



Monitoring Report

CARBON OFFSET UNIT (CoU) PROJECT



Title: 123.88 MW Bundled Wind, Solar and Hybrid Power Project by KP Group in Gujarat

Version 1.2

Date: 10/12/2025

First CoU Issuance Period: 08 years, 11 months, 18 days

Monitoring Period: 13/01/2016 to 31/12/2024



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

Monitoring Report	
Title of the project activity	123.88 MW Bundled Wind, Solar and Hybrid Power Project by KP Group in Gujarat
UCR Project Registration Number	487
Version	1.2
Completion date of the MR	10/12/2025
Monitoring period number and duration of this monitoring period	Monitoring Period Number: 01 Duration of this monitoring Period: (first and last days included 13/01/2016 to 31/12/2024)
Project participants	Representator: Advait Greenergy Private Limited Developer: KPI Green Energy Limited KPIG Energia Private Limited Sun Drops Energia Private Limited KP Energy Limited
Host Party	India
Applied methodologies and standardized baselines	Applied Methodologies: ACM0002: Grid-connected electricity generation from renewable sources - Version 22.0 Standardized Baselines: N/A
Sectoral scopes	01 Energy Industries (Renewable/Non-Renewable Sources)
Actual amount of GHG emission reductions for this monitoring period	2016: 6,711 CoUs (6,711 tCO _{2eq})
	2017: 21,638 CoUs (21,638 tCO _{2eq})
	2018: 31,923 CoUs (31,923 tCO _{2eq})
	2019: 46,891 CoUs (46,891 tCO _{2eq})
	2020: 83,546 CoUs (83,546 tCO _{2eq})
	2021: 1,03,549 CoUs (1,03,549 tCO _{2eq})
	2022: 1,42,360 CoUs (1,42,360 tCO _{2eq})
	2023: 1,97,416 CoUs (1,97,416 tCO _{2eq})
Total:	8,19,294 CoUs (8,19,294 tCO_{2eq})

SECTION A. Description of project activity

A.1. Purpose and general description of project activity >>

a) Purpose of the project activity and the measures taken for GHG emission reductions >>

The **123.88 MW Bundled Wind, Solar, and Hybrid Power Project by KP Group** is located across the villages of Matalpur, Keshav, Rinavada, Sathara, Samoj, Vedcha, Shahpura, Bhungar, Simdhara, Karad, Muler, Ranada, Sudi, Tancha, Kurchan, and Bhimpura in the state of Gujarat, India.

The individual project locations with commissioning details and associated DISCOM are provided below:

Wind Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Associated DISCOM
KP ENERGY LTD	Matalpar	Bhavnagar	Wind	2.1	11-Mar-16	Gujarat Urja Vikas Nigam Ltd. (GUVNL)
KP ENERGY LTD	Keshav	Porbandar	Wind	2.1	31-Mar-17	Dakshin Gujarat Vij Company Limited (DGVCL)
KP ENERGY LTD	Rinawada	Porbandar	Wind	2.1	30-May-17	Madhya Gujarat Vij Company Limited (MGVCL)
KP ENERGY LTD	Sathara	Bhavnagar	Wind	2.1	29-Jun-17	Dakshin Gujarat Vij Company Limited (DGVCL)
			Total	8.4		

Solar Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Associated DISCOM
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.16	13-Jan-16	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.39	24-Apr-16	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.63	25-Jul-16	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.7	24-Feb-17	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN	Sudi & Tancha	Bharuch	Solar	2.015	04-Jul-17	Dakshin Gujarat Vij Company Limited (DGVCL)

ENERGY LTD						
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.97	23-Sep-17	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.31	01-Dec-17	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.05	31-Jul-18	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.52	29-Nov-18	Madhya Gujarat Vij Company Limited (MGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.165	29-Jan-19	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.71	30-Apr-19	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.85	27-Jun-19	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.43	21-Sep-19	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.81	04-Nov-19	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.783	31-Mar-20	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.87	31-Mar-20	Uttar Gujarat Vij Company Limited (UGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.56	06-Nov-20	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	3.26	15-Dec-20	Dakshin Gujarat Vij Company Limited (DGVCL)

KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.2	01-Jun-21	Dakshin Gujarat Vij Company Limited (DGVCL)
KPIG ENERGIA PVT LTD	Muler	Bharuch	Solar	1	01-Dec-21	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	7.5	10-Dec-21	Madhya Gujarat Vij Company Limited (MGVCL)
KPI GREEN ENERGY LTD	Bhimpura	Bharuch	Solar	1.2	31-Dec-21	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Kurchan	Bharuch	Solar	1.2	11-Feb-22	Dakshin Gujarat Vij Company Limited (DGVCL)
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	11	01-Mar-22	Dakshin Gujarat Vij Company Limited (DGVCL) Madhya Gujarat Vij Company Limited (MGVCL)
KPI GREEN ENERGY LTD	Vedcha 2	Bharuch	Solar	0.6	25-Mar-22	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Vedcha 1	Bharuch	Solar	0.6	29-Mar-22	Dakshin Gujarat Vij Company Limited (DGVCL)
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	4	01-Apr-22	Dakshin Gujarat Vij Company Limited (DGVCL)
SUNDROPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	4.5	01-Apr-22	Dakshin Gujarat Vij Company Limited (DGVCL) Uttar Gujarat Vij Company Limited (UGVCL)
SUNDROPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	1.5	01-Jun-22	Uttar Gujarat Vij Company Limited (UGVCL)
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	0.44	01-Nov-22	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar	0.4	01-Dec-22	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Vedcha 4	Bharuch	Solar	0.4	01-Mar-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	1.76	01-Mar-23	Dakshin Gujarat Vij Company Limited (DGVCL)

KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.88	23-Mar-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.44	31-Mar-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KP ENERGY LTD	Simdhara	Bharuch	Solar	3.52	14-Jun-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	14-Jun-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	0.88	17-Jul-23	Dakshin Gujarat Vij Company Limited (DGVCL)
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	24-Jul-23	Dakshin Gujarat Vij Company Limited (DGVCL)
			Total	88.843		

Wind-Solar Hybrid Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	DISCOM
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Solar-Hybrid	7.04	11-Apr-23	Dakshin Gujarat Vij Company Limited (DGVCL) Madhya Gujarat Vij Company Limited (MGVCL)
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	9.2	11-Apr-23	
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	6.9	24-Apr-23	
KPI GREEN	Samoj	Bharuch	Solar-Hybrid	1.4	14-Jun-23	Dakshin Gujarat Vij Company Limited (DGVCL)

ENERGY LTD					
KPI GREEN ENERGY LTD	Samoj	Bharuch	Wind-Hybrid	2.1	14-Jun-23
			Total	26.64	

This project activity represents a bundle of grid-connected solar photovoltaic (PV) and wind power generation projects, including a hybrid system that combines both technologies. The net generated electricity from the project activity is being wheeled to industrial customers through PPAs through the Indian grid (previously known as NEWNE grid)¹ as per wheeling agreement signed between Power Purchasers and PP.

