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TEMPLATE

MONITORING REPORT

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VERSION **v. 1.1**

RELATED SUPPORT – **TEMPLATE GUIDE Monitoring Report v. 1.1**

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KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS 1237
Title of the project (s) covered by monitoring report	Sadilli Wind Farm Project, Turkey
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	9
Version number of the monitoring report	08
Completion date of the monitoring report	06/03/2025
Date of project design certification	11/09/2013
Date of Last Annual Report	13/12/2022
Monitoring period number	1 st MP of 2 nd CP
Duration of this monitoring period	27/10/2021 to 27/09/2023 (both days are included, 2 nd Crediting period, 1 st Monitoring period)
Project Representative	Life İklim ve Enerji Ltd Şti.
Host Country	Turkey
Activity Requirements applied	Community Services Activities ☒ Renewable Energy Activities Land Use and Forestry Activities/Risks & Capacities ☒ N/A ☐
Methodology (ies) applied and version number	01 - ACM0002, v. 20.0.0, "Grid-connected electricity generation from renewable sources"
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration Renewable Energy Label ☐ N/A ☐

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 13 Climate Action	Emissions Reductions	Emission Reduction: 159,160 tCO ₂ ¹	VERs
SDG 7 Affordable and clean energy	MWh of renewable energy generated	245,558.88 MWh	MWh
		11,522,985.74 EUR	EUR
SDG 8 Decent work and economic growth	The project provides employment. Health&Safety Trainings to be held.	9 employees work at the WPP. There are 4 local employees. All employees at the plant are provided Health&Safety Trainings annually.	Health&Safety Trainings and SGK records
SDG 6 Clean water	Wastewater discharge transfer records are to be provided.	Avoidance of 6,063.10 x1000 m ³ /year wastewater discharge to the environment.	Invoices

Table 2 – Product Vintages

		Amount Achieved		
Start Dates	End Dates	VERs	...	...

¹ However the actual emission reduction achieved during this monitoring period is 159,160 tCO₂, as increases in electricity production is observed in many monitoring periods, including this monitoring period, the claimed emission reductions for this monitoring period have been calculated as capping the estimated emission reduction each year in the monitoring period at the upper bound of the sensitivity analysis, set at 10%, in accordance with paragraphs 2.1.3(b) and 2.1.4 of the Rule Clarification on the Assessment Approach for Reporting Higher Ex-Post Emission Reductions. **Hence, it has been calculated as 153,369 tCO₂ and this value be the only claimed emission reduction for this monitoring period.** For detailed analysis, please see the page named "Sadilli" in the emission reduction calculation spreadsheet and section E.6 in this monitoring report. Also, the actual achieved emission reduction value has not been changed in this monitoring report to avoid the confusion.

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27/10/2021	31/12/2021	18,730		
01/01/2022	31/12/2022	84,890		
01/01/2023	27/09/2023	55,540		

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

Çanres Elektrik Üretim A.Ş. (hereafter referred to as "Çanres Elektrik"), operated 14 units of Sadilli Wind Farm Project, Turkey (hereafter referred to as "Sadilli WPP") with total installed capacity of 38.5 MWm/33 MWe. The Project consists of the installation of 14 wind turbines that have an installed capacity of 2.75 MW each; totaling 38.5 MWm. Type of the turbines is GE 2.75-100. Project located in Çanakkale and Tekirdağ provinces, in Turkey. Energy Market Regulatory Authority (EMRA) issued the license of the project in February 2012².

The mobilisation for construction of the Project had started on 03/09/2012 and the provisional acceptance date of the first three turbines was 26/10/2014³. Furthermore, electricity production starts at midnight of that date at 12 am so, operation start date of the first three turbines was 27/10/2014, and it can be considered as the actual start date of the project. Therefore, the first crediting period starts following the commissioning of the power plant which was to be 27/10/2014.

The generation license has a limit of 33 MWe, meaning that the total electrical power supply of the Project is limited to 33 MWe. The Project is expected to generate 112,000 MWh per year. The turbines, each equipped with 3 blades, have a hub height of 85 m and a rotor diameter of 100 m. The Project has been connected to the Keşan transformer station via a 154 kV high voltage transmission line.

