



## Verification Report for

Project : 4 MW Wind Power Project by Gujarat Fluorochemicals Limited, India.

UCR Project ID : 394

Name of Verifier	SQAC Certification Pvt. Ltd.
Date of Issue	May 17, 2024
Project Proponent	M/s. Gujarat Fluorochemicals Limited.
UCR Project Aggregator	Inox Green Energy Service Limited
Work carried by	Mr. Santosh Nair
Work reviewed by	Mr. Praful Shinganapurkar

### **Summary:**

SQAC Certification Pvt. Ltd., has performed verification of the “4 MW Wind Power Project by Gujarat Fluorochemicals Limited, India” which generates electrical power using wind energy which is generated from two windmills of total capacity 4MW from Veraval and Kidi village of Rajkot & Amreli District in the state of Gujarat, India, there by displacing non-renewable fossil resources resulting to sustainable, economic and environmental development.

**The project activity meets the following UN SDG's:**



Verification for the period: **08.10.2013 to 31.12.2022** (9 Years 02 month 23 days)

Accredited by 5 Jupiter House, Callera Park, Aldermaston, Reading Berkshire RG7 8NN, United Kingdom (UK).

India Office: Off. No. 4, Fifth Floor, Buildmore Business Park, New Canca Bypass Road, Khorlim, Mapusa, Goa – 403 507

Web: [www.sqac.in](http://www.sqac.in)

Email: [info@sqac.in](mailto:info@sqac.in) Tel: 7219716786 / 87



In our opinion, the total GHG emission reductions over the crediting / verification period stated in the Project Concept Note (PCN) / Monitoring Report (MR), submitted to SQAC are 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, UCR Protocol Standard Baseline, UNFCCC Methodology AMS-I.D: "Grid connected renewable electricity generation", version 18. The verification was done remotely by way of video calls / verification, phone calls and submission of documents for verification through emails.

SQAC is able to certify that the emission reductions from the 4 MW Wind Power Project by Gujarat Fluorochemicals Limited, India, (UCR ID – 394) for the period **08.10.2013 to 31.12.2022** (9 Years 02 month 23 days) amounts to **44,801 CoUs (44,801 tCO<sub>2</sub>eq)**

**Detailed Verification Report:**

**Purpose:**

The main purpose of the project activity is the implementation and operation of 4 MW wind power project by Gujarat Fluorochemicals Limited (GFL), hereinafter referred to as the Project Proponent (PP). The GFL Wind Projects consists of 2 WTGs of 2.0 MW each at the following locations.

<b>Sr No</b>	<b>Name of Wind Farm</b>	<b>Installed Capacity (MW)</b>	<b>Village/s</b>	<b>District</b>	<b>State</b>
01	Gujarat Fluorochemicals Limited	4	Veraval & Kidi	Rajkot & Amreli	Gujarat

The wind farm is owned by Gujarat Fluorochemicals Limited (GFL), which operates as a subsidiary of Inox Wind Ltd (IWL) and Inox Green Energy Service Ltd (IGESL), forming part of the Inox GFL Group.

GFL holds complete ownership of the wind farm project, wherein electricity generated from the Wind Turbine Generators (WTGs) is either supplied to the regional Gujarat Energy Transmission Corporation Limited (GETCO) Grid or utilized for captive consumption through grid wheeling.

The wind farm's operation entails a continuous reduction of greenhouse gas (GHG) emissions, qualifying it for voluntary carbon offset units (CoUs) under the "Universal Carbon Registry" (UCR). In the absence of this project, electricity would have been sourced from fossil fuel-based grid-



**Scope:**

The scope covers verification of emission reductions from the project - 4 MW Wind Power Project by Gujarat Fluorochemicals Limited, India, (UCR ID – 394)

**Criteria:**

Verification criteria is as per the requirements of UCR Standard.

**Description of project:**

Project Name: 4MW Wind Power Project by Gujarat Fluorochemicals Limited, Gujarat, India

Project Capacity: 4 MW

Units: 2 WTG

Sr. No	WTG No	COD	Village	Tehsil	District	State
1	PT-T-01	08/10/2013	Veraval	Jasdan	Rajkot	Gujarat
2	PTT-113	03/02/2016	Kidi	Babra	Amreli	Gujarat

The project activity titled, 4 MW Wind Projects by GFL, Gujarat, India is the installation of new grid connected renewable power plants/units. The baseline scenario and scenario existing prior to the implementation of the project activity are both the same.