The 123.88 MW bundled project activity, comprising solar, wind, and hybrid projects, has executed separate Wheeling Agreements with the respective DISCOMs² based on project locations. These agreements, valid for a period of 25 years in line with the operational lifetime of the projects, define the terms for energy injection, transmission losses, scheduling, and settlement.

The primary goal of the project is to mitigate greenhouse gas (GHG) emissions by displacing fossil fuel-based electricity with renewable energy. The solar PV system harnesses sunlight through photovoltaic cells to generate electricity, while the wind power system converts wind energy into electrical power using turbines.

By integrating these two technologies, the hybrid system ensures a more reliable and efficient energy supply. Solar PV provides consistent output during daylight hours, while wind turbines generate electricity during windy or overcast conditions. This complementary arrangement optimizes energy generation, enhances grid stability, and reduces variability compared to standalone renewable sources.

As a result, the project delivers a clean, carbon-free, and sustainable energy solution, significantly reducing GHG emissions by replacing fossil fuel-based electricity in the regional grid.

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

The project activity involves the installation of a hybrid renewable energy system, integrating ground-mounted solar photovoltaic (PV) power plants and wind turbines to achieve an aggregated installed capacity that meets regional energy demands efficiently.

The solar power system utilizes Solar PV Modules to generate clean energy. Solar radiation is directly converted into electricity through photovoltaic (PV) cells, which produce an electric voltage when

¹ [National Grid](#)

² As per Wheeling Agreement

exposed to sunlight. These cells are interconnected within photovoltaic modules, which are further assembled into PV arrays mounted on frames. This system efficiently captures and converts solar energy into electrical power with minimal environmental impact.

The wind power system employs horizontal-axis wind turbines designed to harness kinetic energy from wind currents. The turbines consist of aerodynamic blades connected to a rotor, which drives an electric generator through a gearbox. As wind flows over the blades, it generates rotational mechanical energy, which is subsequently converted into electricity.

The hybrid system is equipped with an advanced controller and inverter system to effectively synchronize solar and wind power generation. This ensures consistent power output, minimizes intermittency, and optimizes energy production for direct use or grid supply.

This combination of solar and wind technologies significantly reduces greenhouse gas emissions, contributing to the clean energy transition and sustainable development.

The synopsis of the Technical Arrangements of the project activity are provided below:

Total Capacity of the Project	123.88 MW (AC)
SPV Modules – Type	Polycrystalline/Monocrystalline
SPV Modules – Make	Goldi Green / Sonali Solar / Navitas Solar / Lanco Solar / Emmvee / Waaree / Seraphim / Renewsys / PV Powertech
Type of Inverters	Central/String
Make of Inverters	Delta/Raychem/Growatt/Sungrow
Bi-Directional Meter Make	L&T/Secure
Wind Turbine Generators (WTGs) - Make	Suzlon Energy Ltd. and Senvion Wind Technology Pvt. Ltd.

The project has generated a total of 9,49,275.11 MWh of electricity over the period, achieving a total of 8,19,294 tCO_{2e} GHG emission reduction during the monitoring period. This initiative supports clean energy deployment and contributes to sustainable development by reducing dependence on conventional power sources.

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

The duration of the crediting period corresponding to the monitoring period covered in this monitoring report.

UCR Project ID or Date of Authorization : 487
 Start Date of Crediting Period : 13/01/2016
 Project Commissioned : Details given in the table under Section B.1.(a)

d) Total GHG emission reductions achieved or net anthropogenic GHG removals by sinks

achieved in this monitoring period>>

The total GHG emission reductions achieved in this monitoring period is as follows:

ERs Generated for the Monitoring Period	
Start date of this Monitoring Period	13/01/2016
Carbon credits claimed up to	31/12/2024
Total ERs generated (tCO ₂ eq)	8,19,294 tCO ₂ eq
Leakage	0 tCO ₂ eq

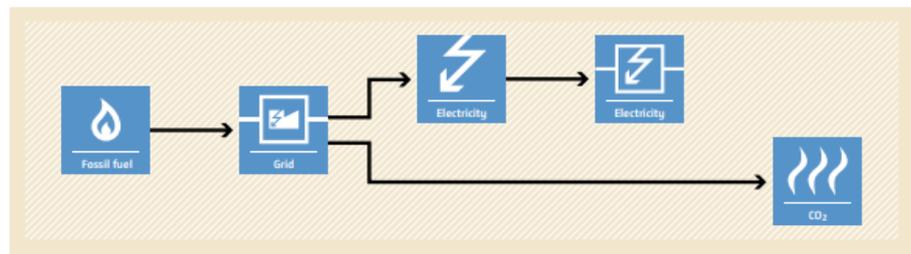
e) Baseline Scenario>>

The baseline scenario identified at the PCN stage of the project activity is: In the absence of the project, the required electricity would have been generated primarily from coal, oil, and gas-fired power stations, leading to significant greenhouse gas (GHG) emissions, making it carbon-intensive.

Therefore, the baseline scenario reflects the pre-project situation, where energy demand was met through conventional grid-based power generation, contributing to higher carbon emissions and environmental impact, which also represents the pre-project situation:

BASELINE SCENARIO

Electricity provided to the grid by more-GHG-intensive means.



PROJECT SCENARIO

Displacement of electricity provided to the grid by more-GHG-intensive means by installation of a new renewable power plant or the retrofit, replacement or capacity addition of an existing renewable power plant.