While total electricity generation is 116,916.14 MWh and achieved total emission reduction is 69,669 tCO₂ in the previous monitoring period (4th MP of 1st CP) which started on 01/10/2019 and ended on 20/06/2021, during the 1st MP of 2nd CP, total electricity generation is 245,558.88 MWh and achieved total emission reduction is 159,160 tCO₂.

The purpose of the project is to generate electricity and to feed it into the public grid. The Sadilli WPP project shall be registered as a Voluntary Emission Reduction project in order to enable the project implementation by means of financial inflows coming from the credits sale. Because of its significant contribution to climate protection and to sustainable development in the region, this project is expected to fulfil the requirements of the Gold Standard.

The project helped Turkey to stimulate and commercialize the use of grid connected renewable energy technologies and markets. Furthermore, the project demonstrated the viability of grid connected wind farms which can support improved energy security, improved air quality, alternative sustainable energy futures, improved local livelihoods and sustainable renewable energy industry development.

Main goals of the project include;

² Please see Sadilli_WPP_Generation_License

³ Please see Sadilli RES_Provisional Acceptance Report_(T12-T13-T14)_Part1

- Utilization of the renewable energy potential of Turkey in order to meet rapidly increasing electricity demand and contribute achieving energy security.
- Increase share of WPPs in electricity generation mix of Turkey and reduction of GHG emissions.
- Contribute to the national economic development by creating direct and indirect job opportunities during construction and operation phases.
- Reduce import dependency of fossil fuel dominated electricity sector and diversify generation mix through use of local resources.
- Contribution to sustainable development through supporting local community and local economy.

The project activities have replaced the grid electricity, which is constituted of different fuel sources causing greenhouse gas emissions. By replacing in the consumption of these fuels, it contributes to conservation of water, soil, flora and faunas and transfers these natural resources and the additional supply of these primary energy sources to the future generations as well. In the absence of the project activity, an equivalent amount of electricity would have been generated from the power plants connected to the grid, majority of which are based on fossil fuels. Thus, the project is replacing the greenhouse gas emissions (CO₂, CH₄) and other pollutants (SOX, NOX, particulate matters) occurring from extraction, processing, transportation and burning of fossil-fuels for power generation connected to the national grid.

This project has helped accelerating the growth of the wind power industry and stimulate the designation and production of renewable energy technologies in Turkey. Then, other entrepreneurs irrespective of sector have been encouraged to invest in wind power generations. It has also assisted reducing Turkey's increasing energy deficit and diversify the electricity generation mix while reducing import dependency, especially natural gas. Importantly, rural development have been maintained in the areas around the project site by providing infrastructural investments to these remote villages.

The employment of local people that have necessary technical qualifications for the required post has been the priority and enhanced by all project activities during construction and operation of wind farm. As a result, local poverty and unemployment have been partially eliminated by increased job opportunities and project business activities. Construction materials for the foundations, cables and other auxiliary equipment were preferentially be sourced locally. Moreover, as contribution of the project to welfare of the region, the quality of the electricity consumed in the region has been increased by local electricity production, which also contributes decreasing of distribution losses.

Implementation of the proposed project has made significant contributions to wider deployment of wind power technology in local and national level. It has demonstrated the viability of larger grid connected wind farms, which supports improved energy security, alternative sustainable energy, and renewable energy industry development as well. This also strengthened pillars of Turkish electricity supply based on ecologically sound technology. Also, The project operates outside of such regulated frameworks, ensuring its alignment with voluntary market principles and eligibility criteria and the GSVERs are not included within or counted under any regulated domestic climate

mitigation target or NDC.

A.2. Location of project

The Project located near Sülaymaniye, Bayramiç, Elmalı villages of Sadilli district in Tekirdağ, Turkey. The coordinates of the turbines are given below. Project license is for 14 turbines with the 2.75 MW output. The coordinates of the turbines are given in Table 3.

