Monitoring Report

CARBON OFFSET UNIT (CoU) PROJECT

Title: 50 MW Wind Power Project by GFL, Gujarat, India

Version 1.0

Date of MR: 08/09/2023

UCR ID: 341

UCR MR Period: 01

1st Monitoring Period: 01.01.2013 to 31.12.2022 (10 Years)

1st Crediting Period: 01.01.2013 to 31.12.2022 (10 Years)

Monitoring Report (MR)
CARBON OFFSET UNIT (CoU) PROJECT

BASIC INFORMATION	
Title of the project activity	**50 MW Wind Power Project by Gujarat Fluorochemicals Limited, Gujarat, India**
Scale of the project activity	Large Scale
UCR Project ID	341
Completion date of the PCN	08/09/2023
Project participants	**Project Proponents:** M/s.Gujarat Fluorochemicals Limited, Inox Towers, Noida,Uttar Pradesh, India. **UCR Aggregator**: Climekare Sustainability Pvt. Ltd. **UCR ID**:336812961
Host Party	India
Applied methodologies and standardized baselines	Type I (Renewable Energy Projects) UNFCCC Methodology **ACM0002**: Grid- connected electricity generation from renewablesources --- Version 20.0 UCR Protocol Standard Baseline
Sectoral scopes	01 Energy industries (Renewable/Non RenewableSources)
SDG Impacts:	SDG 7 Affordable and Clean energy SDG 8 Decent work and economic growthSDG 13 Climate Action
Estimated amount of total GHG emission reductions per year	**01/01/2013-31/12/2013:103240** CoUs/Yr (**103240** tCO2eq/Yr) **01/01/2014-31/12/2014: 92883** CoUs/Yr (**92883** tCO2eq/Yr) **01/01/2015-31/12/2015: 92321** CoUs/Yr (**92321** tCO2eq/Yr) **01/01/2016-31/12/2016: 88812** CoUs/Yr (**88812** tCO2eq/Yr) **01/01/2017-31/12/2017: 84273** CoUs/Yr (**84273** tCO2eq/Yr) **01/01/2018-31/12/2018: 83777** CoUs/Yr (**83777** tCO2eq/Yr) **01/01/2019-31/12/2019: 77202** CoUs/Yr (**77202** tCO2eq/Yr) **01/01/2020-31/12/2020: 61824** CoUs/Yr (**61824** tCO2eq/Yr) **01/01/2021-31/12/2021: 64442** CoUs/Yr (**64442** tCO2eq/Yr) **01/01/2022-31/12/2022: 52245** CoUs/Yr (**52245** tCO2eq/Yr)
Estimated amount of total GHG emission reductions during this MR	**801025** CoUs/Yr (**801025** tCO2eq/Yr)

SECTION A. Description of project activity

Purpose and general description of project activity >>

a) Purpose and general description of Carbon offset Unit (CoU) project activity

The project activity titled, **50 MW Wind Projects by GFL, Gujarat, India** is a renewable(wind) energy projects located at the following locations in 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

The wind farm is owned by Gujarat Fluorochemicals Limited., (GFL- Project Proponent or PP), which is a subsidiary of Inox Wind Ltd (IWL) and Inox Green Energy Service Ltd (IGESL)., which is a part of InoxGFL Group. The InoxGFL Group is an Indian conglomerate with a legacy of more than 90 years. The group is a forerunner in diversified business segments comprising Fluoropolymers, Specialty Chemicals, Wind Energy, and Renewables in various geographies. The total installed capacity of the GFL Wind Project is 50 MW wind power project in Surendra Nagar & Rajkot district of Gujarat. The GFL Wind Projects consists of 25 WTGs of 2.0 MW each. The entire Engineering, Procurement and Construction (EPC) are provided by Inox Wind Ltd & Operations and Maintenance (O&M) services are provided by Inox Green Energy Service Ltd.

The generated electricity from the WTGs is grid connected wind power project located in various village of Surender Nagar & Rajkot District in the state of Gujarat (India). The purpose of this plant installation to supply electricity 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_2) into the atmosphere by displacing an equivalent amount of power at grid.