Technical details of the machines installed are explained below:

<b>Model</b>		
1	Turbine Model	InoxDF2000-WT100
<b>Operating Data</b>		
2	Rated power	2000 kW
3	Cut in wind speed	3.0m/s
4	Rated wind speed	11m/s
5	Cut-out Wind speed	20.0m/s
6	Hub Height	92m
<b>Rotor</b>		
7	Rotor Diameter	100 m
9	Rotor Area	6795m <sup>2</sup>
10	No of Rotor blade	3
<b>Generator</b>		
11	Type	Asynchronous
12	Power regulation	Pitch
<b>Tower</b>		
13	Type	tubular
14	Hub height	80m
15	Rated voltage	690V

The details along with commissioning period are as follows:

**APPENDIX -1**

Details of location of wind turbine generator, its specifications, name plate details and commissioning certificate from GEDA.

Sr. No.	Description	Details
[1]	Name of the Owner	M/s. Inox Wind Limited
[2]	Status of the Owner Company / Developer	M/s.Inox Wind Infrastructure Services Limited
[1]	Amount of Stamp Paper: Stamp Paper no.: Date of issue	100/- AF205151 23/09/2013
[2]	Location of WTG/s Survey no.: Village : Taluka : District :	GGM-PTT-1 8p Veraval Bhadla Jasdan Rajkot
[3]	Name plate details of wind turbine generator including serial number / job number of manufacturer, make and capacity	<b>WL13F0618</b> <b>Make – Leroy Somer</b> <b>Capacity –2 MW 1 No. 2000 KW</b>
[4]	Serial number and date of commissioning certificate, key plan of the land showing location and capacity of WTG/s (copy of the certificate may please be attached.  WTG ID Number:	Under Commissioning  Key plan & Micro siting Drawing enclosed herewith  IWISL/2000/12-14/3306
[5]	Wheeling option at Location:  GETCO/AEC/SEC/Licensee: Division: Consumer No: Contract Demand : Supply Voltage :	M/s. Gujarat Fluorochemicals Ltd 12/A. GIDC Dahej Industrial Estate, Taluka-Vagra, Dist. Bharuch  Share-100 % DGVCL 39193 40000 KVA 66 KV

Additional Charge Engineer (G&R)  
DGVCL SURAT


INOX WIND LIMITED

Authorized Signatory

**APPENDIX -1**

Details of location of Wind Turbine Generator, its specifications, name plate details and commissioning certificate from GEDA

Sr. No.	Description	Details
[1]	Name of the Owner	M/s. Gujarat Fluorochemicals Limited
[2]	Status of the Owner Company / Developer	Company
[1]	Amount of Stamp Paper: Stamp Paper no.: Date of issue:	Rs. 300/-
[2]	Location of WTG/s Survey no.: Village: Taluka: District:	PTT-113 80/p1 Kidi Babra Amreli
[3]	Name plate details of wind turbine generator including serial number / job number of manufacturer, make and capacity	507054A-15001 ELIN  Make- Inox Capacity- 2. 00MW X 1 No
[4]	Serial number and date of commissioning certificate, key plan of the land showing location and capacity of WTG/s (copy of the certificate may please be attached).	Commissioning certificate: GEDA/PWF/INOX- IWL/15-16/9657 dated:-01/03/2016  Micrositing Drawings attached herewith
	WTG ID Number:	<b>IWISL/2000/15-16/3703</b>
[5]	Wheeling option at Location:  GETCO/AEC/SEC/Licensee: Division: Consumer No: Contract Demand: Supply Voltage:	M/s. Gujarat Fluorochemicals Limited, Survey No 16/3, 26, 27, Village: Ranjitnagar Taluka: Ghoghamba District: Panchmahal 389380 MGVCL MGVCL Division office 41328 7000 kVA 66 kV

  
Additional Chief Engineer (RA&C)  
MGVCL, Corporate Office



Total GHG emission reductions achieved or net anthropogenic GHG removals by sinks achieved in this monitoring period:

<b>Summary of the Project Activity and ERs Generated for the Monitoring Period</b>	
Start date of this Monitoring Period	08/10/2013
Carbon credits s (CoUs) claimed up to	31/12/2022
Total ERs generated (tCO <sub>2</sub> eq)	44,801 (expressed as CoUs)
Project Emission (tCO <sub>2</sub> eq)	0
Leakage (tCO <sub>2</sub> eq)	0

