



**SQAC CERTIFICATION PVT.LTD.**

## Verification Report for

Project : 50 MW Wind Power Project by Gujarat Fluorochemicals Limited (GFL), Gujarat, India.

UCR Project ID : 341

Name of Verifier	SQAC Certification Pvt. Ltd.
Date of Issue	September 18, 2023
Project Proponent	M/s. Gujarat Fluorochemicals Limited.
UCR Project Aggregator	Climekare Sustainability Pvt. Ltd.
Work carried by	Mr. Santosh Nair
Work reviewed by	Mr. Praful Shinganapurkar

### **Summary:**

SQAC Certification Pvt. Ltd. has performed verification of the “50 MW Wind Power Project by GFL, Gujarat, India” which generates electrical power using wind energy which is generated from windmills from Surendra Nagar & Rajkot district of Gujarat, 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: **01.01.2013 to 31.12.2022** (10 Years 00 Months)

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.

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

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The GHG emission reductions were calculated on the basis of UCR Protocols which draws reference from, UCR Protocol Standard Baseline, UNFCCC Methodology ACM0002: Grid-connected electricity generation from renewable sources --- Version 20.0. 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 50 MW Wind Power Project by GFL, Gujarat, India (UCR ID – 341) for the period **01.01.2013 to 31.12.2022 (10 Years 00 Months)** amounts to **8,01,025 CoUs (8,01,025 tCO<sub>2</sub>eq)**

### **Detailed Verification Report:**

#### **Purpose:**

The main purpose of the project activity is the implementation and operation of 50 MW wind power by Gujarat Fluorochemicals Limited (GFL) in Surendra Nagar & Rajkot district of Gujarat. The GFL Wind Projects consists of 25 WTGs of 2.0 MW each.

<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	50	Anandpur, Govindpara, Tajpar, Parbdi, Golida, Chobari, Jivapar, Dhoklva, and Madava	Surendra Nagar & Rajkot	Gujarat

The generated electricity from the WTGs is supplied to regional NEWNE grid or wheeled for captive consumption through wheeling into the grid and M/s Gujarat Fluorochemicals Limited (GFL) has the full ownership of the project activity. The wind power projects are operational activities with continuous reduction of GHGs, currently being applied for voluntary carbon offset units (CoUs) under “Universal Carbon Registry” (UCR). The commissioning date of the first WTG considered as the start date of the project activity and is recorded as 13/05/2011.

In the absence of the project activity, electricity would have been delivered to the grid by the operation of fossil fuel-based grid-connected power plants and by the addition of new fossil fuel based generation sources in the grid. As is the nature of wind projects (renewable energy), no fossil fuel is involved for power generation in the project activity. The electricity produced by the project is directly contributing to climate change mitigation by reducing the anthropogenic emissions of greenhouse gases (GHGs, i.e., CO<sub>2</sub>) into the atmosphere by displacing an equivalent amount of power at grid.



**Scope:**

The scope covers verification of emission reductions from the project - 50 MW Wind Projects by GFL, Gujarat, India (UCR ID – 341)

**Criteria:**

Verification criteria is as per the requirements of UCR Standard.

**Description of project:**

Project Name: - Wind Projects by Gujarat Fluorochemicals Limited, Gujarat, India

Project Capacity & Units: - 50 MW & 25 No's WTG

Project Evacuation Details: - 66 KVA GOLDIA (G.F.L) Substation

The project activity titled, 50 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.

**Process Flow Technical Specifications:**

<b>Model</b>		
1	Turbine Model	Inox DF 2000- WT93
<b>Operating Data</b>		
2	Rated power	2000 kW
3	Cut in wind speed	3.5 m/s
4	Rated wind speed	11.0 m/s
5	Cut-out Wind speed	20.0 m/s
6	Hub Height	80 m
7	Class	III B
<b>Rotor</b>		
8	Rotor Diameter	93 m
9	Rotor Area	6795 m <sup>2</sup>
10	No of Rotor blade	3
11	Blade length	45.3 m
<b>Generator</b>		
12	Type	Doubly fed induction generator (DFIG)
13	Rated power	2000 kW
<b>Tower</b>		
14	Type	Conical tubular steel tower
15	Hub height	80 m
<b>Braking system</b>		
16	Operational brake	full span blade pitching
17	Type of construction	gear / servomotor

The details along with commissioning period are as follows:

S. No	WTG No.	COD	Village	Tehsil	District	State
1	GGM94	13-May-11	Anandpur	Chotila	Surendra Nagar	Gujarat
2	GGM24	13-Jun-11	Anandpur	Chotila	Surendra Nagar	Gujarat
3	GGM93	21-Jun-11	Anandpur	Chotila	Surendra Nagar	Gujarat
4	GGM92	05-Jul-11	Anandpur/Govindpara	Chotila	Surendra Nagar	Gujarat
5	GGM91	14-Jul-11	Anandpur/Govindpara	Chotila	Surendra Nagar	Gujarat
6	GGM89	25-Jul-11	Anandpur/Govindpara	Chotila	Surendra Nagar	Gujarat
7	GGM90	26-Aug-11	Anandpur/Govindpara	Chotila	Surendra Nagar	Gujarat
8	GGM129	06-Sep-11	Tajpar	Chotila	Surendra Nagar	Gujarat
9	GGM23	30-Sep-11	Parbdi	Chotila	Surendra Nagar	Gujarat
10	GGM21	24-Nov-11	Golida	Chotila	Surendra Nagar	Gujarat
11	GGM114	24-Nov-11	Chobari	Chotila	Surendra Nagar	Gujarat
12	GGM113	30-Nov-11	Jivapar	Chotila	Surendra Nagar	Gujarat
13	GGM116	05-Dec-11	Jivapar	Chotila	Surendra Nagar	Gujarat
14	GGM134	18-Aug-11	Dhoklva	Chotila	Surendra Nagar	Gujarat
15	GGM138	18-Aug-11	Dhoklva	Chotila	Surendra Nagar	Gujarat
16	GGM139	18-Aug-11	Dhoklva	Chotila	Surendra Nagar	Gujarat
17	GGM96	31-Aug-11	Anandpur	Chotila	Surendra Nagar	Gujarat
18	GGM97	31-Aug-11	Anandpur	Chotila	Surendra Nagar	Gujarat
19	GGM98	31-Aug-11	Golida	Chotila	Surendra Nagar	Gujarat
20	GGM135	28-Sep-11	Madava	Jasdan	Rajkot	Gujarat
21	GGM136	28-Sep-11	Madava	Jasdan	Rajkot	Gujarat
22	GGM137	28-Sep-11	Madava	Jasdan	Rajkot	Gujarat
23	GGM108	30-Sep-11	Golida	Chotila	Surendra Nagar	Gujarat
24	GGM107	30-Sep-11	Golida	Chotila	Surendra Nagar	Gujarat
25	GGM106	12-Nov-11	Golida	Chotila	Surendra Nagar	Gujarat

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




Summary of the Project Activity and ERs Generated for the Monitoring Period	
Start date of this Monitoring Period	01/01/2013
Carbon credits s (CoUs) claimed up to	31/12/2022
Total ERs generated (tCO <sub>2</sub> eq)	8,01,025 (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, there by 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