The project activity is hence 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.

b) Brief description of the installed technology and equipment>>

Project Name: - Wind Projects by Gujarat Fluorochemicals Limited, Gujarat, India
Project Capacity & Units: - 50 MW & 25 No's WTG
Project Evacuation Details: - 66KVA GOLDIA (G.F.L) Substation

Process Flow Technical Specifications

	Model	
1	Turbine Model	Inox DF 2000- WT93
	Operating Data	
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
	Rotor	
8	Rotor Diameter	93 m
9	Rotor Area	6795 m²
10	No of Rotor blade	3
11	Blade length	45.3 m
	Generator	
12	Type	Doubly fed induction generator (DFIG)
13	Rated power	2000 kW
	Tower	
14	Type	Conical tubular steel tower
15	Hub height	80 m
	Braking system	
16	Operational brake	full span blade pitching
17	Type of construction	gear / servomotor

c) Relevant dates for the project activity (e.g., construction, commissioning, continued Operation periods

UCR Project ID: 341
Start Date of 1st UCR Crediting Period: 01/01/2013
Project 1st Commissioning Date: 13/05/2011
UCR Monitoring Period No: 01
1st UCR Monitoring Period: 01/01/2013 to 31/12/2022 (10 Years) (bothdays inclusive)

d) Total GHG emission reductions achieved or net anthropogenic GHGremovals 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 (CoUs) claimed up to	31/12/2022
Total ERs generated (tCO_{2eq})	801025 (expressed as CoUs)
Project Emission (tCO_{2eq})	0
Leakage (tCO_{2eq})	0

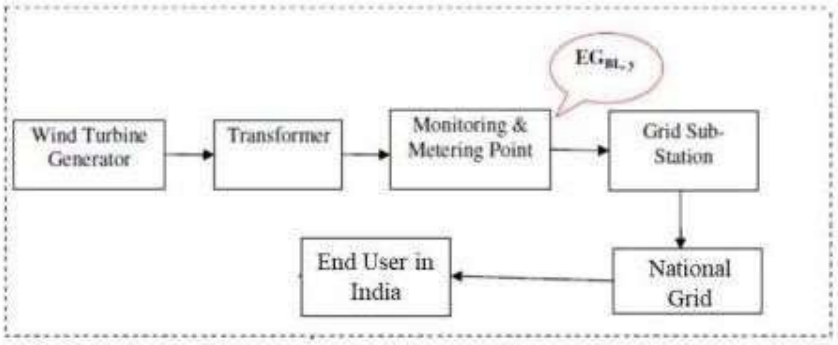
e) Baseline Scenario>>

The baseline scenario identified at the MR stage of the project activity is:

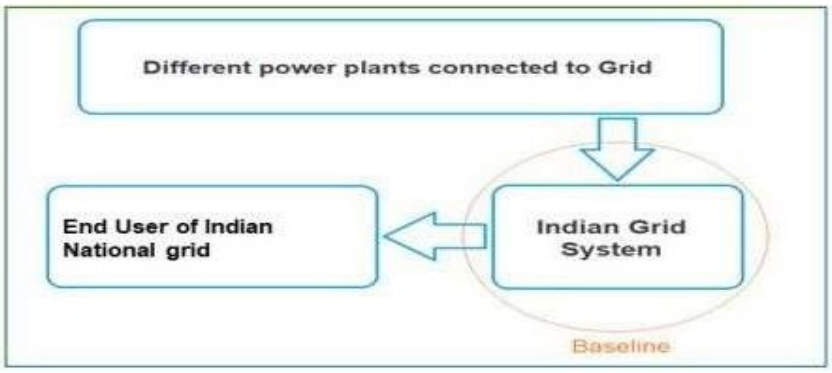
 Grid

In the absence of the project activity, the equivalent amount of electricity would havebeen imported from the regional grid (which is connected to the unified Indian Grid system), which is carbon intensive due to predominantly sourced from fossil fuel- based power plants. Hence, baseline scenario of the project activity is the grid-based electricity system, which is also the pre project scenario.

Project Scenario:



Baseline Scenario:



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

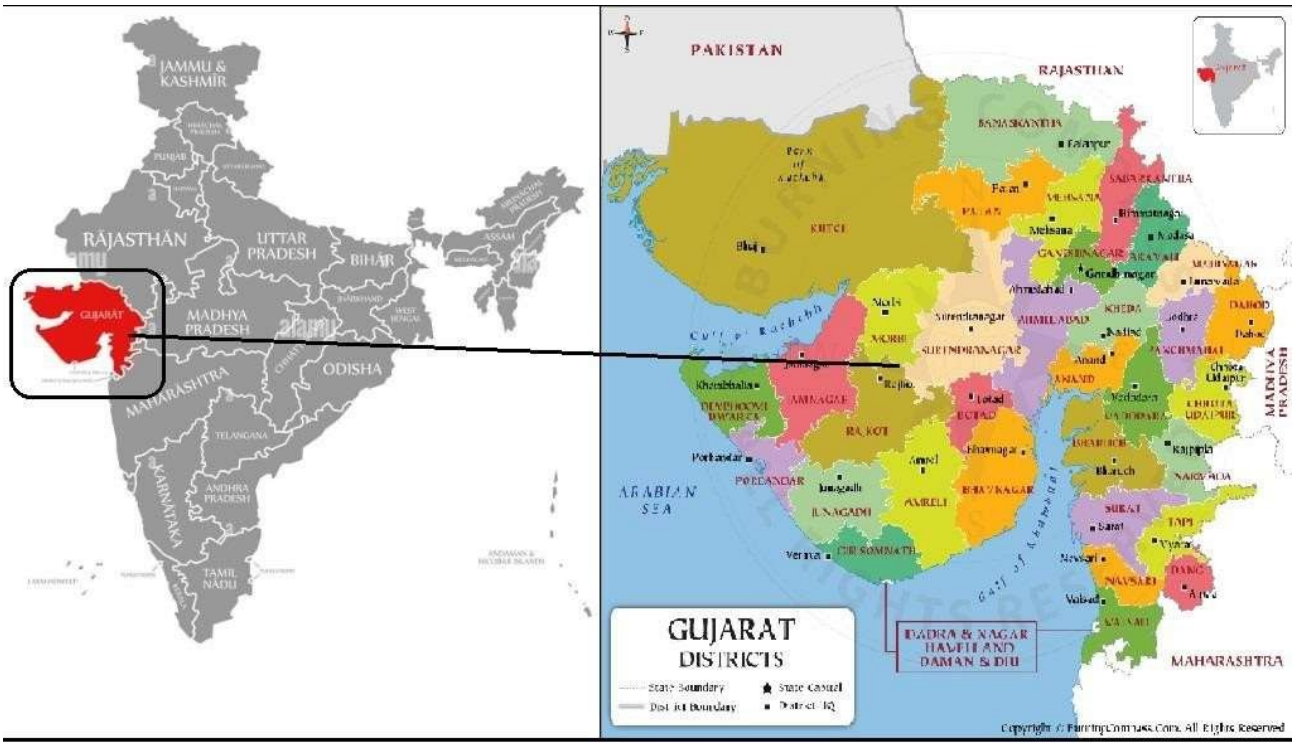


Figure-1- Location of the project activity (courtesy: google images and www.mapofindia.com)

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	2462843
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

Parties and project participants >>

Party (Host)	Participants
India	**Project Proponents**: M/s.Gujarat Fluorochemicals Limited, Inox Towers, Noida,Uttar Pradesh, India. **UCR Aggregator**: Climekare Sustainability Pvt. Ltd. **UCR ID**: 336812961 Email: sustainability@climekare.com

References to methodologies and standardized baselines >>

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

TYPE I - Renewable Energy Projects

CATEGORY- ***ACM0002***- *Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources Version 20.0*

UCR Standardized Baseline Emission Factor Applied for the period 2013-2022

The UCR positive list comprises of:

(a) generation of grid connected electricity from the construction and operationof a new wind power-based power project for supply to grid

Crediting period of project activity >>

Length of the crediting period corresponding to this monitoring period: 10 years **Date**: 01/01/2013 to 31/12/2022 (both days inclusive)

Contact information of responsible persons/entities >>

Consultant: Climekare Sustainability Pvt. Ltd.
Email: sustainability@climekare.com
Phone: 9811752560
UCR ID: 336812961

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity >> A) Provide information on the implementation status of the project activity during thismonitoring period in accordance with UCR PCN>>

a) Description of the installed Technologies, technical processes and equipment:Ref: (Technical information given on Section – A.1.(b))

b) **Information on the implementation and the actual operation of the project activity, including relevant dates:**

The Owner of the project is Ms. Gujarat Fluorochemicals Limited. 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	5-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	6-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	5-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

GFL Site

Substation

B.2 Do no harm or Impact test of the project activity>>

Social well-being:

- Social well being is assessed by contribution by the project activity towards improvement in living standards of the local community.temporary and permanent basis.
- The project activity has resulted in increased job opportunities for the local population on temporary and permanent basis.
- Manpower was required both during erection and operation of the wind farms. This has resulted in poverty alleviation of the local community and development of basic infrastructure leading to improvement in living standards of the local population.

Economic well being

- The project activity has created direct and indirect job opportunities to the local community during installation and operation of the WEGs.
- The investment for the project activity has increased the economic activity of the local area.
- The project activity also contributes in economic well being of the nation's economy by reducing import of fossil fuel for electricity generation in hard currency.

Environmental well being

- The project utilizes wind energy for generating electricity which otherwise would have been generated through alternate fuel (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions of pollutant/unit of energy generated) including GHG emissions.
- As wind power projects produce no end products in the form of solid waste (ash etc.), they address the problem of solid waste disposal encountered by most other sources of power.
- Being a renewable resource, using wind energy to generate electricity contributes to resource conservation. Thus, the project activity causes no negative impact on the surrounding environment.

Technological well being

- There is continuous research and development on the geometry of the wind blades, height of towers, diameters of towers, etc., which augurs well for the technological well-being in the development of wind energy to produce clean electricity.
- The generated electricity from the project activity is connected to the grid. The project activity

improves the supply of electricity with clean, renewable wind power while contributing to theregional/local economic development.