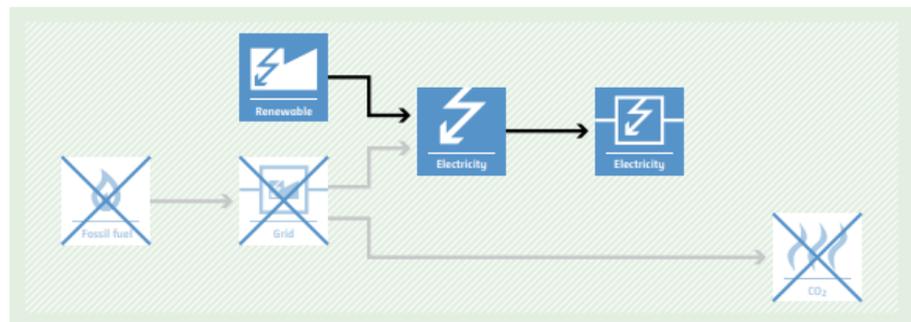


Figure 1

By implementing this renewable energy project, the project activity displaces fossil fuel-based electricity from the grid, effectively reducing GHG emissions and supporting India's clean energy transition.

A.2. Location of project activity>>

Country: India

Districts: Bharuch, Porbandar, and Bhavnagar

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Latitude Longitude
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.16	13-Jan-16	21.89184, 72.89558
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.39	24-Apr-16	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.63	25-Jul-16	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.7	24-Feb-17	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.015	04-Jul-17	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.97	23-Sep-17	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.31	01-Dec-17	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.05	31-Jul-18	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.52	29-Nov-18	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.165	29-Jan-19	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.71	30-Apr-19	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.85	27-Jun-19	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.43	21-Sep-19	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.81	04-Nov-19	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.783	31-Mar-20	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.87	31-Mar-20	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.56	06-Nov-20	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	3.26	15-Dec-20	
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.2	01-Jun-21	

KPIG ENERGIA PVT LTD	Muler	Bharuch	Solar	1	01-Dec-21	21.8734, 72.6817
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	7.5	10-Dec-21	21.8952, 72.89912
KPI GREEN ENERGY LTD	Bhimpura	Bharuch	Solar	1.2	31-Dec-21	21.98989, 72.88295
KPI GREEN ENERGY LTD	Kurchan	Bharuch	Solar	1.2	11-Feb-22	21.90261, 72.95901
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	11	01-Mar-22	21.89397, 72.91231
KPI GREEN ENERGY LTD	Vedcha 2	Bharuch	Solar	0.6	25-Mar-22	22.00806, 72.93829
KPI GREEN ENERGY LTD	Vedcha 1	Bharuch	Solar	0.6	29-Mar-22	22.00872, 72.94233
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	4	01-Apr-22	21.89397, 72.91231
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	4.5	01-Apr-22	
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	1.5	01-Jun-22	
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	0.44	01-Nov-22	21.90261, 72.95901
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar	0.4	01-Dec-22	22.15181, 72.72794
KPI GREEN ENERGY LTD	Vedcha 4	Bharuch	Solar	0.4	01-Mar-23	22.00837, 72.93237
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	1.76	01-Mar-23	21.90261, 72.95901
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.88	23-Mar-23	21.8759, 73.10925
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.44	31-Mar-23	21.8717, 73.1101
KP ENERGY LTD	Simdhara	Bharuch	Solar	3.52	14-Jun-23	21.74663, 73.18334
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	14-Jun-23	21.74822, 73.17817
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	0.88	17-Jul-23	
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	24-Jul-23	
			Total	88.843		

Villages: Bhimpura, Bhungar, Keshav, Kurchan, Matalpar, Muler, Ranada, Rinavada, Samoj, Sathara, Shahpura-1, Shahpura-4, Simdhara & Karad, Sudi & Tancha, Vedcha-1, Vedcha-2, Vedcha-4.

The representation of the project locations is given below:



Source: Google Maps and Geo-Coordinates³

Wind Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Latitude Longitude
KP ENERGY LTD	Matalpar	Bhavnagar	Wind	2.1	11-Mar-16	21.30467, 71.75556
KP ENERGY LTD	Keshav	Porbandar	Wind	2.1	31-Mar-17	21.78877, 69.49095
KP ENERGY LTD	Rinawada	Porbandar	Wind	2.1	30-May-17	21.75022, 69.53578
KP ENERGY LTD	Sathara	Bhavnagar	Wind	2.1	29-Jun-17	21.12055, 71.824
			Total	8.4		

Solar Projects:

³ As per Wheeling Agreement

Wind-Solar Hybrid Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Latitude Longitude
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Solar-Hybrid	7.04	11-Apr-23	21.25252, 72.01685
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	9.2	11-Apr-23	
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	6.9	24-Apr-23	
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar-Hybrid	1.4	14-Jun-23	22.14362, 72.72412
KPI GREEN ENERGY LTD	Samoj	Bharuch	Wind-Hybrid	2.1	14-Jun-23	
			Total	26.64		

A.3. Parties and project participants >>

Party (Host)	Participants
INDIA	KPI GREEN ENERGY LIMITED
INDIA	KPIG ENERGIA PRIVATE LIMITED
INDIA	SUN DROPS ENERGIA PRIVATE LIMITED
INDIA	KP ENERGY LIMITED
INDIA	ADVAIT GREENERGY PRIVATE LIMITED (Authorized Representor)

A.4. References to methodologies and standardized baselines >>

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

TYPE: I–Renewable Energy Projects

CATEGORY: ACM0002: Grid-connected electricity generation from renewable sources - Version 22.0⁴

The project activity complies with the Common Eligibility Criteria for All Project Types under the UCR CoU Standard (Updated August 2024, Version 7.0)⁵ and meets all applicable conditions.

A.5. Crediting period of project activity >>

The crediting period for the project under UCR is determined based on the commissioning dates of the bundled renewable energy installations.

This monitoring report covers 1st monitoring period.

Length of the crediting period corresponding to this monitoring period: 08 years, 11 months, 18 days
13/01/2016 to 31/12/2024

A.6. Contact information of responsible persons/entities >>

Representator	
Name	Advait Greenergy Private Limited
Contact Person	Ms. Avantika Gupta
Mobile	+91 90797 65066
E-mail	avantika.gupta@advaitgroup.co.in
Address	Advait Greenergy Private Limited, 1st Floor, KIFS Corporate House, Iskcon Ambli Road, Beside Hotel Planet Landmark, Near Ashok Vatika, Ambli, Ahmedabad – 380058
Project Proponent (Developer)	
Name	KPI Green Energy Limited KPIG Energia Private Limited

⁴ [ACM0002: Grid-connected electricity generation from renewable sources -Version 22.0](#)

⁵ [UCRStandardAug2024updatedVer7](#)