Table 3. Geographical Coordinates of the Turbines of Sadilli WWP¹

Turbine Number	Y	X
T1	40° 45' 04"	26° 53' 13"
T2	40° 44' 54"	26° 53' 27"
T3	40° 44' 59"	26° 53' 47"
T4	40° 45' 5"	26° 53' 56"
T5	40° 45' 10"	26° 54' 14"
T6	40° 45' 18"	26° 54' 27"
T7	40° 45' 11"	26° 54' 38"
T8	40° 45' 9"	26° 54' 51"
T9	40° 45' 15 "	26° 55' 5"
T10	40° 45' 19 "	26° 55' 20"
T11	40° 45' 26"	26° 55' 25"
T12	40° 45' 13"	26° 55' 26"
T13	40° 45' 7"	26° 55' 36"
T14	40° 45' 1"	26° 55' 46"

¹ Coordinates given in the generation licence of the project (which are in Standard UTM Coordinates at 35th Zone) are converted to Degress, Minutes and Seconds using this link: <http://www.rcn.montana.edu/Resources/Converter.aspx>

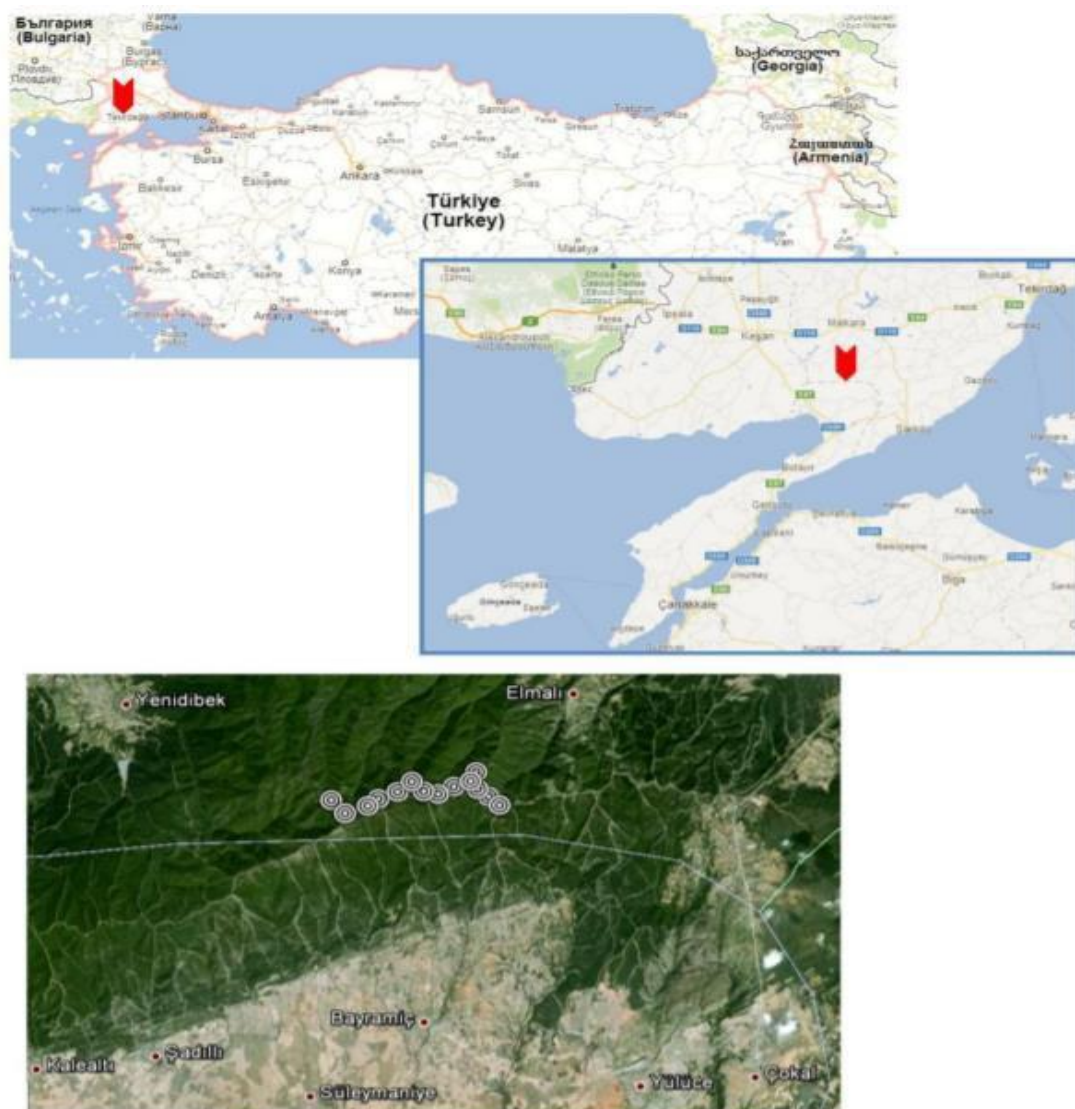


Figure 1. Project Location on Turkey Map

A.3. Reference of applied methodology

For the determination of the baseline, the official methodology ACM0002 version 20.0.0, "Grid-connected electricity generation from renewable sources"⁴, is applied, using conservative options and data as presented in the following section. This methodology refers to four Tools, which are:

1. Tool to calculate the emission factor for an electricity system (Version 07.0.0)⁵;
2. Tool for the demonstration and assessment of additionality (Version 07.0.0)⁶;
3. Tool to determine the remaining lifetime of equipment (Version 01.0.0)⁷;
4. Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (Version 03.0.1)⁸

4

https://cdm.unfccc.int/filestorage/A/G/0/AG07ZJQ3EXD42LT5YV9HR16M8KINPO/EB105_repan03_ACM0002.pdf?t=TTh8cW5wOGp3fDDxMFR1LiJ01CgZkMkMC18L

⁵ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

⁶ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

⁷ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-10-v1.pdf>

⁸ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-11-v3.0.1.pdf>

A.4. Crediting period of project

The first crediting period starts following the commissioning of the power plant which was to be 27/10/2014. The second crediting period is from 27/10/2021 to 26/10/2028. Both dates are included. The current monitoring period is included in the second crediting period because the monitoring period is from 27/10/2021 to 27/09/2023. (The crediting period of the project is 7 years which is once renewable.)

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

Table 4. Milestones of the Sadilli WPP

Date	Milestone
01/11/2007	EMRA is applied for the license
15/02/2012	License is issued by EMRA ⁹
15/11/2011	Proposals for carbon development are collected (prior consideration)