- Wind Energy plants provide local distributed generation, and provide site-specific reliability and transmission and distribution benefits including:

1. Improved power quality
2. Reactive power control
3. Mitigation of transmission and distribution congestion

With regards to ESG credentials:

At present specific ESG credentials have not been evaluated, however, the project essentially contributes to various indicators which can be considered under ESG credentials. Some of the examples are as follows:

Under Environment:

The following environmental benefits are derived from the project activity:

i. Produces renewable electricity without any GHG emissions.
ii. Wind power plants have little impact on the surrounding ecology.

For the PPs, energy sale pattern is now based on renewable energy due to the project and it also contributes to GHG emission reduction and conservation of depleting energy sources associated with the project baseline. Hence, project contributes to ESG credentials.

There are social, environmental, economic and technological benefits which contribute to sustainable development. Rational: As per 'Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India)', final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories (07/03/2016), it has been declared that wind project activity falls under the "White category".

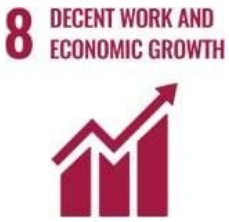
White Category projects/industries do not require any Environmental Clearance such as 'Consent to Operate' from PCB as such project does not lead to any negative environmental impacts. Additionally, as per Indian Regulation, Environmental and Social Impact Assessment is not required for Wind Projects.

United Nations Sustainable Development

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:

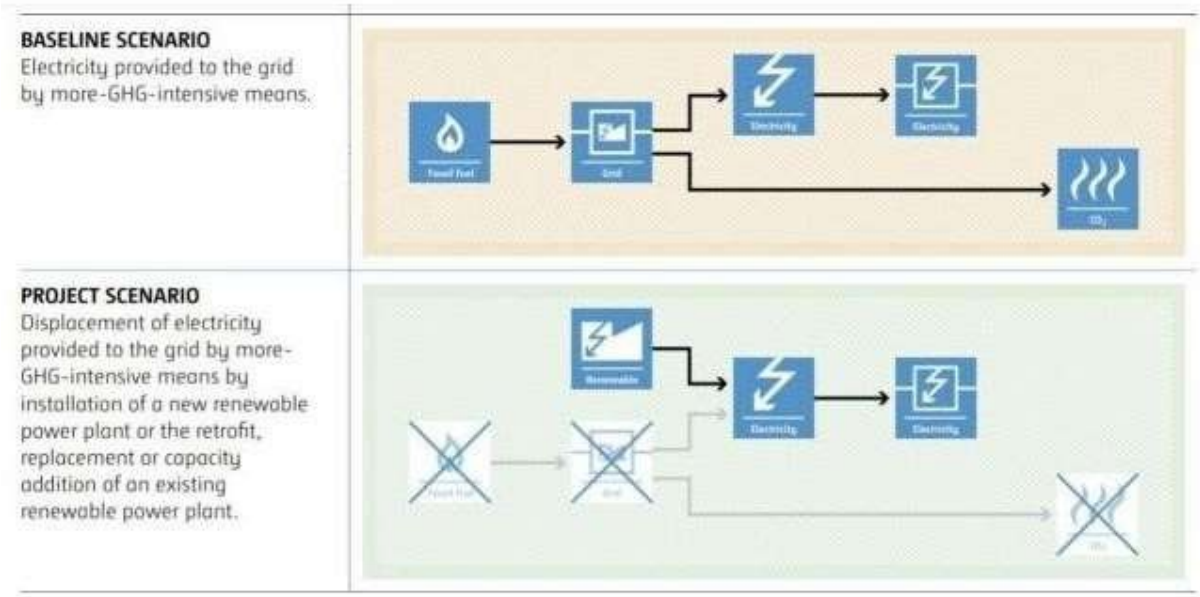
- SDG13: Climate Action
- SDG 7: Affordable and Clean Energy
- SDG 8: Decent Work and Economic Growth

Development Goals	Targeted SDG	Target Indicator (SDG Indicator)
 SDG 13: Climate Action	13.2: Integrate climate change measures into national policies, strategiesand planning **Target: 801025 tCO2** avoided during MR Period.	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)
 SDG 7: Affordable andClean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix **Target: 890026.35 MWh** supplied during thisMR from wind energy.	7.2.1: Renewable energy share in the total final energy consumption
 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,	8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

Baseline Emissions>>

This section provides details of emission displacement rates/coefficients/factors established by the applicable methodology selected for the project. As per para 19 of the approved consolidated methodology *ACM0002*, version 20, if the project activityis 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-connectedpower plants and by the addition of new generation sources into the grid".