	Sun Drops Energia Private Limited KP Energy Limited
Contact Person	Ms. Avantika Gupta
Mobile	+91 90797 65066
E-mail	avantika.gupta@advaitgroup.co.in
Address	Advait Greenergy Private Limited, 1st Floor, KIFS Corporate House, Iskcon Ambli Road, Beside Hotel Planet Landmark, Near Ashok Vatika, Ambli, Ahmedabad – 380058

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 this monitoring period in accordance with UCR PCN>>

The total capacity of the bundle is 123.88 MW (AC). The individual project location and commissioning details are as follows:

Wind Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Status
KP ENERGY LTD	Matalpar	Bhavnagar	Wind	2.1	11-Mar-2016	Operational
KP ENERGY LTD	Keshav	Porbandar	Wind	2.1	31-Mar-2017	Operational
KP ENERGY LTD	Rinavada	Porbandar	Wind	2.1	30-May-2017	Operational
KP ENERGY LTD	Sathara	Bhavnagar	Wind	2.1	29-Jun-2017	Operational
			Total	8.4		

Solar Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Status
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.16	13-Jan-2016	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.39	24-Apr-2016	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.63	25-Jul-2016	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.7	24-Feb-2017	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.015	4-Jul-2017	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.97	23-Sep-2017	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.31	1-Dec-2017	Operational

KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.05	31-Jul-2018	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.52	29-Nov-2018	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.165	29-Jan-2019	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.71	30-Apr-2019	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.85	27-Jun-2019	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.43	21-Sep-2019	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.81	4-Nov-2019	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.783	31-Mar-2020	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.87	31-Mar-2020	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.56	6-Nov-2020	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	3.26	15-Dec-2020	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.2	1-Jun-2021	Operational
KPIG ENERGIA PVT LTD	Muler	Bharuch	Solar	1	1-Dec-2021	Operational
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	7.5	10-Dec-2021	Operational
KPI GREEN ENERGY LTD	Bhimpura	Bharuch	Solar	1.2	31-Dec-2021	Operational
KPI GREEN ENERGY LTD	Kurchan	Bharuch	Solar	1.2	11-Feb-2022	Operational
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	11	1-Mar-2022	Operational
KPI GREEN ENERGY LTD	Vedcha	Bharuch	Solar	0.6	25-Mar-2022	Operational
KPI GREEN ENERGY LTD	Vedcha	Bharuch	Solar	0.6	29-Mar-2022	Operational
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	4	1-Apr-2022	Operational

SUNDROPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	4.5	1-Apr-2022	Operational
SUNDROPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	1.5	1-Jun-2022	Operational
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	0.44	1-Nov-2022	Operational
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar	0.4	1-Dec-2022	Operational
KPI GREEN ENERGY LTD	Vedcha	Bharuch	Solar	0.4	1-Mar-2023	Operational
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	1.76	1-Mar-2023	Operational
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.88	23-Mar-2023	Operational
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.44	31-Mar-2023	Operational
KP ENERGY LTD	Simdhara	Bharuch	Solar	3.52	14-Jun-2023	Operational
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	14-Jun-2023	Operational
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	0.88	17-Jul-2023	Operational
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	24-Jul-2023	Operational
			Total	88.843		

Wind-Solar Hybrid Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Status
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Solar-Hybrid	7.04	11-Apr-2023	Operational
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	9.2	11-Apr-2023	Operational
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	6.9	24-Apr-2023	Operational
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar-Hybrid	1.4	14-Jun-2023	Operational
KPI GREEN ENERGY LTD	Samoj	Bharuch	Wind-Hybrid	2.1	14-Jun-2023	Operational

			Total	26.64		
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The project has generated a total of 9,49,275.11 MWh of electricity over the period, achieving a total of 8,19,294 tCO_{2e} GHG emission reduction during the monitoring period. This initiative supports clean energy deployment and contributes to sustainable development by reducing dependence on conventional power sources.

b) For the description of the installed technology(ies), technical process and equipment, include diagrams, where appropriate>>

There was no harm identified from the project and hence no mitigations measures are applicable.

Wind Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Technical Specifications
KP ENERGY LTD	Matalpar	Bhavnagar	Wind	2.1	11-Mar-16	Make: Suzlon
KP ENERGY LTD	Keshav	Porbandar	Wind	2.1	31-Mar-17	Make: Suzlon Model: S97- 120
KP ENERGY LTD	Rinawada	Porbandar	Wind	2.1	30-May-17	Make: Suzlon Model: S97- 120
KP ENERGY LTD	Sathara	Bhavnagar	Wind	2.1	29-Jun-17	Make: Suzlon
			Total	8.4		

Solar Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Technical Specifications
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.16	13-Jan-16	PV Panels: Goldi Green Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.39	24-Apr-16	PV Panels: Goldi Green Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.63	25-Jul-16	PV Panels: GoldiGreen, Sonali Solar Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.7	24-Feb-17	PV Panels: Navitas 330 Wp Inverters: DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.015	04-Jul-17	PV Panels: Sonali Solar 250 Wp & Lanco Solar 320 Wp & 300 Wp Inverters: Raychem (Fimer) 750 kW & 900 kW
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.97	23-Sep-17	PV Panels: Lanco Solar Inverters: Fimer Raychem RPG (Italy)

KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.31	01-Dec-17	PV Panels: Navitas Inverters: Delta, DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.05	31-Jul-18	Make: PV Panels: Sonali Solar-250Wp, Seraphim Solar-265Wp, Navitas Solar-315 Wp, 275Wp 325Wp,330Wp Inverters: Raychem-900 Wp 750 Wp
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.52	29-Nov-18	PV Panels: Goldi Green 335 Wp Inverters: DelCen 2500
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.165	29-Jan-19	PV Panels: Navitas Solar Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.71	30-Apr-19	PV Panels: Navifas Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.85	27-Jun-19	PV Panels: Navitas Inverters: Delta, DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.43	21-Sep-19	PV Panels: Navitas Inverters: Delta, DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.81	04-Nov-19	PV Panels: Navitas Inverters: Delta, DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.783	31-Mar-20	PV Panels: Navitas Inverters: Delta
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.87	31-Mar-20	PV Panels: Goldi Green Technologies 250Wp, Lanco Solar - 320 Wp, Navitas 330 Wp Inverters: Fimer (RPG Raychem), Delta 3000 Kw
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.56	06-Nov-20	PV Panels: Lanco, Navitas Solar Inverters: Fimer Raychem RPG (Italy)
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	3.26	15-Dec-20	PV Panels: Navitas 330 Wp Inverters: DelCEN3000
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.2	01-Jun-21	PV Panels: Goldi Green 335 Wp, Navitas 330 Wp & Waaree 380 Wp Inverters: DelCen 2500, DelCen 3000
KPIG ENERGIA PVT LTD	Muler	Bharuch	Solar	1	01-Dec-21	Make - Emmvee Capacity-1000 kW
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	7.5	10-Dec-21	PV Panels: Navitas 335 Wp, Goldi Solar 335 Wp & Emmvee 335 Wp, Inverters: DelCen 1000, 2500 & 3000