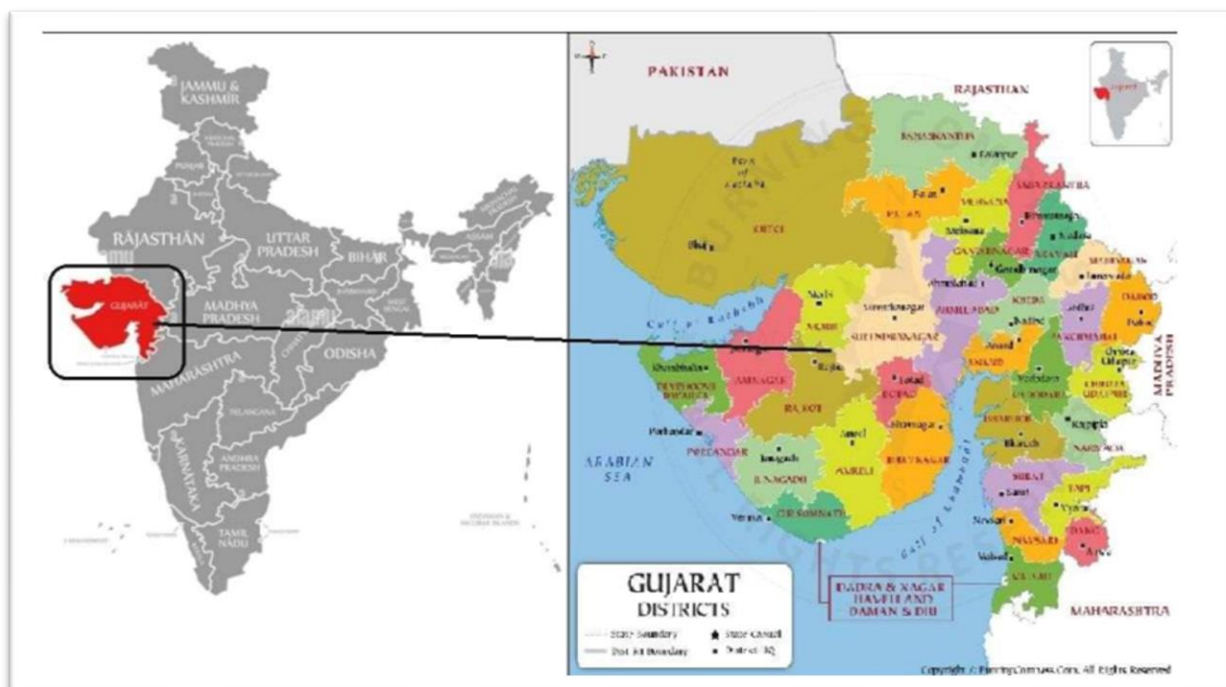


Development Goals	Targeted SDG	Target Indicator (SDG Indicator)
<b>13 CLIMATE ACTION</b>  SDG 13: Climate Action	13.2: Integrate climate change measures into national policies, strategies and planning  Target: 94608 tCO <sub>2</sub> per annum	13.2.1: Number of countries that have communicated establishment or operationalization of an integrated policy/ strategy/ plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)
<b>7 AFFORDABLE AND CLEAN ENERGY</b>  SDG 7: Affordable and Clean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix  Target: 105120 MWh per annum	7.2.1: Renewable energy share in the total final energy consumption
<b>8 DECENT WORK AND ECONOMIC GROWTH</b>  SDG 8: Decent Work and Economic Growth	8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value  Target: Training O&M Staff	8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

**Location of project activity:**

Country: India

Sr No	Name of Wind Farm	Installed Capacity (MW)	Village/s	District	State
01	Gujarat Fluorochemicals Limited	50	Anandpur, Govindpara, Tajpar, Parbdi, Golida, Chobari, Jivapar, Dhoklva, and Madava	Surendra Nagar & Rajkot	Gujarat



Gujarat Fluorochemicals Limited					
S. No	WTG No.	INST_CAPACITY (MW)	WTG_MODEL_NAME	Longitude	Latitude
1	GGM94	2.0	Inox DF 2000- WT93	72.3702	24.59932
2	GGM24	2.0	Inox DF 2000- WT93	72.4287	24.60040'
3	GGM93	2.0	Inox DF 2000- WT93	72.3017	24.59999
4	GGM92	2.0	Inox DF 2000- WT93	72.2957	24.61110'
5	GGM91	2.0	Inox DF 2000- WT93	72.267	24.61877
6	GGM89	2.0	Inox DF 2000- WT93	72.3014	24.63057
7	GGM90	2.0	Inox DF 2000- WT93	72.3055	24.62330'
8	GGM129	2.0	Inox DF 2000- WT93	72.3984	24.61403
9	GGM23	2.0	Inox DF 2000- WT93	72.5233	24.61661
10	GGM21	2.0	Inox DF 2000- WT93	72.5184	24.62843
11	GGM114	2.0	Inox DF 2000- WT93	72.0948	24.61066
12	GGM113	2.0	Inox DF 2000- WT93	72.0829	24.61707
13	GGM116	2.0	Inox DF 2000- WT93	72.2668	24.60661
14	GGM134	2.0	Inox DF 2000- WT93	72.9732	24.57848
15	GGM138	2.0	Inox DF 2000- WT93	72.8627	24.57347
16	GGM139	2.0	Inox DF 2000- WT93	72.8706	24.57084
17	GGM96	2.0	Inox DF 2000- WT93	72.2509	24.58639
18	GGM97	2.0	Inox DF 2000- WT93	72.3562	24.58122
19	GGM98	2.0	Inox DF 2000- WT93	72.3758	24.57435
20	GGM135	2.0	Inox DF 2000- WT93	72.9136	24.54628
21	GGM136	2.0	Inox DF 2000- WT93	72.9353	24.53977
22	GGM137	2.0	Inox DF 2000- WT93	72.9595	24.53552
23	GGM108	2.0	Inox DF 2000- WT93	72.6394	24.56968
24	GGM107	2.0	Inox DF 2000- WT93	72.5957	24.57243
25	GGM106	2.0	Inox DF 2000- WT93	72.5131	24.57211



**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 Report of all WTG's
- Calibration Certificates
- Joint Meter Readings
- Invoices
- Wheeling Agreement
- Data provided upon request of all the documents of the related projects.

**Sampling:**

Since there are 25 Wind Turbine generators (WTGs) installed of total capacity of 50 MW, 5 WTG's has been selected for complete site monitoring through video, which are GGM – 138, 139, 91, 90 & 89

**Persons interviewed:**

- |                      |                  |
|----------------------|------------------|
| 1. Mr. Bhargav Patel | : M/s. Inox Wind |
| 2. Mr. Mukesh Dudi   | : M/s. GFL       |

Ref No.: \_\_\_\_\_ Date: \_\_\_\_\_  
GEDA/GFL/PWF/CHO/2011-12/ 1965 25 August 2011  
CERTIFICATE OF COMMISSIONING

This is to certify that **M/s. Gujarat Flourochemicals Ltd, Inox Towers, Plot No. 17, Sector 16A, Noida - 201 301** have commissioned 12.00 MW capacity windfarms consisting of six numbers of new wind turbine generator, as per the WTG ID No. and date of commissioning given below and locations, as shown in micrositing drawing enclosed herewith.