### **United Nations Sustainable Development Goals:**

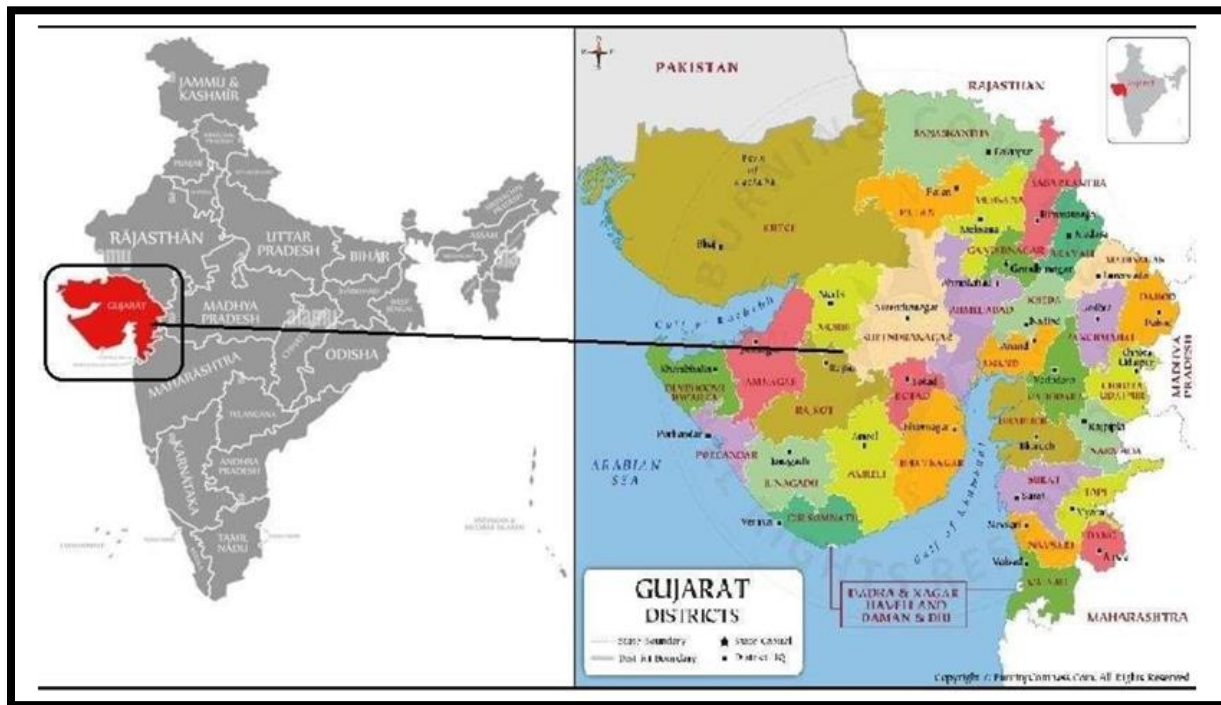
The project activity generates electrical power using wind energy which is generated from windmills, thereby displacing non-renewable fossil resources resulting to sustainable, economic and environmental development. In the absence of the project activity equivalent amount of power generation would have taken place through fossil fuel dominated power generating stations. Thus, the renewable energy generation from project activity will result in reduction of the greenhouse gas emissions. Positive contribution of the project to the following Sustainable Development Goals:

- SDG13: Climate Action
- SDG 7: Affordable and Clean Energy
- SDG 8: Decent Work and Economic Growth

### **Location of project activity:**

Village: Veraval & Kidi  
District: Rajkot & Amreli  
State: Gujarat  
Country: India  
Latitude: 22.228576 & 21.950576  
Longitude: 71.100081 & 71.320081

The representative location map is included below:



### Level of Assurance:

The verification report is based on the information collected through interviews conducted over video calls / phone calls, supporting documents provided during the verification, Project Concept Note (PCN) / Monitoring Report (MR), submitted to SQAC. The verification opinion is assured provided the credibility of all the above.

### Verification Methodology:

Review of the following documentation was done by SQAC Verifier, Mr. Santosh Nair, who is experienced in such projects.

- Project Concept Note (PCN)
- Monitoring Report (MR)
- Commissioning Certificate of 2 nos. WTG's
- Calibration Certificates
- Joint Meter Readings
- Wheeling Agreement
- Data provided upon request of all the documents of the related projects.



**Sampling:**

Since there are 2 Wind Turbine generators (WTGs) installed of total capacity of 4 MW, 1 WTG has been selected for complete site monitoring through video, which is PTT-01

**Persons interviewed:**

1. Mr. Saurabh Tyagi: M/s. Inox Green Energy Service Limited
2. Mr. Mukesh Kumar (Assistant Manager): M/s. Gujarat Fluorochemicals Limited.



CALIBRATION CERTIFICATE		F/CA/13 Issue No. 01 Page 1 of 7
<b>Name and Address of Customer:</b> Inox Green Energy Services Ltd. 66 KV GFL Sub-Station, Survey No. : 71/7, 72/1, Deepura, Ta. : Chotila, Dist. : Surendranagar		<b>Certificate No.</b> AEP/22/M/S-1275 <b>Date of issue</b> 01.10.2022 <b>Date of calibration</b> 29.09.2022 <b>Date of receipt</b> 29.09.2022
<b>ULR No.:</b> CC29832200001273F		
<b>Details of Unit Under Calibration</b>		
Location of performance of Calibration : GFL Line - 3 (Main Meter)		
Name of Instrument : Three Phase Energy Meter		
Sr. No.	: RUM8332	
Identification No.	: 203095	
Make / Model No.	: Secura / Premier 100	
Standard Current	: 1 A	
Frequency	: 50 Hz	
Accuracy	: 0.25	
Mode of Calibration	: Direct	
Temp	: 28°C	
Type	: E3M021, 3P4W	
VT Ratio	: 710V/V3	
CT Ratio	: 71 A	
Unit	: 180 Pulse/Unit	
Humidity	: 40-60%	
Visual inspection	: Found OK	
Initial Error	: NA	
Calibration By:	Approved By:	
Calibration Engineer	Quality Manager	
<b>AKRON ENERGY PRIVATE LIMITED</b> A-504, "PRIVILION", Behind GSKON Temple, S G Highway, Ahmedabad, Gujarat-380054. +91 90990 47999, naresh.soni@akronenergy.in akronenergy.in		