29/12/2011	Confirmation for going ahead with carbon development services
26/01/2012	EIA exemption permit acquired.
28/02/2012	Equipment order is signed.
06/08/2012	Agreement with the construction company is signed.
03/09/2012	Mobilisation on site is initiated (road construction etc.).
19/12/2012	Loan agreement is signed.
26/12/2012	Final license amendment application is made to EMRA.
01/05/2013	Estimated operational start date (partial).
12/12/2013	EIA exemption permit is amended according to the turbine coordinate change.
26/10/2014	3 turbines with 8.25 MWe capacity are started to operate and start date of the first monitoring period. (Provisional Acceptance date of the turbines T12-T13-T14) ¹⁰
27/10/2014	Start date of the 1 st monitoring period of the 1 st crediting period
14/11/2014	5 turbines with 13.75 MWe capacity are started to operate (Provisional Acceptance date of the turbines T1-T5-T9-T10-T11) ¹¹
06/12/2014	6 turbines with 16.5 MWe capacity are started to operate (Provisional Acceptance date of the turbines T2-T3-T4-T6-T7-T8) ¹²
31/03/2016	End date of the 1 st monitoring period of the 1 st crediting period

⁹ Please see: Sadilli_WPP_Generation_License document

¹⁰ Please see: Sadilli WPP_Provisional Acceptance Report_(T12-T13-T14)_Part1 document

¹¹ Please see: Sadilli WPP_Provisional Acceptance Report_(T1-T5-T9-T10-T11)_Part1 document

¹² Please see: Sadilli WPP_Provisional Acceptance Report_(T2-T3-T4-T6-T7-T8)_Part1 document

01/04/2016	Starting date of the 2 nd monitoring period of the 1 st crediting period
30/09/2017	End date of the 2 nd monitoring period of the 1 st crediting period
01/10/2017	Starting date of the 3 rd monitoring period of the 1 st crediting period
30/09/2019	End date of the 3 rd monitoring period of the 1 st crediting period
01/10/2019	Starting date of the 4 th monitoring period of the 1 st crediting period
26/10/2021	End date of the 4 th monitoring period of the 1 st crediting period
27/10/2021	Start date of the 2 nd crediting period
27/10/2021	Start date of the 1 st monitoring period of 2 nd crediting period
27/09/2023	End date of the 1 st monitoring period of 2 nd crediting period

Technology to be employed

The Project activity involves the generation of renewable energy from wind, thereby displacing grid electricity that is partly generated from fossil fuel fired power plants. The wind-driven blades are connected to an electricity generator, which produces electrical energy and supplies it to the grid without storage.