Make of each Wind Turbine Generator (WTG) : INOX  
Capacity of each Wind Turbine Generator : 2000 kW  
No. of Wind Turbine Generator/s : 6 (Six)  
Total capacity of the Windfarm : 12.00 MW

Sr. No.	Details of site of installation	Revenue Survey No.	Date of commissioning	WTG ID numbers
	Name of Village Taluka District			
1	Anandpar Chotila Surandranagar	60/p/101	13/05/2011	IOX/2000/11-12/2101
2	Sakhpar Chotila	24/1	13/06/2011	IOX/2000/11-12/2094
3	Anandpar Chotila	60/p/101	05/07/2011	IOX/2000/11-12/2098
4	Anandpar Chotila	60/p/101	14/07/2011	IOX/2000/11-12/2097
5	Anandpar Chotila	60/p/101	25/07/2011	IOX/2000/11-12/2095
6	Anandpar Chotila	60/p/101	21/06/2011	IOX/2000/11-12/2099

This windfarm is connected by 33 kV grid line to 66 kV GFL site sub-station at Golida. The GFL Golida site substation is connected to 66 kV GETCO Jasdan-II substation.

Sr. no.	WTG ID No.	Date	Time (Hrs.)	Meter (kwh)	
			From To	Initial Final	Difference
1	IOX/2000/11-12/2101	13/05/2011	13.40 13.55	0 100	100
2	IOX/2000/11-12/2094	13/06/2011	11.00 12.30	271 1026	755
3	IOX/2000/11-12/2098	05/07/2011	12.15 14.20	0 31	31
4	IOX/2000/11-12/2097	14/07/2011	11.35 12.05	1500 1800	300
5	IOX/2000/11-12/2095	25/07/2011	12.20 15.00	074 178	104
6	IOX/2000/11-12/2099	21/06/2011	11.50 12.05	077 450	373
				Total	1663

For Gujarat Energy Development Agency

(S. B. Patil)  
Deputy Director (I/C)

Ref No.: \_\_\_\_\_ Date: \_\_\_\_\_  
GEDA/GFL/PWF/CHO/2011-12/ 1103 19 September 2011  
CERTIFICATE OF COMMISSIONING

This is to certify that **M/s. Gujarat Flourochemicals Ltd, Inox Towers, Plot No. 17, Sector 16A, Noida - 201 301** have commissioned 16.00 MW capacity windfarms consisting of eight numbers of new wind turbine generators, as per the WTG ID No. and date of commissioning given below and locations, as shown in micrositing drawing enclosed herewith.

Make of each Wind Turbine Generator (WTG) : INOX  
Capacity of each Wind Turbine Generator : 2000 kW  
No. of Wind Turbine Generator/s : 8 (Eight)  
Total capacity of the Windfarm : 16.00 MW

Sr. No.	Details of site of installation	Revenue Survey No.	Date of commissioning	WTG ID numbers
	Name of Village Taluka District			
1	Dholkwa Chotila Surandranagar	405/p/11	18/08/2011	IOX/2000/11-12/2105
2	Dholkwa Chotila	405/p/11	18/08/2011	IOX/2000/11-12/2110
3	Dholkwa Chotila	60/p/101	18/08/2011	IOX/2000/11-12/2109
4	Anandpar Chotila	60/p/101	31/08/2011	IOX/2000/11-12/2103
5	Anandpar Chotila	60/p/101	31/08/2011	IOX/2000/11-12/2102
6	Anandpar Chotila	60/p/101	31/08/2011	IOX/2000/11-12/2102(A)
7	Tajpar Chotila	80/p/6	06/09/2011	IOX/2000/11-12/2104
8	Anandpar Chotila	60/p/101	26/08/2011	IOX/2000/11-12/2096

This windfarm is connected by 33 kV grid line to 66 kV GFL site sub-station at Golida.

The GFL Golida site substation is connected to 66 kV GETCO Jasdan-II substation.

Sr. no.	WTG ID No.	Date	Time (Hrs.)	Meter (kwh)	
			From To	Initial Final	Difference
1	IOX/2000/11-12/2105	18/08/2011	13.10 14.05	06 60	54
2	IOX/2000/11-12/2110	18/08/2011	11.30 12.15	165 250	85
3	IOX/2000/11-12/2109	18/08/2011	12.25 13.00	47 86	39
4	IOX/2000/11-12/2103	31/08/2011	15.45 16.10	111 219	108
5	IOX/2000/11-12/2102	31/08/2011	14.30 14.55	19 125	106
6	IOX/2000/11-12/2102(A)	31/08/2011	15.05 15.35	136 241	105
7	IOX/2000/11-12/2104	06/09/2011	16.50 17.15	112 221	109
8	IOX/2000/11-12/2096	26/08/2011	11.30 12.35	93 198	105
				Total	711

For Gujarat Energy Development Agency

(S. B. Patil)  
Deputy Director (I/C)

Ref No.: \_\_\_\_\_ Date: \_\_\_\_\_  
GEDA/GFL/PWF/CHO/2011-12/ 1351 21 October 2011  
CERTIFICATE OF COMMISSIONING

This is to certify that **M/s. Gujarat Flourochemicals Ltd, Inox Towers, Plot No. 17, Sector 16A, Noida - 201 301** have commissioned 8.00 MW capacity windfarms consisting of four numbers of new wind turbine generators, as per the WTG ID No. and date of commissioning given below and locations, as shown in micrositing drawing enclosed herewith.