CALIBRATION CERTIFICATE		F/CA/13 Issue No. 01 Page 1 of 7
<b>Name and Address of Customer:</b> Inox Green Energy Services Ltd. 66 KV GFL Sub-Station, Survey No. : 71/7, 72/1, Deepura, Ta. : Chotila, Dist. : Surendranagar		<b>Certificate No.</b> AEP/22/M/S-1275 <b>Date of issue</b> 01.10.2022 <b>Date of calibration</b> 29.09.2022 <b>Date of receipt</b> 29.09.2022
<b>ULR No.:</b> CC29832200001271F		
<b>Details of Unit Under Calibration</b>		
Location of performance of Calibration : GFL Line - 1 (Main Meter)		
Name of Instrument : Three Phase Energy Meter		
Sr. No.	: G4R8371	
Identification No.	: 203091	
Make / Model No.	: Secura / Premier	
Standard Current	: 1 A	
Frequency	: 50 Hz	
Accuracy	: 0.25	
Mode of Calibration	: Direct	
Temp	: 28°C	
Type	: E3M021, 3P4W	
VT Ratio	: 664V/V3/110V/V3	
CT Ratio	: 71 A	
Unit	: 180 Pulse/Unit	
Humidity	: 40-60%	
Visual inspection	: Found OK	
Initial Error	: NA	
Calibration By:	Approved By:	
Calibration Engineer	Quality Manager	
<b>AKRON ENERGY PRIVATE LIMITED</b> A-504, "PRIVILION", Behind GSKON Temple, S G Highway, Ahmedabad, Gujarat-380054. +91 90990 47999, naresh.soni@akronenergy.in akronenergy.in		

CALIBRATION CERTIFICATE		F/CA/13 Issue No. 01 Page 1 of 7
<b>Name and Address of Customer:</b> Inox Green Energy Services Ltd. 66 KV GFL Sub-Station, Survey No. : 71/7, 72/1, Deepura, Ta. : Chotila, Dist. : Surendranagar		<b>Certificate No.</b> AEP/22/M/S-1275 <b>Date of issue</b> 01.10.2022 <b>Date of calibration</b> 29.09.2022 <b>Date of receipt</b> 29.09.2022
<b>ULR No.:</b> CC29832200001273F		
<b>Details of Unit Under Calibration</b>		
Location of performance of Calibration : GFL Line - 2 (Main Meter)		
Name of Instrument : Three Phase Energy Meter		
Sr. No.	: G4R8370	
Identification No.	: 203093	
Make / Model No.	: Secura / Premier	
Standard Current	: 1 A	
Frequency	: 50 Hz	
Accuracy	: 0.25	
Mode of Calibration	: Direct	
Temp	: 28°C	
Type	: E3M021, 3P4W	
VT Ratio	: 664V/V3/110V/V3	
CT Ratio	: 71 A	
Unit	: 180 Pulse/Unit	
Humidity	: 40-60%	
Visual inspection	: Found OK	
Initial Error	: NA	
Calibration By:	Approved By:	
Calibration Engineer	Quality Manager	
<b>AKRON ENERGY PRIVATE LIMITED</b> A-504, "PRIVILION", Behind GSKON Temple, S G Highway, Ahmedabad, Gujarat-380054. +91 90990 47999, naresh.soni@akronenergy.in akronenergy.in		

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CALIBRATION DIVISION

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**CALIBRATION CERTIFICATE**

Name and Address of Customer:  
Inox Green Energy Services Ltd.  
66 KV GFL Sub-Station, Survey No. : 71/1, 72/1,  
Devgpara, Ta. - Chorla, Dist. - Surendranagar

Certificate No.: AEP/22/M/5-1274  
Date of issue: 01.10.2022  
Date of calibration: 29.09.2022  
Date of receipt: 29.09.2022