The project activity involves setting up of a new wind power plant to harness the green power from wind energy and to use the green electricity through regional NEWNE grid or wheeled for captive consumption through wheeling into the grid. In the absence of the project activity, the equivalent amount of power would have been generated by the operation of grid-connected fossil fuel-based power plants and by the addition of new fossil fuel-based generation sources into the grid. The power produced at grid from the other conventional sources which are predominantly fossil fuel based. Hence, the baseline for the project activity is the equivalent amount of power produced at the Indian grid.

A "grid emission factor" refers to a CO2 emission factor (tCO2/MWh) which will be associated with each unit of electricity provided by an electricity system. The UCR recommends an emission factor of 0.9 tCO_2/MW_h for the 2013- 2021 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. Also, for the vintage 2021-22, the combined margin emission factor calculated from CEA database in India results into higher emission than the default value. Hence, **the same UCR emission factor (**0.9 tCO_2/MW_h) has been consideredto calculate the emission reduction under conservative approach.

Debundling>>

This **50 MW Wind Power Project by Gujarat Fluorochemicals Limited** project is not debundled component of a larger carbon or GHG registered project activity.

SECTION C. Application of methodologies and standardized baselines

C.1. 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 togrid. The project activity has installed capacity of 50 MW which qualifies for a large-scale project activity. The project status is corresponding to the methodologyACM0002 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.

C.3 Applicability of double counting emission reductions >>

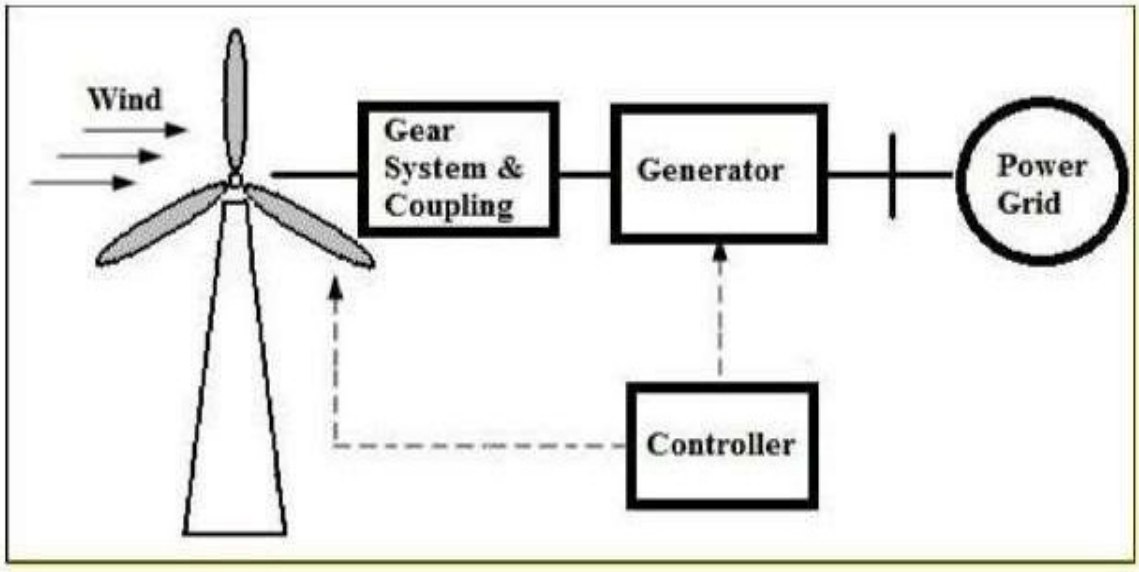
There is no double accounting of emission reductions in the project activity due to thefollowing reasons:

- 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.

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_2	**Included**	Major source of emission
		CH_4	Excluded	Excluded for simplification. This is conservative
		N_2O	Excluded	Excluded for simplification. This is conservative
Project Activity	Greenfield power project	CO_2	Excluded	Excluded for simplification. This is conservative
		CH_4	Excluded	Excluded for simplification. This is conservative
		N_2O	Excluded	Excluded for simplification. This is conservative



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

Net GHG Emission Reductions and RemovalsThus, ERy

= BEy – PEy – LEy

Where:
ERy = Emission reductions in year y (tCO2/y)
BEy = Baseline Emissions in year y (t CO2/y)
PEy = Project emissions in year y (tCO2/y)
LEy = Leakage emissions in year y (tCO2/y)

Baseline Emissions

Baseline emissions include only CO2 emissions from electricity generation in powerplants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated byexisting grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

Total Installed Capacity: 50 MW

Year	MWh Supplied to Grid
2013	1,14,711.24
2014	1,03,203.43
2015	1,02,578.48
2016	98,686.70
2017	93,636.36
2018	93,085.08
2019	85,779.5
2020	68,693.45
2021	71,601.97
2022	58,050.15

Estimated Annual Emission Reductions: $BE_y = EG_{BL,yl} \times EF_{, CO2, GRID, y}$

BE_y = Emission reductions in a year y.

where:

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

$EF_{Grid,CO2,y}$ = CO_2 emission factor of the grid in year y (t CO_2/MWh) as determined bythe UCR Standard.