Make of each Wind Turbine Generator (WTG) : INOX  
Capacity of each Wind Turbine Generator : 2000 kW  
No. of Wind Turbine Generator/s : 4 (Four)  
Total capacity of the Windfarm : 8.00 MW

Sr. No.	Details of site of installation	Revenue Survey No.	Date of commissioning	WTG ID numbers
	Name of Village Taluka District			
1	Dholkwa Chotila Surandranagar	405/p/11	28/09/2011	IOX/2000/11-12/2106
2	Dholkwa Chotila	405/p/11	28/09/2011	IOX/2000/11-12/2107
3	Dholkwa Chotila	405/p/11	28/09/2011	IOX/2000/11-12/2108
4	Sakhpar Chotila	24/1	30/09/2011	IOX/2000/11-12/2093

This windfarm is connected by 33 kV grid line to 66 kV GFL site sub-station at Golida. The GFL Golida site substation is connected to 66 kV GETCO Jasdan-II substation.

Sr. no.	WTG ID No.	Date	Time (Hrs.)	Meter (kwh)	
			From To	Initial Final	Difference
1	IOX/2000/11-12/2106	28/09/2011	17.00 19.30	0 100	100
2	IOX/2000/11-12/2107	28/09/2011	17.10 19.45	0 100	100
3	IOX/2000/11-12/2108	28/09/2011	17.20 20.00	0 100	100
4	IOX/2000/11-12/2093	30/09/2011	14.00 20.05	0 100	100
				Total	400

For Gujarat Energy Development Agency

(S. B. Patil)  
Deputy Director (I/C)

Ref No.: \_\_\_\_\_ Date: \_\_\_\_\_  
GEDA/GFL/PWF/CHO/2011-12/ 1351 7 January 2012  
CERTIFICATE OF COMMISSIONING

This is to certify that **M/s. Gujarat Flourochemicals Ltd, Inox Towers, Plot No. 17, Sector 16A, Noida - 201 301** have commissioned 14.00 MW capacity windfarms consisting of seven numbers of new wind turbine generators, as per the WTG ID No. and date of commissioning given below and locations, as shown in micrositing drawing enclosed herewith.

Make of each Wind Turbine Generator (WTG) : INOX  
Capacity of each Wind Turbine Generator : 2000 kW  
No. of Wind Turbine Generator/s : 7 (Seven)  
Total capacity of the Windfarm : 14.00 MW

Sr. No.	Details of site of installation	Revenue Survey No.	Date of commissioning	WTG ID numbers
	Name of Village Taluka District			
1	Golida Chotila Surandranagar	103/3 p3	30/9/2011	IOX/2000/11-12/2358
2	Golida Chotila	101/3 p3	30/09/2011	IOX/2000/11-12/2359
3	Sakhpar Chotila	15/p2	24/11/2011	IOX/2000/11-12/2356
4	Anandpar Chotila	134/p2	24/11/2011	IOX/2000/11-12/2361
5	Anandpar Chotila	135/1	30/11/2011	IOX/2000/11-12/2360
6	Anandpar Chotila	134/p2	05/12/2011	IOX/2000/11-12/2362
7	Golida Chotila	101/4/p4	12/11/2011	IOX/2000/11-12/2357

This windfarm is connected by 33 kV grid line to 66 kV GFL site sub-station at Golida.

The GFL Golida site substation is connected to 66 kV GETCO Jasdan-II substation.



Sr. no.	WTG ID No.	Date	Time (Hrs.)	Meter (kwh)	
			From To	Initial Final	Difference
1	IOX/2000/11-12/2358	30/9/2011	14.10 20.15	0 100	100
2	IOX/2000/11-12/2359	30/09/2011	14.20 20.30	0 100	100
3	IOX/2000/11-12/2356	24/11/2011	12.30 13.40	0 75	75
4	IOX/2000/11-12/2361	24/11/2011	12.15 13.10	0 103	103
5	IOX/2000/11-12/2360	30/11/2011	15.50 18.05	0 128	128
6	IOX/2000/11-12/2362	05/12/2011	12.05 16.10	0 102	102
7	IOX/2000/11-12/2357	12/11/2011	12.15 13.45	0 102	102
				Total	710

For Gujarat Energy Development Agency



(S. B. Patil)  
Deputy Director (I/C)