ULR No.: CC29832200001274F

**Details of Unit Under Calibration**

Location of performance of Calibration : GFL Line - 1 (Check Meter)  
Name of Instrument : Three Phase Energy Meter  
Sr. No. : 020554-A  
Identification No. : 201054  
Make / Model No. : L&T / ER30P  
Standard Current : 1 A  
Frequency : 50 Hz  
Accuracy : 0.25 for Active, 0.55 for Reactive  
Mode of Calibration : Direct  
Temp : 28°C  
Type : 3P4W  
VT Ratio : 1  
CT Ratio : 1:1 A  
Unit : 50 Pulse/Unit  
Humidity : 40-60%  
Visual Inspection : Found OK  
Initial Error : NA

Calibration By: [Signature]  
Approved By: [Signature]

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akronenergy.in

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**CALIBRATION CERTIFICATE**

Name and Address of Customer:  
Inox Green Energy Services Ltd.  
66 KV GFL Sub-Station, Survey No. : 71/1, 72/1,  
Devgpara, Ta. - Chorla, Dist. - Surendranagar

Certificate No.: AEP/22/M/5-1274  
Date of issue: 01.10.2022  
Date of calibration: 29.09.2022  
Date of receipt: 29.09.2022

ULR No.: CC29832200001274F

**Details of Unit Under Calibration**

Location of performance of Calibration : GFL Line - 1 (Check Meter)  
Name of Instrument : Three Phase Energy Meter  
Sr. No. : 020554-A  
Identification No. : 201054  
Make / Model No. : L&T / ER30P  
Standard Current : 1 A  
Frequency : 50 Hz  
Accuracy : 0.25 for Active, 0.55 for Reactive  
Mode of Calibration : Direct  
Temp : 28°C  
Type : 3P4W  
VT Ratio : 1  
CT Ratio : 1:1 A  
Unit : 50 Pulse/Unit  
Humidity : 40-60%  
Visual Inspection : Found OK  
Initial Error : NA

Calibration By: [Signature]  
Approved By: [Signature]

AKRON ENERGY PRIVATE LIMITED  
A-504, "PRIVILEGE", Behind SDCON Temple,  
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**CALIBRATION CERTIFICATE**

Name and Address of Customer:  
Inox Green Energy Services Ltd.  
66 KV GFL Sub-Station, Survey No. : 71/1, 72/1,  
Devgpara, Ta. - Chorla, Dist. - Surendranagar

Certificate No.: AEP/22/M/5-1274  
Date of issue: 01.10.2022  
Date of calibration: 29.09.2022  
Date of receipt: 29.09.2022

ULR No.: CC29832200001274F

**Details of Unit Under Calibration**

Location of performance of Calibration : GFL Line - 2 (Check Meter)  
Name of Instrument : Three Phase Energy Meter  
Sr. No. : 020554-A  
Identification No. : 201054  
Make / Model No. : L&T / ER30P  
Standard Current : 1 A  
Frequency : 50 Hz  
Accuracy : 0.25  
Mode of Calibration : Direct  
Temp : 28°C  
Type : 3P4W  
VT Ratio : 1  
CT Ratio : 1:1 A  
Unit : 50 Pulse/Unit  
Humidity : 40-60%  
Visual Inspection : Found OK  
Initial Error : NA

Calibration By: [Signature]  
Approved By: [Signature]

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**GEICO**  
GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

State Load Despatch Centre-Gotri, Vadodara-390 021  
Fax: 0265-2352019 Phone: 0265-2352103/2322206 Email : sldcibccomm@gmail.com  
No. SLDCC/Comm./WEA/2019-20/AUG/REV028 Date:16-09-2019

**CERTIFICATE FOR SHARE OF ELECTRICITY GENERATED BY THE WIND FARM**  
AT GOLIDA (GFL) FOR THE MONTH OF AUGUST 2019

(A) ELECTRICITY GENERATED BY THE WIND FARM			
1	Period Considered for the month of AUGUST 2019	01-August-19 to 31-August-19	
2	Active Energy Received From GOLIDA (GFL) wind farm	17341.616	Mwh
3	Reactive Energy Supplied to GOLIDA (GFL) wind Farm	32.859	Mvarh

(B) SHARE OF WIND FARM OWNER IN THE ELECTRICITY RECEIVED AT GOLIDA (GFL) S/S				
Sr No	Name of Wind Farm Owner.	Installed Capacity(MW)	Share in Active Energy (Mwh)	Share in Reactive Energy (Mvarh)
1	Gujarat Fluorochemicals Ltd.(GGM-B4.24.93.21.113,116,114)	14,000	2065.161	2.176
2	Gujarat Fluorochemical Ltd.	24,000	4794.509	4.602
3	Ashwari Traders,Mumbai"	2,000	439.742	0.386
4	CERA SANITARYWARE LTD.	2,000	377.239	0.234
5	Ratnamani Metals & Tubes Ltd. , Ahmedabad.	4,000	683.909	0.400
6	Sri Balaji and Company, Mumbai.	2,000	414.140	0.149
7	Jagdamba Polymers Ltd. , Ahmedabad	2,000	340.063	0.220
8	Ambica Polymer Pvt. Ltd. , Ahmedabad	2,000	375.764	0.263
9	Inox Wind Ltd. ,HP	2,000	383.301	0.325
10	Meyur Wovens Pvt. Ltd. , Ahmedabad	2,000	347.778	0.224
11	Grainspan Nutrients Pvt.Ltd,Ahmedabad	2,000	371.965	0.170
12	Surya Vidyut Ltd.	26,000	5123.284	22.051
<b>SHARE OF WIND FARM OWNER (UNDER REC MECHANISM)</b>		12,000	1624.761	1.659
<b>TOTAL</b>		<b>96,000</b>	<b>17341.616</b>	<b>32.859</b>