KPI GREEN ENERGY LTD	Bhimpura	Bharuch	Solar	1.2	31-Dec-21	Make - Emmvee Capacity- 1200 kW
KPI GREEN ENERGY LTD	Kurchan	Bharuch	Solar	1.2	11-Feb-22	Make - Emmvee Capacity- 1200 kW
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	11	01-Mar-22	Make - Emmvee 335 Wp, DelCen 2500, Sungrow 200
KPI GREEN ENERGY LTD	Vedcha 2	Bharuch	Solar	0.6	25-Mar-22	Make - Waaree Capacity: 600 kW
KPI GREEN ENERGY LTD	Vedcha 1	Bharuch	Solar	0.6	29-Mar-22	Make - Waaree Capacity: 600 kW
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	4	01-Apr-22	Make - Emmvee 335 Wp, PV Powertech & Waaree 335 Wp Inverter - Sungrow 200
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	4.5	01-Apr-22	Make - Emmvee 335Wp, Waaree 335 Wp, Inverter - Sungrow 200 kW
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	1.5	01-Jun-22	Make - Emmvee 335Wp, Waaree 335 Wp, Inverter - Sungrow 200 kW
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	0.44	01-Nov-22	Make - Emmvee 335 Wp Invertor - Growatt 220 kW
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar	0.4	01-Dec-22	Make - Renewsys 335 Wp Invertor - Sungrow 200 kW
KPI GREEN ENERGY LTD	Vedcha 4	Bharuch	Solar	0.4	01-Mar-23	Make - Renewsys Capacity: 440 kW
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	1.76	01-Mar-23	Make - Emmvee 335 Wp Invertor - Growatt 220 kW
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.88	23-Mar-23	Make - Emmvee Capacity: 880 kW
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.44	31-Mar-23	Make - Renewsys Capacity: 440 kW
KP ENERGY LTD	Simdhara	Bharuch	Solar	3.52	14-Jun-23	Make - Waaree Inverter- Growatt
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	14-Jun-23	Make - Waaree Inverter- Growatt
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	0.88	17-Jul-23	Make - Waaree Inverter- Growatt
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	24-Jul-23	Make - Waaree Inverter- Growatt
			Total	88.843		

Wind-Solar Hybrid Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Technical Specifications
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Solar-Hybrid	7.04	11-Apr-23	WTG Make - Senvion Capacity - 2.3 MW Modules: Emmvee- 325, 330, 335 Wp Inverter : Growatt-220 kW
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	9.2	11-Apr-23	
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	6.9	24-Apr-23	
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar-Hybrid	1.4	14-Jun-23	WTG Make - Senvion Capacity - 2.1 MW Modules: Waaree-545 Wp
KPI GREEN ENERGY LTD	Samoj	Bharuch	Wind-Hybrid	2.1	14-Jun-23	Inverter: Sungrow-200 kW
			Total	26.64		

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)⁶, it has been declared that solar and 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

⁶ [Environment Ministry](#)

Assessment is not required for Wind Projects.

Additionally, there are social, environmental, economic and technological benefits which contribute to sustainable development. The key details have been discussed in the previous section.

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

The 123.88 MW Bundled Wind, Solar, and Hybrid Power Project by KP Group in Gujarat therefore represents a milestone in advancing renewable energy adoption, reducing emissions, and accelerating the shift to a sustainable energy future.

The Government of India has stipulated following indicators for sustainable development in the interim approval guidelines for such projects which are contributing to GHG mitigations. The Ministry of Environment, Forests & Climate Change (MoEFCC), has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. It has been envisaged that the project shall contribute to sustainable development using the following ways:

Social well-being:

There have been good employment opportunities created for the local workforce during the project construction phase. The project after implementation has also continued to provide employment opportunities for the local populace in a sustained manner and the same would be continued over the project life time. The employment opportunities created will contribute towards alleviation of poverty in the surrounding area throughout the lifetime of the project activity.

Economic well-being:

The project represents a strategic investment in clean technology, effectively mitigating CO₂ emissions from the grid. As a result, it qualifies for carbon incentives in the form of CoUs (Certified Emission Reduction Units), signifying an influx of clean energy investments into the host country. The project's operations necessitate both temporary and permanent skilled and semi-skilled manpower at the project site, thereby creating additional employment opportunities within the region.

The project is a clean technology investment decided based on carbon revenue support, which signifies flows of clean energy investments into the host country. The project activity requires temporary and permanent, skilled and semi-skilled manpower at the project location; this will create additional employment opportunities in the region. In addition, success of this kind of project will provide new opportunities for industries and economic activities to be setup in the area. Apart from getting better employment opportunities, the local people will get better prices for their land, thereby resulting in overall economic development.

Technological well-being:

The successful operation of project activity would lead to promotion of solar based power generation and would encourage other entrepreneurs to participate in similar projects. Increased interest in solar and wind energy projects will further push R&D efforts by technology providers to develop more efficient and better machinery in future.

The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar and wind power projects. Hence, the project activity leads to technological well-being.

Environmental well-being:

The project activity will generate power using zero emissions solar based power generation facility which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated

with the conventional thermal power generation facilities. The project utilizes solar energy for generating electricity which is a clean source of energy.

Also, being a renewable resource, use of solar energy to generate electricity contributes to resource conservation. It reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. The impact on land, water, air and soil is negligible. Thus, the project causes no negative impact on the surrounding environment contributing to environmental well-being.

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 proposed project aims to generate electricity using a zero-emission solar and wind-based power generation facility. By harnessing solar and wind energy, the project avoids greenhouse gas (GHG) emissions and specific pollutants like SO_x, NO_x, and SPM associated with conventional thermal power plants.

Solar and wind power are clean and renewable energy sources, contributing to resource conservation. It reduces reliance on fossil fuels and helps preserve natural resources that are at risk of depletion. Importantly, the project has minimal impact on land, water, air, and soil, ensuring a positive environmental footprint.