GE Energy, a wind turbine manufacturer, has been selected as equipment provider. The Project includes 14 turbines:

Table 5. Equipment Information

Turbine number	Model of turbines	Explanation
14 x 2.75 MWe	GE 2.75-100 wind Turbine	The turbines are of similar model and the total capacity of the wind farm is 38.5 MWm. The total overall power supply is limited to 33 MWe in order to comply with the generation license.

The turbines consist of the following components: rotor, drive train, gearbox, generator, cooling and filtration, braking system, nacelle, yaw system, tower, control and grid connection and lightning protection. The model of the turbines and their specifications are provided below:

Table 6. Specification of turbine units¹³

Component	Explanation/Specification
Model	GE 2.75-100
Rated power	2.75 MWe
Rotor diameter	100 m
Tower	85 m

¹³ Please see; GE 2.75MW 100m CI 2-3.pdf document

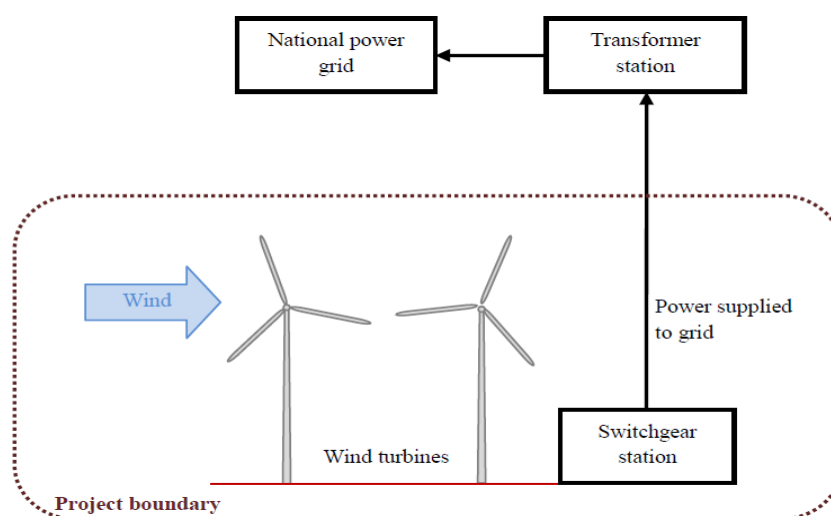
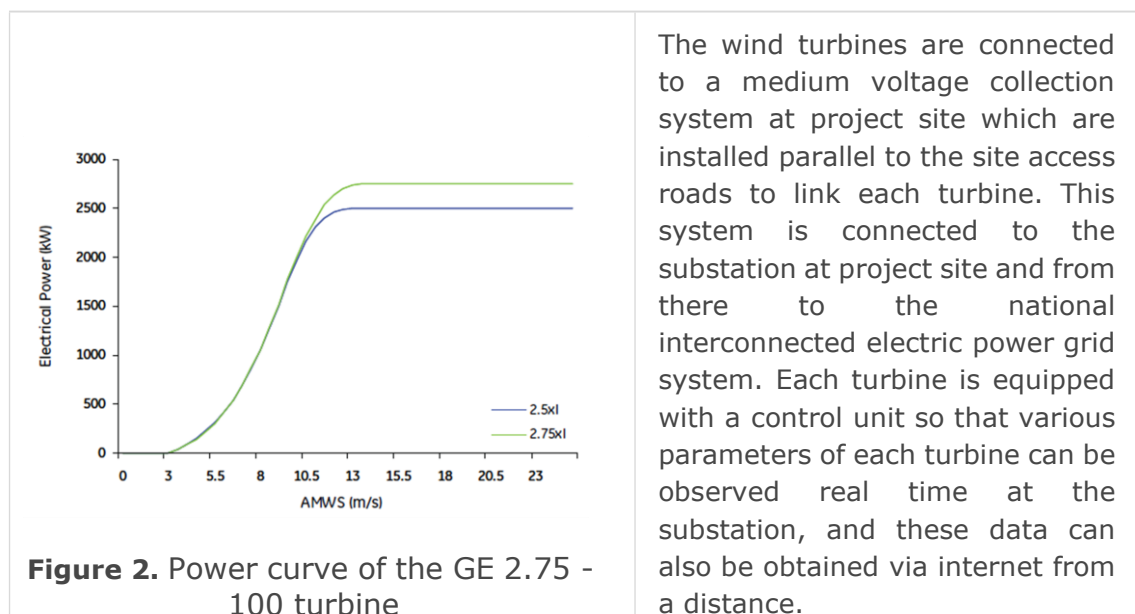