(C) CONSIDERATIONS FOR ISSUING ABOVE STATEMENT

- Active Energy received for GOLIDA (GFL) wind Farm pooling at interface point of substations is computed by GOLIDA (GFL) by summation of net energy recorded in Special Energy (ABT) meter in every 15 minute basis. The detail computation of active energy is carried out by SLDCC and block wise computation and meter data is published on website.
- Reactive energy supplied to Wind Farm pooling substation GOLIDA (GFL) S/S is computed as per the conventional tariff meters. The detail computation of reactive energy is carried out by GEDA and circulated by them to all wind owners in advance.
- Share of wind Farms in the electricity received at interface point from GOLIDA (GFL) S/S is computed by GEDA on the basis of energy generation recorded on each wind energy generation during the period specified as above.
- After careful consideration of various representation received before SLDCC-Gujarat, SLDCC has issued this statement for immediate period to circumvent difficulties faced by various wind owners. This will be continued till the received mechanism is in place. The any change in procedure will be communicated separately.  
For BLOCKED Wind Energy Certificate Please Visit:  
[https://www.sldccguj.com/compdoc/CERTIFICATES\\_NOT\\_TO\\_BE\\_ISSUED\\_AUG19.pdf](https://www.sldccguj.com/compdoc/CERTIFICATES_NOT_TO_BE_ISSUED_AUG19.pdf)

Remark1

**GEICO**  
GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

State Load Despatch Centre-Gotri, Vadodara-390 021  
Fax: 0265-2352019 Phone: 0265-2352103/2322206 Email : sldcibccomm@gmail.com  
No. SLDCC/Comm./WEA/2019-20/AUG/REV103,028 Date:24-10-2020

**CERTIFICATE FOR SHARE OF ELECTRICITY GENERATED BY THE WIND FARM**  
AT 220 KV SUKHPAR(INOX) S/S FOR THE MONTH OF AUGUST 2019

(A) ELECTRICITY GENERATED BY THE WIND FARM			
1	Period Considered for the month of AUGUST 2019	01-August-19 to 31-August-19	
2	Active Energy Received From 220 KV SUKHPAR(INOX) S/S wind Farm	79925.92	Mwh
3	Reactive Energy Supplied to 220 KV SUKHPAR(INOX) S/S Wind Farm	22.000	Mvarh

(B) SHARE OF WIND FARM OWNER IN THE ELECTRICITY RECEIVED AT 220 KV SUKHPAR(INOX) S/S S/S					
Sr No	Name of Wind Farm Owner.	DISCOM Allocation	Installed Capacity(MW)	Share in Active Energy (Mwh)	Share in Reactive Energy (Mvarh)
1	GREEN INFRA CORPORATE SOLAR LTD-NEW DELHI	GUVNL	28,000	5239.653	1.357
2	TATA POWER RENEWABLE ENERGY LTD,MUMBAI	GUVNL	22,000	2974.931	1.056
3	TATA POWER TRADING COMPANY LTD,NOIDA	GUVNL	4,000	657.800	0.194
4	JAY CHEMICAL INDUSTRIES LTD,AHMEDABAD	MGVCL	2,000	250.398	0.097
5	RATNAMANI METAL & TUBES LTD. AHMEDABAD	PGVCL	4,000	551.000	0.194
6	GREEN INFRA CORPORATE SOLAR LTD. - I NEW DELHI	GUVNL	8,000	1833.301	0.388
7	GUJARAT ALKALIES AND CHEMICALS LTD. VADODARA	DGVCL	8,000	1346.200	0.388
8	TATA POWER RENEWABLE ENERGY LIMITED - I, MUMBAI	GUVNL	8,000	1209.067	0.388
9	GOKULANAND TEXTURIERS PVT LTD,SURAT	DGVCL	2,000	0.000	0.000
10	GREEN INFRA CORPORATE SOLAR LTD - II, NEW DELHI	GUVNL	10,000	2074.252	0.485
11	TATA POWER RENEWABLE ENERGY LIMITED - II, MUMBAI	GUVNL	18,000	2696.602	0.872
12	GUJARAT ALKALIES AND CHEMICALS LTD - VADODARA	DGVCL	2,000	211.821	0.097
13	GREEN INFRA CORPORATE SOLAR LTD-III NEW DELHI	GUVNL	4,000	966.612	0.194
14	GREEN INFRA CORPORATE SOLAR LTD-IV,NEW DELHI	GUVNL	2,000	463.675	0.097
15	GREEN INFRA CORPORATE SOLAR LTD-V,NEW DELHI	GUVNL	2,000	595.086	0.097
16	TATA POWER RENEWABLE ENERGY LTD - III,MUMBAI	GUVNL	2,000	301.503	0.097
17	GREEN INFRA CORPORATE SOLAR LTD-VI,NEW DELHI	GUVNL	2,000	431.747	0.097
18	INOX WIND LTD,BASAL	DGVCL	2,000	416.807	0.097
19	ASIAN PAINTS LTD,MUMBAI(RJO-211)	DGVCL	2,000	281.831	0.097
20	EVERGREEN BOARDHAM PVT LTD,SURAT	DGVCL	2,000	95.053	0.097
21	ATUL LTD	DGVCL	2,000	223.879	0.097
22	ASIAN PAINTS LTD,MUMBAI(RJO-210)	DGVCL	2,000	269.772	0.097
23	GUJARAT MINERAL DEVELOPMENT CORPORATION LTD, ABAD	GUVNL	4,000	676.544	0.194