<b>GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED</b>				
<b>State Load Despatch Centre-Gotri, Vadodra-390 021</b> <b>Fax: 0265-2352019 Phone: 0265-2352103/2322206 Email: slcdcattcomm@gmail.com</b> No: SLDC/Comm/WEA/2016-19/JUNE/REV/2      Date:14-07-2018				
<b>CERTIFICATE FOR SHARE OF ELECTRICITY GENERATED BY THE WIND FARM AT GOLIDA (GFL) FOR THE MONTH OF JUNE 2018</b>				
<b>(A) ELECTRICITY GENERATED BY THE WIND FARM</b>				
Period Considered for the month of JUNE 2018		01-June-18 to 30-June-18		
1	Active Energy Received at: From GOLIDA (GFL) Wind Farm	27963.545	Mwh	
3	Reactive Energy Supplied to wind farm from GOLIDA (GFL)	5.094	Mvarh	
<b>(B) SHARE OF WIND FARM OWNER IN THE ELECTRICITY RECEIVED AT GOLIDA (GFL) SIS</b>				
Sr No	Name of Wind Farm Owner.	Installed Capacity(MW)	Share in Active Energy (Mwh)	Share in Reactive Energy (Mvarh)
1	Ambica Polymer Pvt. Ltd., Ahmedabad	2.000	428.248	0.091
2	Ashwini Traders,Mumbai*;	2.000	557.638	0.090
3	CERA SANITARYWARE LTD.-I, AHMEDABAD;	2.000	620.584	0.081
4	Grainspan Nutrients Pvt.Ltd,Ahmedabad	2.000	587.628	0.041
5	Gujarat Fluorochemical Ltd.	24.000	7163.741	1.238
6	Inox Wind Ltd., HP	2.000	630.209	0.085
7	Jagdisham Polymers Ltd., Ahmedabad	2.000	579.673	0.083
8	Mayur Wovens Pvt. Ltd., Ahmedabad	2.000	590.579	0.081
9	Ratnamani Metals & Tubes Ltd., Ahmedabad;	4.000	1201.896	0.208
10	Sri Balaji and Company, Mumbai.	2.000	544.810	0.083
11	Surya Vidhut Pvt. Ltd.	26.000	8009.589	1.648
<b>SHARE OF WIND FARM OWNER (UNDER REC MECHANISM)</b>				
12	Gujarat Fluorochemical Ltd.;	26.000	7050.949	1.365
<b>TOTAL</b>		<b>96.000</b>	<b>27963.545</b>	<b>5.094</b>
<b>(C) CONSIDERATIONS FOR ISSUING ABOVE STATEMENT</b>				
1	Active Energy received at GOLIDA (GFL) substations is computed 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 SLDC and block wise computations and meter data is published on website.			
2	Reactive energy supplied to Wind Farm from GOLIDA (GFL) SIS 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.			
3	Share of wind farms in the electricity received at interphase point of GOLIDA (GFL) SIS is computed by GEDA on the basis of energy generation recorded on each wind energy generation during the period specified as above.			
4	After careful consideration of various representation received before SLDC-Gujarat, SLDC 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.			
<b>(D) CERTIFICATE</b>				
This is to certify that energy generated by Wind Turbine generators as specified in Para 'A' and received at GOLIDA (GFL) Substation during the month of JUNE 2018 at the period specified as above is 27963.545 Mwh and shared by wind farm owners as mentioned in Part(B). This certificate is issued by SLDC as per submission of GEDA and for the purpose of settlement between distribution licensee, wind farm owners supplying energy and consumers receiving such energy.				
Signature : Name : B B Mehta Designation : Chief Engineer				

[illegible]

 CC-2983	<div style="display: flex; align-items: center; justify-content: flex-end;">  </div> <p style="text-align: right; margin-top: 10px;">CALIBRATION DIVISION</p>
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<b>CALIBRATION CERTIFICATE</b>		F/CR/E/19 Issue No. 01 Page 1 of 8																																		
<b>Name and Address of Customer:</b> Inox Green Energy Services Ltd. 66 kV GFL Sub-Station, Survey No. : 71/1, 72/1, Devpura, Ta. : Chotila, Dist. : Surendranagar	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><b>Certificate No.</b></td> <td style="padding: 2px;">AEPL/22/M/S-1274</td> </tr> <tr> <td style="padding: 2px;">Date of issue</td> <td style="padding: 2px;">01.10.2022</td> </tr> <tr> <td style="padding: 2px;">Date of calibration</td> <td style="padding: 2px;">29.09.2022</td> </tr> <tr> <td style="padding: 2px;">Date of receipt</td> <td style="padding: 2px;">29.09.2022</td> </tr> </table>	<b>Certificate No.</b>	AEPL/22/M/S-1274	Date of issue	01.10.2022	Date of calibration	29.09.2022	Date of receipt	29.09.2022																											
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<b>ULR No.:</b> CC298322000001274F																																				
<b>Details of Unit Under Calibration</b>																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%;">Location of performance of Calibration</td> <td>: GFL Line - 2 (Check Meter)</td> </tr> <tr> <td>Name of Instrument</td> <td>: Three Phase Energy Meter</td> </tr> <tr> <td>Sr. No.</td> <td>: GJ-3624-A</td> </tr> <tr> <td>Identification No.</td> <td>: 201/04</td> </tr> <tr> <td>Make / Model No.</td> <td>: L&amp;T / ER300P</td> </tr> <tr> <td>Standard Current</td> <td>: 1 A</td> </tr> <tr> <td>Frequency</td> <td>: 50 Hz</td> </tr> <tr> <td>Accuracy</td> <td>: 0.2S</td> </tr> <tr> <td>Mode of Calibration</td> <td>: Direct</td> </tr> <tr> <td>Temp</td> <td>: 28°C</td> </tr> <tr> <td>Type</td> <td>: 3P4W</td> </tr> <tr> <td>VT Ratio</td> <td>: -</td> </tr> <tr> <td>CT Ratio</td> <td>: 1/1 A</td> </tr> <tr> <td>Unit</td> <td>: 50 Pulse/Unit</td> </tr> <tr> <td>Humidity</td> <td>: 40-60%</td> </tr> <tr> <td>Visual inspection</td> <td>: Found Ok</td> </tr> <tr> <td>Initial Error</td> <td>: NA</td> </tr> </table>			Location of performance of Calibration	: GFL Line - 2 (Check Meter)	Name of Instrument	: Three Phase Energy Meter	Sr. No.	: GJ-3624-A	Identification No.	: 201/04	Make / Model No.	: L&T / ER300P	Standard Current	: 1 A	Frequency	: 50 Hz	Accuracy	: 0.2S	Mode of Calibration	: Direct	Temp	: 28°C	Type	: 3P4W	VT Ratio	: -	CT Ratio	: 1/1 A	Unit	: 50 Pulse/Unit	Humidity	: 40-60%	Visual inspection	: Found Ok	Initial Error	: NA
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<div style="text-align: center;">   <b>Calibration Engineer</b> </div>	<div style="text-align: center;">   <b>Quality Manager</b> </div>																																			