Through solar photovoltaic (PV) and wind power technology, the project displaces an equivalent amount of power from the regional grid. This displacement directly contributes to reducing GHG emissions associated with electricity generation in India's regional grids. As the world strives to prevent permanent climate disaster by ramping up clean technologies by 2030, carbon incentive policies like the UCR CoU program play a crucial role.

Under Social:

During the construction phase of the project, significant employment opportunities were generated for the local workforce. These opportunities not only supported the project's development but also had a positive impact on the community.

Importantly, even after the project's implementation, it has continued to provide sustained employment for the local population. This ongoing support contributes to poverty alleviation in the surrounding area, ensuring that economic benefits extend throughout the project's lifetime.

Under Governance:

Governance criteria relate to overall operational practices and accounting procedure of the organization. With respect to this project, the Project Proponent practices a good governance practice with transparency, accountability and adherence to local and national rules & regulations etc. This can be further referred from the company's annual report.

Also, the project activity is owned and managed by the PP for which all required NOCs and approvals are received. The electricity generated from the project can be accurately monitored, recorded and further verified under the existing management practice of the company. Thus, the project and the proponent ensure good credentials under ESG.

SDG	Relevant SDG Target	Project Contributions
SDG7: Affordable and Clean Energy 	Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.	<p>The project contributes to Sustainable Development Goal 7 by generating 123.88 MW of renewable electricity using solar and wind energy systems.</p> <p>The project generated a total 9,49,275.11 MWh electricity supplied directly to the grid, thereby reducing the dependency on fossil fuel-based electricity and enhancing access to sustainable, affordable energy.</p>
SDG13: Climate Action 	Target 13.2: Integrate climate change measures into national policies, strategies and planning.	<p>The project avoids significant greenhouse gas emissions during the monitoring period by replacing conventional fossil fuel-based energy sources with solar and wind power.</p> <p>This directly supports Sustainable Development Goal 13 by contributing to climate change mitigation and promoting a transition to low-carbon energy infrastructure.</p> <p>The project resulted in total reduction of 8,19,294 tonnes of CO₂ equivalent (tCO₂e) over its crediting period.</p> <p>This significant reduction in greenhouse gas emissions supports national and global targets for carbon mitigation and represents a transition towards low-carbon energy infrastructure.</p>

B.3. Baseline Emissions>>

At the PCN stage, the baseline scenario for the project was identified as the import of an equivalent amount of electricity from the grid, which is predominantly dependent on fossil fuel-based power plants, making it a carbon-intensive energy source.

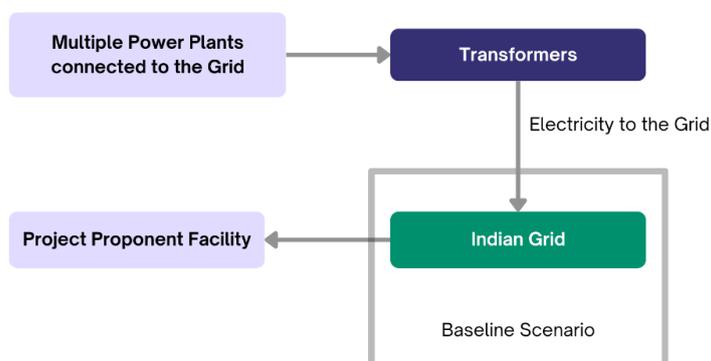


Figure 1: Baseline Scenario

B.4. Debundling>>

This 123.88 MW Bundled Wind and Solar Power Project by KPI Group in Gujarat is not a debundled component of a larger 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

CATEGORY: ACM0002: Grid-connected electricity generation from renewable sources - Version 22.0⁷

C.2. Applicability of methodologies and standardized baselines >>

Applicability Condition	Justification
<p>This methodology is applicable to grid-connected renewable energy power generation project activities that:</p> <ul style="list-style-type: none"> (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plant(s)/unit(s); (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s). 	<p>The project activity is (a) greenfield wind and solar power plants substituting electricity produced on the grid by renewable energy.</p> <p>Therefore, the project activity is applicable to the criteria.</p>
<p>In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that:</p> <ul style="list-style-type: none"> (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s) (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s). 	<p>The project activity does not involve the integration of BESS. Hence, this criterion is not applicable.</p>
<p>The methodology is applicable under the following conditions:</p> <ul style="list-style-type: none"> (a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal 	<p>The project activity is Greenfield wind and solar power plants without the involvement of a BESS. Hence, this criterion is not applicable.</p>

⁷ [ACM0002: Grid-connected electricity generation from renewable sources -Version 22.0](#)

<p>power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;</p> <p>(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;</p> <p>(c) In case of Greenfield project activities applicable under paragraph 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents);</p> <p>(d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more during a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.</p>	
<p>In case of hydro power plants, one of the following conditions shall apply:</p> <p>(a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or</p> <p>(b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation</p>	<p>The project is installation of Greenfield wind and solar power plants and hence this criterion is not applicable.</p>

<p>(7), is greater than 4 W/m²; or</p> <p>(c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m²; or</p> <p>(d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m², all of the following conditions shall apply:</p> <p>(i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m²;</p> <p>(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;</p> <p>(iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m² shall be:</p> <p>a. Lower than or equal to 15 MW; and</p> <p>b. Less than 10 per cent of the total installed capacity of integrated hydro power project.</p>	
<p>In the case of integrated hydro power projects, project participants shall:</p> <p>(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or</p> <p>(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.</p>	<p>The project is installation of Greenfield wind and solar power plants and hence this criterion is not applicable.</p>
<p>The methodology is not applicable to:</p> <p>(a) Project activities that involve switching from fossil fuels to renewable energy sources</p>	<p>The project is installation of Greenfield wind and solar power plants and hence this criterion is not applicable.</p>

at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.	
In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”	The project is installation of Greenfield wind and solar power plants and hence this criterion is not applicable.

The project activity complies with the Common Eligibility Criteria for All Project Types under the UCR CoU Standard (Updated August 2024, Version 7.0) and meets all applicable requirements.

C.3 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 consumption point for project developer

C.4. Project boundary, sources and greenhouse gases (GHGs)>>

As per the ACM0002 Version 22.0 Methodology, the project boundary is “the spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the project power plant is connected to.”

