioning some of the people have been employed permanently and local people were engaged leading to social financial benefits. Overall social impact of project implementation is positive in the surrounding area.
Findings	--
Conclusion	The project has an overall positive social impact.

D.8 Sustainable development aspects (if any)

Means of Project Verification	Not Applicable
Findings	--
Conclusion	The Project addresses SDG 7 Affordable and Clean Energy and SDG 13 Climate Action

E. Internal quality control:

- Due professional care has been taken while reviewing the submitted document.
- There is no conflict of interest as the verifier has no other engagement with either the aggregator or project owner directly or indirectly.
- Verification team consists of experienced personnel.
- Technical review is performed by an experienced and independent person.

F. Project Verification opinion:

Considering the above-mentioned verification conducted on the basis of UCR Protocol, which draws reference from UCR Protocol Standard and Baseline, AMS.I.D – Grid connected renewable electricity generation (Version 18.0), the documents submitted during the verification including the PPA, DPR, commissioning certificate, JMRs and calibration reports, Project Concept Note (PCN 2.0), Monitoring Report, I am able to certify that the emission reductions from the project - 3.787 MW bundled Rooftop Solar Projects in Gujarat, India (UCR ID – 098) for the period 28/05/2020 to 31/12/2022 amounts to 12080 CoUs (12080 tCO_2e).

G. Abbreviations

Abbreviations	Full texts
UCR	Universal Carbon Registry
CPCB	Central Pollution Control Board
JMR	Joint meter reading
GETCO	Gujarat energy Transmission Corporation Ltd
PGVCL	Paschim Guarat Vij Company Ltd
DGVCL	Dakshin Guarat Vij Company Ltd
UGVCL	Uttar Guarat Vij Company Ltd
PGCIL	Power Grid Corporation of India Limited
MR	Monitoring report
PCN	Project Concept Note
VR	Verification Report
VS	Verification Statement
DAA	Double Accounting Agreement
COD	Commercial Operation Date
PP/PO	Project Proponent / Project Owner
PA	Project Aggregator

PPA	Power Purchase Agreement
ER	Emission Reduction
CoUs	Carbon offset Units.
tCO_2e	Tons of Carbon Dioxide Equivalent
kWh	Kilo-Watt Hour
MWh	Mega-Watt Hour
kW	Kilo-Watt
MW	Mega-Watt
CDM	Clean Development Mechanism
SDG	Sustainable Development Goal
CAR	Corrective Action Request
CL	Clarification Request
FAR	Forward Action Request
GHG	Green House Gas
SPV	Solar Photovoltaic
PV	Photovoltaic

H. Competence of team members and technical reviewers

No.	Last name	First name	Affiliation	Technical Competence
1.	Amin	Shardul	Lead Verifier	Mr. Shardul Amin is post graduate having more than 5 years of experience in the field of waste to energy, thermochemical conversion technologies and emission study.

I. Document reviewed or referenced

No.	Author	Title	Provider
1	UCR	Communication agreement	PA
2	Creduce	Project Concept Note	PA
3	Creduce	Monitoring Report	PA
4	Creduce	Avoidance of double accounting	PA
5	Creduce	Emission reduction excel	PA
6	PP	Net Metering Interconnection Agreement	PA
7	PGVCL/UGVCL	Calibration report	PA
8	PP	Purchase order of solar panels	PA
9	PP	Purchase order of solar inverter	PA
11	GEDA	Commissioning date and the project registration details	PA
12	PP	Meter photographs	PA

13	PP	Energy generation reports	PA

J. Clarification request, corrective action request, and forward action request

Table 1. CLs from this Project Verification

CL ID	**01**	**Section no.:** D.4	Start date, crediting period, and duration	**Date:** 08/01/2023
Description of CL				
Need clarification on the start date of crediting period.				
Project Owner's response				**Date:** 12/01/2023
The earliest date of electricity generation is taken as the start date of electricity generation.				
Documentation provided by Project Owner				
Electricity generation data.				
UCR Project Verifier assessment				**Date:** 16/01/2023
As per the UCR standard, the start date of crediting is the date of grid synchronization or the date from which the electricity generation has begun.				