Year	MWh Supplied to Grid	ER
2013	114,711.24	103,240.00
2014	103,203.43	92,883.00
2015	102,578.48	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
Total ER (tCO2)		801,025.00

Rational: This final value is conservative as all annualized ER values are rounded down and final sum is considered for reporting, which gives the most conservativeresult. The vintage wise break up is given under the ER excel sheet.

Prior History>>

The project activity has earlier applied for registration under the UNFCCC CDM mechanism under the title "**50 MW wind power project in Gujarat by Gujarat Fluorochemicals Limited**," (link:https://cdm.unfccc.int/Projects/Validation/DB/648Z8RPB7O44S4NNDSLY58KFBUCGOC/view.html), however, the PP has not completed the validation process, nor has generated a CDM registration number or generated carbon credits under the CDM since 2012. Further, the PP has not applied for registration or crediting under any other voluntary GHG mechanism for the current UCR monitoring and crediting period of this project activity. Hence there is no double counting of the carbon credits anticipated for the current project activity.

Monitoring period number and duration>>

Number: First Monitoring Period
Duration: 01/01/2013 to 31/12/2022 (10 years)

Changes to start date of crediting period >>

There is no change in the start date of crediting period. The start date of crediting under UCR is considered as 01/01/2013, which is the earliest monitor period of wind turbine as per the UCR Guidelines and no GHG emission reduction has been claimed so far under any other voluntary GHG program.

C.9. Permanent changes from PCN monitoring plan, applied methodology or appliedstandardized baseline >>

Not applicable

C.10. Monitoring plan>>

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, PEy =0.

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, LEy= 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:

Calculated Emission Reductions (ER_y) = 801,025 CoUs (801,025 tCO2eq)

B.10. Monitoring plan>>

Key Data Monitored: • Quantity of net electricity supplied to the grid

·· Monitoring Plan Objective and Organization

PPs are the project implementers and monitors the electricity delivered to the electricity grid by the project activity. The data is already archived electronically and is stored since **01/01/2013**.

To ensure that the data is reliable and transparent, the PPs have established Quality Assurance and Quality Control (QA&QC) measures to effectively control and manage data reading, recording, auditing as well as archiving data and all relevant documents. The data is monitored on a daily basis and is submitted to PPs on a daily basis.

PPs have implemented QA&QC measures to calibrate and ensure the accuracy of metering and safety aspects of the project operation. The metering devices are calibrated and inspected properly and periodically, according to state electricity board's specifications and requirements to ensure accuracy in the readings.

2 Data and Parameters monitored

The project activity essentially involves generation of electricity from wind, the employed WEGs can only convert wind energy into electrical energy and cannot use any other input fuel for electricity generation. Thus, no special ways and means are required to monitor leakage from the project activity.

The recording of the electricity fed to the state utility grid is carried out jointly at the incoming feeder of the state power utility. The joint measurement is carried out once in a month in presence of both parties (the developer's representative and officials of the state power utility). Both parties sign the recorded reading.

Data / Parameter:	***EGy***
Data unit:	MWh
Description:	<table><tr><th>Year</th><th>MWh Supplied to Grid</th></tr><tr><td>2013</td><td>114,711.24</td></tr><tr><td>2014</td><td>103,203.43</td></tr><tr><td>2015</td><td>102,578.48</td></tr><tr><td>2016</td><td>98,686.70</td></tr><tr><td>2017</td><td>93,636.36</td></tr><tr><td>2018</td><td>93,085.08</td></tr><tr><td>2019</td><td>85,779.50</td></tr><tr><td>2020</td><td>68,693.45</td></tr><tr><td>2021</td><td>71,601.97</td></tr><tr><td>2022</td><td>58,050.15</td></tr></table>
Source of data:	Quantity of net electricity supplied by the Project Activity to the grid in year y
Measurement procedures (if any):	JMR. Statement of net export of power to the grid issued Monthly by State Electricity Board or any other competent authority as Applicable.
Monitoring frequency:	Total MWh supplied to the grid during this MR =**890,026.35**

	The net energy exported to the grid is measured every month using calibrated energy meter by the State Electricity Board authorities in the presence of the project implementer or its representatives. The meter/s shall be jointly inspected, and sealed by authorized representatives of the company and the state utility. Measuring procedure: Will be measured by an export-import energy meter. The net electricity exported by the project plant would either be directly sourced as a measured parameter or be calculated by deducting the amount of imported electricity from the total amount of exported electricity. Accuracy class of energy meter: As per Wheeling Agreement or relevant National standards amended/modified from timeto time. Calibration Frequency: As per the Central Electricity Authority the testing and calibration frequency should be minimum once in five years. However, the calibration will be done following the relevant applicable National Guidelines updated from time to time during the operation of the project activity. Entity responsible: Aggregator