	Source	GHG	Included?	Justification/Explanation
Baseline	Emissions from burning non-renewable wood	CO2	Included	Major source of emission
		CH4	Excluded	Excluded for simplification. This is conservative
	Emissions from animal manure stored on site	N2O	Excluded	Excluded for simplification. This is conservative
Project	Emissions from on-site electricity use	CO2	Excluded	Electricity is generated from clean, sustainable and renewable sources, i.e., solar.
	Emissions from residue from anaerobic digester composting	CH4	Excluded	Excluded for simplification. This is conservative
		N2O	Excluded	Excluded for simplification. This is conservative

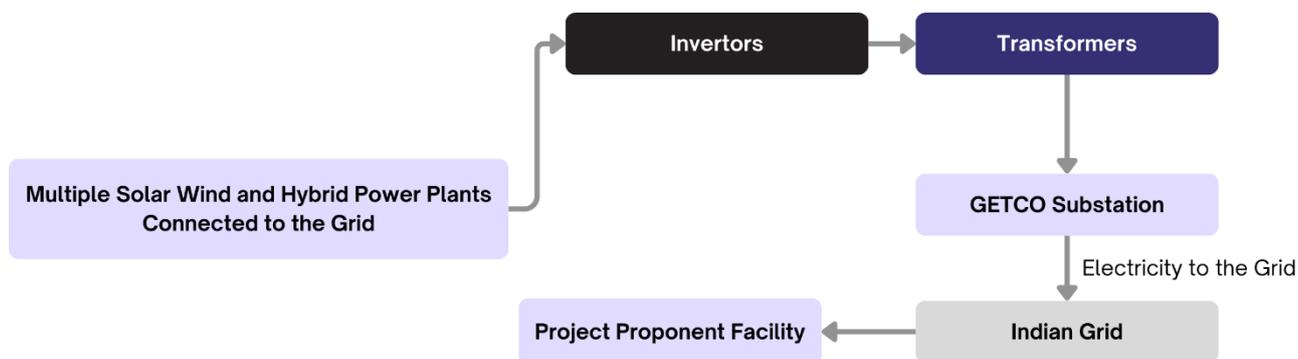


Figure 2: Project Boundary

Thus, the project boundary includes the Solar Wind and Hybrid power systems and the Indian grid system.

C.5. Establishment and description of baseline scenario (ACM0002 Version 22.0) >>

As per the approved consolidated methodology ACM0002 Version 22.0, 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”.

The project activity involves establishing new wind and solar power plants along with hybrid projects as well to harness green energy from renewable sources. The electricity generated will serve as a captive supply for a specific purpose. In the absence of this project, an equivalent amount of power would have been sourced from the Indian grid, which primarily relies on fossil fuel-fired plants.

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 tCO₂/MWh for the 2013–2023 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. The UCR recommends a grid emission factor of 0.757 tCO₂/MWh for the 2024 vintage year as a fairly conservative estimate for Indian projects not previously verified under any GHG program.

In this project activity, the emission factor is determined in two distinct phases. For the period year up to 2023, a grid emission factor of 0.9 tCO₂/MWh is applied and for the year 2024, a grid emission factor of 0.757 tCO₂/MWh in accordance with the updated UCR guidelines.

In the Project Concept Note (PCN), a conservative grid emission factor of 0.9 tCO₂/MWh was used for ex-ante emission reduction estimates, as recommended by UCR for projects not previously registered under any GHG program.⁸

⁸ [UCR CoU Standard Update](#)

Net GHG Emission Reductions and Removals

Thus,

$$ER_y = BE_y - PE_y - LE_y$$

Where:

- ER_y = Emission reductions in year y (tCO₂/y)
- BE_y = Baseline Emissions in year y (t CO₂/y)
- PE_y = Project Emissions in year y (t CO₂/y)
- LE_y = Leakage Emissions in year y (t CO₂/y)

Baseline Emissions

Baseline emissions include only CO₂ 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 baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{grid,y}$$

Where;

BE_y	Baseline Emissions in year y (t CO ₂)
$EG_{PJ,y}$	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,y}$	UCR recommended emission factors of 0.9 tCO ₂ /MWh and 0.757 tCO ₂ /MWh has been considered.

Baseline Emissions table based on actual generation

Baseline Emissions Table		
Year	Generation (MWh)	Baseline Emissions (tCO ₂ e)
2016	7,463.06	6,711
2017	24,049.18	21,638
2018	35,477.67	31,923
2019	52,107.40	46,891
2020	92,835.60	83,546
2021	1,15,062.31	1,03,549
2022	1,58,184.96	1,42,360
2023	2,19,357.37	1,97,416
2024	2,44,737.58	1,85,260
Total	9,49,275.11	8,19,294

Project Emissions

As per ACM0002. Version: 22.0, only emissions associated with fossil fuel combustion, emissions from the operation of geothermal power plants due to the release of non-condensable gases, and emissions from a water reservoir of hydro should be accounted for the project emission. Since the project activity is a solar and wind electric power project, it's emission from renewable energy plants is nil.

Thus, $PE_y = 0$.

Leakage Emissions

As per ACM0002. Version: 22.0, '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 zero.

Thus, $LE_y = 0$.

$$ER_y = BE_y$$

Total Emission reduction by the project for the current monitoring period is calculated as below.

Emission Reduction table based on actual generation

Year	Baseline Emissions (tCO ₂ e)	Project Emissions (tCO ₂ e)	Leakage Emissions (tCO ₂ e)	Emission Reductions (tCO ₂ e)
2016	6,711	0	0	6,711
2017	21,638	0	0	21,638
2018	31,923	0	0	31,923
2019	46,891	0	0	46,891
2020	83,546	0	0	83,546
2021	1,03,549	0	0	1,03,549
2022	1,42,360	0	0	1,42,360
2023	1,97,416	0	0	1,97,416
2024	1,85,260	0	0	1,85,260
Total	8,19,294	0	0	8,19,294

C.6. Prior History>>

The project activity is a bundled large-scale wind and solar project and has never been registered under any other GHG mechanism before its inclusion in UCR.

Additionally, the total project capacity has not been applied for any other environmental crediting or certification mechanism. Therefore, the project does not cause double accounting of carbon offset units or credits (CoUs).

C.7. Monitoring period number and duration>>

First Monitoring Period: 08 years and 11 months, 18 days; 13/01/2016 to 31/12/2024

C.8. Changes to start date of crediting period >>

There is no change in start date of crediting period. Crediting period start date is 13/01/2016.

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

There are no permanent changes to the registered PCN monitoring plan, applied methodology, or standardized baseline.