Table 2. CARs from this Project Verification

CAR ID		**Section no.**		**Date:**
Description of CAR				
Project Owner's response				**Date:**
Documentation provided by Project Owner				
UCR Project Verifier assessment				**Date:**

Table 3. FARs from this Project Verification

FAR ID	xx	**Section no.**		**Date:** DD/MM/YYYY
Description of FAR				
Project Owner's response				**Date:** DD/MM/YYYY

Documentation provided by Project Owner	
UCR Project Verifier assessment	**Date:** DD/MM/YYYY

ANNEXURE I: Photographs of the Power Plant

A. Google Map Image of the Power Plant



Figure-1- Dharti Cotspin



Figure-2- Orito Polyfab

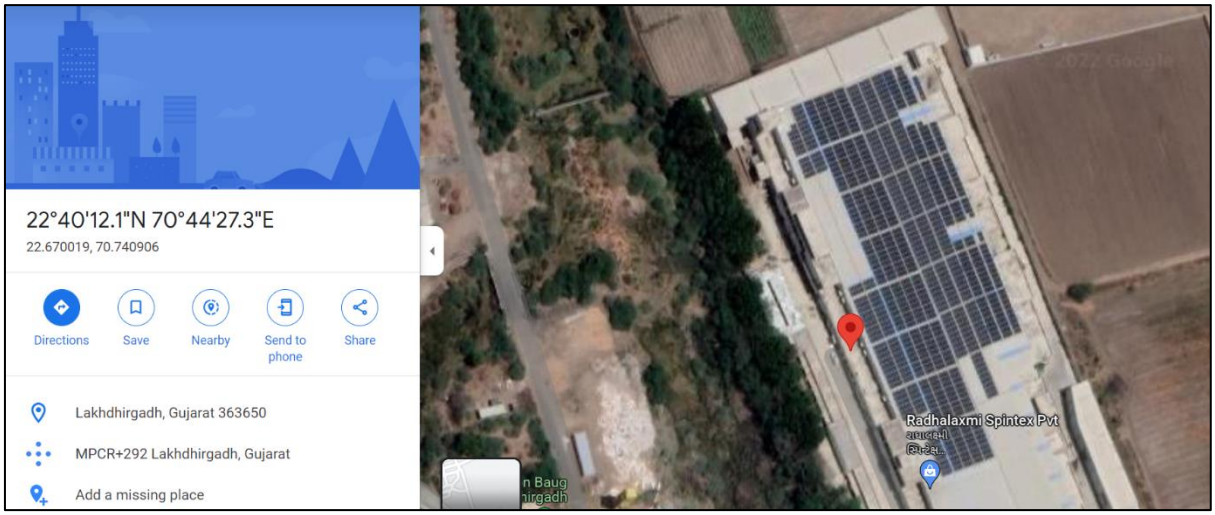


Figure-3- Radhalaxmi Spintex

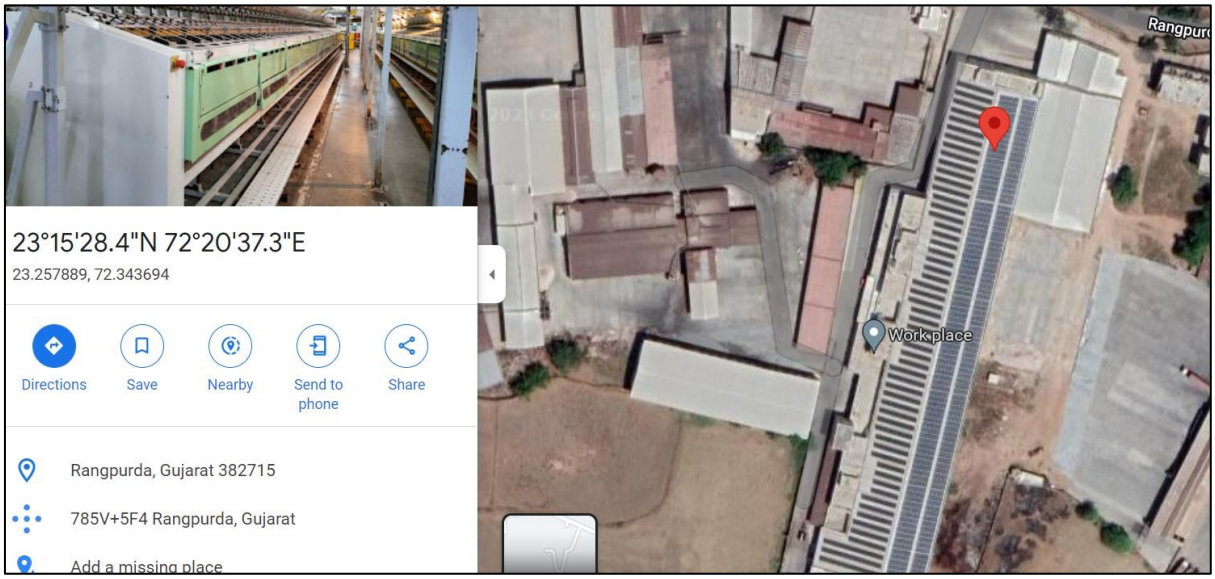


Figure-4- Vivekanand Cotspin

B. Control Panel and Invertor



Figure-5- Dharti Cotspin

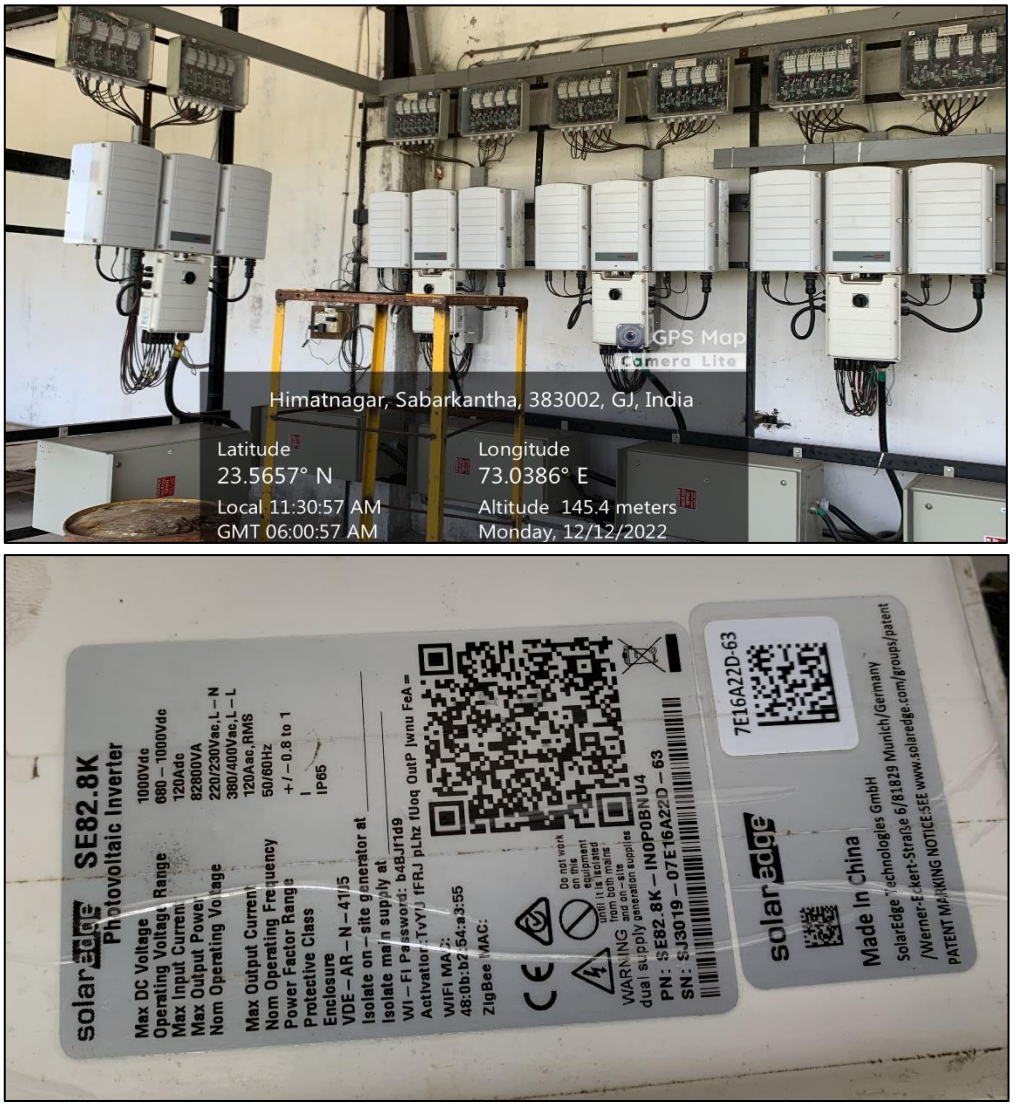


Figure-6- Orito Polyfab



Figure-7- Radhalaxmi Spintex



Figure-8- Vivekanand Cotspin