QA/QC procedures:	Monitoring frequency: Continuous Measurement frequency: Hourly Recording frequency: Monthly
	The electricity meter/s record both export and import of electricity from the Wind Farm plant and the readings with regard to net electricity generated will be used for calculation of emission reductions. The net electricity supplied to the grid will be cross checked with the monthly settlement invoices. The meter/s would be checked for accuracy and the meters will be calibrated as per the procedures of State Electricity Board as per the national or international standards. Measurement results shall be cross checked with records for sold electricity (i.e. invoice). As per the monthly accounting procedure reflected in the monthly statement (e.g., JMR and Settlement Invoices etc.) However, if the monthly statement does not directly provide “net electricity” units, then quantity of net electricity supplied to thegrid shall be calculated using the parameters reflected in the monthly document, such as Export units and Import units. Thus, the difference between the measured quantities of the grid export and the import will be considered as net export: EGPJ,y= EG Export - EGImport (Calculation has been referred in the ER sheet)
Purpose of Data	-Calculation of baseline emissions

GFL Main and Check Meter Details

Project	Feeder	Main Meter	Check Meter
GFL 50 MW Wind Power Project	Line-1	GJU61771	GJ-1966-A
	Line-2	GJU61770	GJ-3624-A
	Line-3	RJB81532	GJ-2532-A

Gujarat Energy Development Agency

(A Government of Gujarat Organisation)

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Ref No. :

Date :

GEDA/GFL/PWF/CHO/2011-12/ 765 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	Surandra nagar	60/p/101	13/05/2011	IOX/2000/11-12/2101
2	Sakhpur	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.

Electricity generation report for the purpose of commissioning of windfarm

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)

Gujarat Energy Development Agency

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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	Surandran agar	405/p11	18/08/2011	IOX/2000/11-12/2105
2	Dholkwa	Chotila		405/p11	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.

Electricity generation report for the purpose of commissioning of windfarm

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)

GEDA/GFL/PWF/CHO/2011-12/ 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/p11	28/09/2011	IOX/2000/11-12/2106
2	Dholkwa	Chotila		405/p11	28/09/2011	IOX/2000/11-12/2107
3	Dholkwa	Chotila		405/p11	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.

Electricity generation report for the purpose of commissioning of windfarm

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)

Gujarat Energy Development Agency
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Ref No. : Date :

GEDA/GFL/PWF/CHO/2011-12/13510 07 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 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 : 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/p 3	30/09/2011	IOX/2000/11-12/2359
3	Sakhpar	Chotila		15/p 2	24/11/2011	IOX/2000/11-12/2356
4	Anandpar	Chotila		134/p 2	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/p 2	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.

Electricity generation report for the purpose of commissioning of windfarm

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)

GETCO
GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

State Load Despatch Centre-Gotri, Vadodara-390 021
Fax: 0265-2352019 Phone: 0265-2352103/2322206 Email : sldcabtcomm@gmail.com

No: SLDC/Comm./WEA/2022-23/JUN/REV1/694 Date:22-07-2022

CERTIFICATE FOR SHARE OF ELECTRICITY GENERATED BY THE WIND FARM AT GOLIDA (GFL) FOR THE MONTH OF JUNE'2022

(A) ELECTRICITY GENERATED BY THE WIND FARM

1	Period Considered for the month of JUNE'2022	01-June-22 to 30-June-22	
2	Active Energy Received From **GOLIDA (GFL)** wind Farm	11779.315	Mwh
3	Reactive Energy Supplied to **GOLIDA (GFL)** wind Farm	57.273	Mvarh

(B) SHARE OF WIND FARM OWNER IN THE ELECTRICITY RECEIVED AT GOLIDA (GFL) 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	Gujarat Flourochemicals Ltd.(GGM-94,24,93,21,113,116,114)	DGVCL	14.000	1384.097	6.524
2	Gujarat Flourochemicals Ltd.(GGM-92,91,89,90,129,23)	DGVCL	12.000	1362.653	7.170
3	Gujarat Flourochemical Ltd.	DGVCL	24.000	2738.253	15.798
4	Ashwini Traders,Mumbai*	GUVNL	2.000	302.588	1.824
5	CERA SANITARYWARE LTD.	UGVCL	2.000	173.163	1.510
6	Ratnamani Metals & Tubes Ltd., Ahmedabad.	PGVCL	4.000	379.667	2.207
7	Sri Balaji and Company, Mumbai.	GUVNL	2.000	306.641	1.882
8	Jagdamba Polymers Ltd., Ahmedabad	UGVCL	2.000	0.000	0.000
9	Ambica Polymer Pvt. Ltd., Ahmedabad	MGVCL	2.000	0.000	0.000
10	Inox Wind Ltd., HP	DGVCL	2.000	582.798	1.562
11	Mayur Wovens Pvt. Ltd., Ahmedabad	UGVCL	2.000	199.635	1.159
12	Grainspan Nutrients.Pvt.Ltd,Ahmedabad	UGVCL	2.000	226.343	1.139
13	Surya Vidyut Ltd.	GUVNL	26.000	4122.373	16.497
14	Taurus Tiles Pvt.Ltd	PGVCL	2.000	1.104	0.001
		TOTAL	98.000	11779.315	57.273