C.10. Monitoring plan>>

Data and Parameters available at validation (ex-ante values):

Data/Parameter	EF_{grid,y}					
Data unit	tCO ₂ /MWh					
Description	CO2 emission factor per unit of energy of the fossil fuel used in the baseline generation source (Grid) displaced due to the project activity, during the year y					
Source of data	<p>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.</p> <p>The UCR recommends an emission factor of 0.9 tCO₂/MWh for the 2013–2023 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program.</p> <p>The UCR recommends a grid emission factor of 0.757 tCO₂/MWh for the 2024 vintage year as a fairly conservative estimate for Indian projects not previously verified under any GHG program. UCR CoU Standard Update</p>					
Value(s) applied	<table border="1"> <tr> <td>Emission Factor (Till 2023)</td> <td>0.90</td> </tr> <tr> <td>Emission Factor (2024 Onwards)</td> <td>0.757</td> </tr> </table>	Emission Factor (Till 2023)	0.90	Emission Factor (2024 Onwards)	0.757	
Emission Factor (Till 2023)	0.90					
Emission Factor (2024 Onwards)	0.757					
Measurement methods and procedures	As per the requirements in “Tool to calculate the emission factor for an electricity system”					
Monitoring frequency	-					
Purpose of data	Calculation of baseline emission					

Data and Parameters available at issuance (ex-post values):

Data / Parameter:	EG_{PJ,y}
Data unit:	MWh
Description:	Net electricity supplied to the Indian grid facility by the project activity
Source of data:	Generation Statements
Measurement procedures (if any):	<p>Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Archiving Policy: Electronic</p> <p>The electricity generation is monitored directly through energy meters installed by DISCOM. The generation data is recorded, maintained, and periodically revised by DISCOM based on their own meter readings and calibration processes. The frequency of meter calibration is not within the control of the Project Proponent.</p>
Monitoring frequency:	Monthly
Value applied	9,49,275.11 MWh
QA/QC procedures:	Continuous monitoring, hourly measurement monthly recording. Tri-vector (TVM)/ABT energy meters with accuracy class 0.2s
Purpose of data:	Calculation of baseline emission
Any comment:	The renewable power generated by the project is wheeled for captive consumption. Therefore, during monitoring and verification, the provisions outlined in the wheeling agreement may be referred to as supporting documentation.

Project Activity Meter Details:

Wind Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Meter Number
KP ENERGY LTD	Matalpar	Bhavnagar	Wind	2.1	11-Mar-16	XC565337
KP ENERGY LTD	Keshav	Porbandar	Wind	2.1	31-Mar-17	XD595933
KP ENERGY LTD	Rinawada	Porbandar	Wind	2.1	30-May-17	XD595930
KP ENERGY LTD	Sathara	Bhavnagar	Wind	2.1	29-Jun-17	Y0342860
			Total	8.4		

Solar Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Meter Number
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.16	13-Jan-16	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.39	24-Apr-16	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.63	25-Jul-16	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.7	24-Feb-17	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.015	04-Jul-17	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.97	23-Sep-17	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.31	01-Dec-17	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.05	31-Jul-18	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	2.52	29-Nov-18	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.165	29-Jan-19	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.71	30-Apr-19	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.85	27-Jun-19	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.43	21-Sep-19	GJ-5882-A GJ-7491-A

KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	5.81	04-Nov-19	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.783	31-Mar-20	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	0.87	31-Mar-20	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	1.56	06-Nov-20	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	3.26	15-Dec-20	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	6.2	01-Jun-21	GJ-5882-A GJ-7491-A
KPIG ENERGIA PVT LTD	Muler	Bharuch	Solar	1	01-Dec-21	GJ-5239-B
KPI GREEN ENERGY LTD	Sudi & Tancha	Bharuch	Solar	7.5	10-Dec-21	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Bhimpura	Bharuch	Solar	1.2	31-Dec-21	GJ-5215-B
KPI GREEN ENERGY LTD	Kurchan	Bharuch	Solar	1.2	11-Feb-22	GJ-5333-B
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	11	01-Mar-22	GJ-5882-A GJ-7491-A
KPI GREEN ENERGY LTD	Vedcha 2	Bharuch	Solar	0.6	25-Mar-22	GJ-5631-B
KPI GREEN ENERGY LTD	Vedcha 1	Bharuch	Solar	0.6	29-Mar-22	GJ-5629-B
KPIG ENERGIA PVT LTD	Ranada	Bharuch	Solar	4	01-Apr-22	GJ-5882-A GJ-7491-A
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	4.5	01-Apr-22	GJ-5882-A GJ-7491-A
SUNDRUPS ENERGIA PVT LTD	Ranada	Bharuch	Solar	1.5	01-Jun-22	GJ-5882-A GJ-7491-A
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	0.44	01-Nov-22	GJ-5851-A
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar	0.4	01-Dec-22	GJ-6139-A
KPI GREEN ENERGY LTD	Vedcha 4	Bharuch	Solar	0.4	01-Mar-23	GJ-5903-B
KPIG ENERGIA PVT LTD	Kurchan	Bharuch	Solar	1.76	01-Mar-23	GJ-5851-A

KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.88	23-Mar-23	GJ-6194-B
KPI GREEN ENERGY LTD	Shahpura	Bharuch	Solar	0.44	31-Mar-23	GJ-7073-B
KP ENERGY LTD	Simdhara	Bharuch	Solar	3.52	14-Jun-23	GJ-7328-B
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	14-Jun-23	GJ-7330-B
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	0.88	17-Jul-23	GJ-7330-B
KP ENERGY LTD	Simdhara & Karad	Bharuch	Solar	1.32	24-Jul-23	GJ-7330-B
			Total	88.843		

Wind-Solar Hybrid Projects:

Project Proponent	Village	District	Project Type	Installed Capacity (MW _{AC})	Commissioning Date	Meter Number
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Solar-Hybrid	7.04	11-Apr-23	GJ-6331-A
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	9.2	11-Apr-23	
KPI GREEN ENERGY LTD	Bhungar	Bhavnagar	Wind-Hybrid	6.9	24-Apr-23	
KPI GREEN ENERGY LTD	Samoj	Bharuch	Solar-Hybrid	1.4	14-Jun-23	GJ7283B GJ7284B

KPI GREEN ENERGY LTD	Samoj	Bharuch	Wind-Hybrid	2.1	14-Jun-23	
			Total	26.64		

The meter(s) are calibrated and maintained by the DISCOM as per their own schedule, and this frequency of meter calibration is not within the control of the project proponent.