## Application of methodologies and standardized baselines

### References to methodologies and standardized baselines

SECTORAL SCOPE – 01 Energy industries (Renewable/Non-renewable sources)

TYPE I – Renewable Energy Projects

Scale – Small Scale

Applied UNFCCC CDM Baseline Methodology: AMS-I.D: “Grid connected renewable electricity generation”, version 18.

The project activity involves generation of grid connected electricity from the construction and operation of a new Wind power-based project and to use for captive purpose via grid interface by wheeling through state electricity board (GETCO) under the Power Purchase Agreement (PPA) signed between the Project Proponent (PP) and the utility.

The project activity has installed 2 WTGs of capacity 4MW each which will qualify for a small- scale project activity under Type-I of the Small-Scale methodology. The project status is corresponding to the methodology AMS-I.D., version 18 and applicability of methodology is discussed below:

- ❖ This project is included within the UCR Standard Positive List of technologies and is within the small-scale CDM thresholds (i.e., installed capacity less than 15 MW). The UCR positive list comprises of: (a) generation of grid connected electricity from the construction and operation of a new wind power-based power project for supply to grid.
- ❖ Project activity involves power generation with installed capacity of 4 MW.
- ❖ The project activity is a Renewable Energy Project i.e., Wind Power Project which satisfies the applicability criteria option (a) i.e., “Install a Greenfield plant”. Hence the project activity meets the given applicability criterion of AMS-I.D..

- ❖ The project activity is wind energy power project and not a hydro power project activity.
- ❖ The project activity does not involve any retrofit measures nor any replacement to existing WEGs. Hence there are no new units having either renewable or non-renewable components (e.g., a wind/diesel unit).
- ❖ The project activity is not a combined heat and power (co-generation) system.
- ❖ No biomass is involved, the project is only a wind energy power project. The case for retrofit, rehabilitation or replacement, towards a Large-scale project is also not applicable.
- ❖ The project activity is a voluntary coordinated action. The project activity is a greenfield of 4 MW Wind Electric Project, i.e., no capacity addition was done to any existing power plant.
- ❖ The project activity is not a landfill gas, waste gas, wastewater treatment and agro-industries project, and does not recover methane emissions and is not eligible under any relevant Type III category.
- ❖ The project activity comprises of renewable power/energy generation through wind energy and displaces fossil fuel powered electricity from the regional grid by supplying renewable power to the grid itself. Hence this UNFCCC CDM Methodology is applicable and fulfilled.
- ❖ The project activity involves the installation of new power plants at listed sites where there was no renewable energy power plant operating prior to implementation of project.

### **Applicability of double counting emission reductions**

There is no double accounting of emission reductions in the project activity due to the following reasons:

- Project is uniquely identifiable based on its location coordinates,
- Project has dedicated commissioning certificate and connection point,
- Project is associated with energy meters which are dedicated to the generation/feeding point with the grid.

Agreement for Double Counting Avoidance has been provided duly signed by M/s. Gujarat Fluorochemicals Limited on 20.04.2024.

### **Project boundary, sources and greenhouse gases (GHGs)**

As per applicable methodology AMS-I.D. Version 18, “The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the UCR project power plants are connected”. The project boundary encompasses the physical, geographical site of the wind energy power plant, the energy metering equipment and the connected regional electricity grid.