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**AKRON<sup>®</sup>**  
**ENERGY**

CALIBRATION DIVISION

**CALIBRATION CERTIFICATE**

F/CR/E/19

Issue No. 01

Page 1 of 7

**Name and Address of Customer:**

**Inox Green Energy Services Ltd.**

66 kV GFL Sub-Station, Survey No. : 71/1, 72/1,

Devpura, Ta. : Chotila, Dist : Surendranagar

**Certificate No.**

AEPL/22/M/S-1273

**Date of issue**

01.10.2022

**Date of calibration**

29.09.2022

**Date of receipt**

29.09.2022

**ULR No.:** CC298322000001273F

**Details of Unit Under Calibration**

**Location of performance of Calibration** : GFL Line - 2 (Main Meter)

**Name of Instrument** : Three Phase Energy Meter

**Sr. No.** : GJU51770

**Identification No.** : 201/03

**Make / Model No.** : Secure / Premier

**Standard Current** : 1 A

**Frequency** : 50 Hz

**Accuracy** : 0.25

**Mode of Calibration** : Direct

**Temp** : 28°C

**Type** : E3M021, 3P4W

**VT Ratio** : 66kV/V3/110V/V3

**CT Ratio** : -/1 A

**Unit** : 160 Pulse/Unit

**Humidity** : 40-60%

**Visual inspection** : Found Ok

**Initial Error** : NA

**Calibration By:**

**Calibration Engineer**

**Approved By:**

**Quality Manager**

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## **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 – Large Scale

CATEGORY – ACM0002, version 20.0

The project activity involves generation of grid connected electricity from the construction and operation of a new wind power-based power project for supply to grid. The project activity has installed capacity of 50 MW which qualifies for a large-scale project activity. The project status is corresponding to the methodology ACM0002 version 20.0 and applicability of methodology is discussed below:

- ❖ This project is included within the UCR Standard Positive List of technologies and is within the large -scale CDM thresholds (e.g., installed capacity greater 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 50 MW.
- ❖ The project activity is a Renewable Energy Project i.e., Wind Power Project which falls under applicability criteria option 1 (a) i.e., “Install a Greenfield power plant”. Hence the project activity meets the given applicability criterion of ACM0002.
- ❖ 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 50 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 10.09.2023.

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

As per applicable methodology ACM0002 version 20.0, “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	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	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)

### Net GHG Emission Reductions and Removals:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

$ER_y$  = Emission reductions in year  $y$  ( $tCO_2/y$ )

$BE_y$  = Baseline Emissions in year  $y$  ( $t CO_2/y$ )

$PE_y$  = Project emissions in year  $y$  ( $tCO_2/y$ )

$LE_y$  = Leakage emissions in year  $y$  ( $tCO_2/y$ )

## 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 methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants.

The Annual Emission Reductions 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)

$EF_{CO_2, GRID, y}$  = CO<sub>2</sub> emission factor of the grid in year y (t CO<sub>2</sub>/MWh) as determined by the UCR Standard.