(C) CONSIDERATIONS FOR ISSUING ABOVE STATEMENT

1. 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 SLDC and block wise computations and meter data is published on website.

GETCO
GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

State Load Despatch Centre-Gotri, Vadodara-390 021
Fax: 0265-2352019 Phone: 0265-2352103/2322206 Email : sldcabtcomm@gmail.com

No: SLDC/Comm./WEA/2022-23/JUN/REV1/694 Date:22-07-2022

(D) CERTIFICATE

This is to certify that energy generated by Wind Turbine generators as specified in Para 'A' and received at INTERFACE POINT OF **GOLIDA (GFL) FOR GOLIDA (GFL)**Substation during the month of JUNE'2022 at the period specified as above is **11779.315** 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.

GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED. SLDC, GOTRI VADODARA 390 021

Signature :
Name : **A B Rathod**
Designation :**Addl Chief Engineer**

50 MW Large Scale Wind Power Project of Gujarat Fluorochemicals Limited														
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	10,173,326	7,925,192	8,531,529	10,144,832	16,451,066	10,279,761	14,600,912	11,433,809	10,556,261	3,089,848	5,517,577	6,007,126	**114,711,239**	**114,711.24**
2014	9,343,881	6,753,325	7,905,809	7,483,289	12,100,003	16,085,445	14,001,979	9,513,925	5,164,530	2,431,154	2,874,564	9,545,527	**103,203,431**	**103,203.43**
2015	8,194,897	7,549,727	6,794,842	9,181,519	12,065,602	8,808,382	15,262,511	10,152,342	6,369,223	4,241,513	5,515,511	8,442,415	**102,578,484**	**102,578.48**
2016	4,618,511	6,850,735	6,204,547	7,360,901	12,368,466	12,452,760	12,731,631	13,321,907	9,372,452	3,514,228	3,694,440	6,196,126	**98,686,704**	**98,686.70**
2017	8,019,457	7,032,657	7,424,739	9,989,500	14,091,374	7,555,163	11,321,419	8,569,168	3,312,896	3,645,598	4,139,652	8,534,732	**93,636,355**	**93,636.36**
2018	5,110,907	4,070,751	5,887,493	6,526,522	10,487,506	14,214,690	14,541,145	12,802,825	6,665,520	2,259,546	2,897,948	7,620,228	**93,085,081**	**93,085.08**
2019	8,223,030	7,267,262	7,211,891	7,595,390	10,140,937	9,966,135	11,207,779	8,484,431	3,544,991	3,084,728	2,676,679	6,376,242	**85,779,495**	**85,779.50**
2020	4,636,235	4,826,970	5,245,942	5,244,572	8,232,854	5,176,420	6,157,453	10,892,414	3,032,773	3,612,331	6,043,678	5,591,810	**68,693,452**	**68,693.45**
2021	5,697,269	4,329,514	5,350,531	5,317,240	6,710,116	8,185,290	10,228,543	6,365,037	4,114,269	2,610,810	5,619,240	7,074,108	**71,601,967**	**71,601.97**
2022	5,798,808	3,267,886	4,218,319	4,972,420	7,149,931	5,485,003	7,663,980	5,741,660	3,299,108	2,517,742	2,468,090	5,467,198	**58,050,145**	**58,050.15**
Total Generation from January 2013 to December 2022 in kWh													**890,026,353**	**890,026.35**

Data/Parameter	$EF_{, CO2, GRID, y}$
Data unit	0.9 tCO2 /MWh
Description	A "grid emission factor" refers to a CO2 emission factor (tCO2/MWh) which will be associated with each unit of electricityprovided by an electricity system. The UCR recommends an emission factor of 0.9 tCO2/MWh for the 2013-2020 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. Also, for the vintage 2021-22,the combined margin emission factor calculated from CEA database in India results into same emission factors as that of thedefault value. Hence, the same emission factor has been considered to calculate the emission reduction
of data Value(s) applied	UCR Standard Protocol As per Standard
Measurement methods and procedures	Fixed
Monitoring frequency	NA
Purpose of data	To estimate baseline emissions