	Source	GHG	Included?	Justification/Explanation
Baseline	Grid connected electricity generation.	CO <sub>2</sub>	<b>Included</b>	Major source of emission
		CH <sub>4</sub>	Excluded	Excluded for simplification. This is conservative
		N <sub>2</sub> O	Excluded	Excluded for simplification. This is conservative
Project Activity	Greenfield Wind Power Project Activity	CO <sub>2</sub>	Excluded	Excluded for simplification. This is conservative
		CH <sub>4</sub>	Excluded	Excluded for simplification. This is conservative
		N <sub>2</sub> O	Excluded	Excluded for simplification. This is conservative

### Establishment and description of baseline scenario (UCR Protocol)

As per para 19 of the approved consolidated methodology AMS-I.D. Version 18, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following:

“The baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid”.

### Net GHG Emission Reductions and Removals:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

**ER<sub>y</sub>** = Emission reductions in year y (tCO<sub>2</sub>/y)

**BE<sub>y</sub>** = Baseline Emissions in year y (t CO<sub>2</sub>/y)

**PE<sub>y</sub>** = Project emissions in year y (tCO<sub>2</sub>/y)

**LE<sub>y</sub>** = Leakage emissions in year y (tCO<sub>2</sub>/y)

## Baseline Emissions

Baseline emissions include only CO<sub>2</sub> emissions from electricity generation in power plants that are displaced due to the project activity.

The Baseline Emissions to be calculated are as follows:  $BE_y = EG_{BL,y} \times EF_{CO_2, GRID, y}$

Where:

$BE_y$  = Emission reductions in year y (tCO<sub>2</sub>)

$EG_{BL,y}$  = Quantity of net electricity supplied to the grid as a result of the implementation of the UCR project activity in year y (MWh)

$EF_{CO_2, GRID, y}$  = UCR recommended emission factor of 0.9 tCO<sub>2</sub>/MWh has been considered, this is conservative as compared to the combined margin grid emission factor which can be derived from Data base of Central Electricity Authority (CEA), India. (Reference: General Project Eligibility Criteria and Guidance, UCR Standard, Page 4)

Year	Net Export Units to Grid in KWh	Net Export Units to Grid in MWh
2013	477039	477.039
2014	3676733	3676.733
2015	5544278	5544.278
2016	7848780	7848.78
2017	7901922	7901.922
2018	6737807	6737.807
2019	6801471	6801.471
2020	4661758	4661.758
2021	2911525	2911.525
2022	3223236	3223.236
<b>Total</b>	<b>49784549</b>	<b>49784.549</b>

**Issuance Period: 08.10.2013 to 31.12.2022** (9 Years 02 month 23 days)

$(BE_y) = 49784.549 \text{ MWh} \times 0.9 \text{ tCO}_2/\text{MWh} = 44,801 \text{ tCO}_2\text{e}$

Total baseline emission reductions  $(BE_y) = 44,801 \text{ CoUs}$  (44,801 tCO<sub>2</sub>eq)

## Emissions:

### a) Project Emissions

As per paragraph 39 of AMS-I.D. (version 18, dated 28/11/2014), for most renewable energy project activities emission is zero.

Thus,  $PE_y = 0$ .

### b) Leakage Emissions

As per paragraph 42 of AMS-I.D. version-18, all projects other than Biomass projects have zero leakage.

Hence,  $LE_y = 0$

The actual emission reduction achieved during the first crediting period shall be submitted as a part of first monitoring and verification. However, for the purpose of an ex-ante estimation, following calculation has been submitted:

$$\begin{aligned} ER_y &= BE_y - PE_y - LE_y \\ &= 44,801 - 0 - 0 \\ &= \mathbf{44,801} \text{ CoUs} \end{aligned}$$

Total Emission Reductions ( $ER_y$ ) = **44,801** CoUs (**44,801** tCO<sub>2</sub>eq)

Year	ER <sub>y</sub> tCO <sub>2</sub>
2013	429
2014	3309
2015	4989
2016	7063
2017	7111
2018	6064
2019	6121
2020	4195
2021	2620
2022	2900
<b>Total</b>	<b>44,801</b>

## Conclusions:

Based on the audit conducted on the basis of UCR Protocol, which draws reference from UCR Protocol Standard Baseline, AMS-I.D. "Grid connected renewable electricity generation", version 18, the documents submitted during the verification including the data, Project Concept Note (PCN) / Monitoring Report (MR), SQAC is able to certify that the emission reductions from the project - 4 MW Wind Power Project by Gujarat Fluorochemicals Pvt. Ltd., Gujarat, India (UCR ID – 394) for the period 08/10/2013 to 31/12/2022 amounts to **44,801 CoUs (44,801 tCO<sub>2</sub>eq)**



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Santosh Nair  
Lead Verifier (Signature)



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Senior Internal Reviewer (Signature)

Date: 17/05/2024