Total Installed Capacity: 50 MW

Month--Wise Energy Delivered to Grid (kWh)														
Year	January	February	March	April	May	June	July	August	September	October	November	December	Total in Kwh	Total in Mwh
2013	1,01,73,326	79,25,192	85,31,529	1,01,44,832	1,64,51,066	1,02,79,761	1,46,00,912	1,14,33,809	1,05,56,261	30,89,848	55,17,577	60,07,126	11,47,11,239	1,14,711.24
2014	93,43,881	67,53,325	79,05,809	74,83,289	1,21,00,003	1,60,85,445	1,40,01,979	95,13,925	51,64,530	24,31,154	28,74,564	95,45,527	10,32,03,431	1,03,203.43
2015	81,94,897	75,49,727	67,94,842	91,81,519	1,20,65,602	88,08,382	1,52,62,511	1,01,52,342	63,69,223	42,41,513	55,15,511	84,42,415	10,25,78,484	1,02,578.48
2016	46,18,511	68,50,735	62,04,547	73,60,901	1,23,68,466	1,24,52,760	1,27,31,631	1,33,21,907	93,72,452	35,14,228	36,94,440	61,96,126	9,86,86,704	98,686.70
2017	80,19,457	70,32,657	74,24,739	99,89,500	1,40,91,374	75,55,163	1,13,21,419	85,69,168	33,12,896	36,45,598	41,39,652	85,34,732	9,36,36,355	93,636.36
2018	51,10,907	40,70,751	58,87,493	65,26,522	1,04,87,506	1,42,14,690	1,45,41,145	1,28,02,825	66,65,520	22,59,546	28,97,948	76,20,228	9,30,85,081	93,085.08
2019	82,23,030	72,67,262	72,11,891	75,95,390	1,01,40,937	99,66,135	1,12,07,779	84,84,431	35,44,991	30,84,728	26,76,679	63,76,242	8,57,79,495	85,779.50
2020	46,36,235	48,26,970	52,45,942	52,44,572	82,32,854	51,76,420	61,57,453	1,08,92,414	30,32,773	36,12,331	60,43,678	55,91,810	6,86,93,452	68,693.45
2021	56,97,269	43,29,514	53,50,531	53,17,240	67,10,116	81,85,290	1,02,28,543	63,65,037	41,14,269	26,10,810	56,19,240	70,74,108	7,16,01,967	71,601.97
2022	57,98,808	32,67,886	42,18,319	49,72,420	71,49,931	54,85,003	76,63,980	57,41,660	32,99,108	25,17,742	24,68,090	54,67,198	5,80,50,145	58,050.15
Total Generation from January 2013 to December 2022 in kWh													89,00,26,353	8,90,026.35

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
MWh Supplied to Grid	1,14,711.24	1,03,203.43	1,02,578.48	98,686.70	93,636.36	93,085.08	85,779.50	68,693.45	71,601.97	58,050.15
TOTAL								8,90,026.35		

Issuance Period: 01.01.2013 to 31.12.2022 ((10 Years 00 Months)

(BE<sub>y</sub>) = 8,90,026.35 MWh \* 0.9 tCO<sub>2</sub>/MWh = 8,01,025 tCO<sub>2</sub>e (i.e., 8,01,025 CoUs)

Total baseline emission reductions (BE<sub>y</sub>) = 8,01,025 CoUs (8,01,025 tCO<sub>2</sub>eq)

Emissions:

**a) Project Emissions**

As per ACM0002 version 20.0, only emission associated with the fossil fuel combustion, emission from operation of geo-thermal power plants due to release of non-condensable gases, emission from water reservoir of Hydro should be accounted for the project emission. Since the project activity is a wind power project, project emission for renewable energy plant is nil.

Thus,  $PE_y = 0$ .

**b) Leakage**

As per ACM0002 version 20.0, 'If the energy generating equipment is transferred from another activity, leakage is to be considered.' In the project activity, there is no transfer of energy generating equipment and therefore the leakage from the project activity is considered as zero.

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:

$$\begin{aligned} ER_y &= BE_y - PE_y - LE_y \\ &= 8,01,025 - 0 - 0 \\ &= 8,01,025 \text{ CoUs} \end{aligned}$$

Total Emission Reductions ( $ER_y$ ) = 8,01,025 CoUs (8,01,025 tCO<sub>2</sub>eq)

Year	MWh Supplied to grid	ER (tCo2)
2013	1,14,711.24	1,03,240.00
2014	1,03,203.43	92,883.00
2015	1,02,578.48	92,321.00
2016	98,686.70	88,818.00
2017	93,636.36	84,273.00
2018	93,085.08	83,777.00
2019	85,779.50	77,202.00
2020	68,693.45	61,824.00
2021	71,601.97	64,442.00
2022	58,050.15	52,245.00
<b>G. Total Units</b>	<b>8,90,026.35</b>	<b>8,01,025.00</b>

## **Conclusions:**

Based on the audit conducted on the basis of UCR Protocol, which draws reference from UCR Protocol Standard Baseline, ACM0002: Grid-connected electricity generation from renewable sources --- Version 20.0, 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 - 50 MW Wind Power Project by GFL, Gujarat, India (UCR ID – 341) for the period 01/01/2013 to 31/12/2022 amounts to 8,01,025 CoUs (8,01,025 tCO<sub>2</sub>eq)



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Santosh Nair  
Lead Verifier (Signature)



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Praful Shinganapurkar  
Senior Internal Reviewer (Signature)

Date: 18/09/2023