Figure 3. Project Boundary

B.1.1. Forward Action Requests

FAR-1 from project design renewal:

"5.1.29: 1st verification shall be completed within two years after the certification is achieved."

Answer to FAR-1 from project design renewal:

Looking at the date of the document GS1237_GS4GG Design Renewal Review_final_28092022.pdf, it is seen that starting the monitoring period process, and site visit are within 2 years.

FAR-2 from project design renewal:

"5.1.39: An annual update report shall be provided to GS, when successfully Transitioned to GS4GG, for each monitoring year by the end of next calendar year for which verification is not completed."

Answer to FAR-2 from project design renewal:

The report was uploaded to SustainCert for the year 2021 and the year 2022 report was uploaded by the end of the year 2023.

B.2. Post-Design Certification changes

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

N/A

B.2.2. Corrections

N/A

B.2.3. Changes to start date of crediting period

The first crediting period start date has been changed as 27/10/2014. Since, operation start date of the first three turbines was 27/10/2014, it can be considered as the actual start date of the project. In registered PDD, generation was expected to start on 01/05/2013 however, due to the fact that generation started on 27/10/2014 start date of the first crediting period is indicated as 27/10/2014. Provisional acceptance date of the first three turbines was 26/10/2014 however, electricity production starts at midnight at 12 am and operation start date can be considered as 27/10/2014. Calibration of the meters was conducted at the same day.

The reason for the delay of expected start date might be a misestimation while presenting PDD since it was an estimated date. Hence, actual start date of the project is operation start date of the first three turbines and date of calibration of the meters that is 27/10/2014.

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

N/A

B.2.5. Changes to project design of approved project

N/A

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

Data handling was slightly revised due to innovation in technology that enables TEİAŞ to read meters remotely. Thus, under this process, the meter is read remotely at the end of every month and published through website of TEİAŞ which can be accessed by project owner to check the correctness of the data. Besides, the data that is read by TEİAŞ, project owner carries monthly protocol to cross-check the data. Once the meter data is correct then the amount is also published in TEİAŞ website which is also accessible by project owner. When all data is correct, an invoice (receipt of sale) is prepared by Çanres Elektrik and delivered to TEİAŞ.

Generation data collected during crediting period is submitted to Life İklim ve Enerji LTD.ŞTİ. who is responsible for calculating the emission reduction subject to verification: Generation data is used to prepare monitoring reports which are used to determine the vintage from the project activity. These reports are submitted to the duly authorized and appointed Designated Operational Entity 'DOE' before each verification period.

As the necessary baseline emission factors are all defined ex ante, the only information to be monitored is the amount of electricity fed into the grid by Sadilli WPP. The data which is base for the invoices and published in TEİAŞ website is used as input for emission reduction calculation.

The collected data is kept by Çanres Elektrik during the crediting period and until two years after the last issuance of VERs for the Sadilli WPP project activity for that crediting period. As of 01/09/2015, EPIAS took over the PMUM procedures from TEİAŞ. Since that date, EPIAS supplies the data.

Potential leakage emissions in the context of power sector projects are emissions arising due to activities such as power plant construction, fuel handling and land inundation. However, according to the methodology, those emission sources are treated as negligible.

The fact that two reliable meters are installed in a redundant manner keeps the uncertainty level of the only parameter for baseline calculation low. High data quality of this parameter is not only in the interest of the emission reduction monitoring, but paramount for the business relation between the plant operator and the electricity buyer. Since the meters are reading electricity supplied to the system and withdrawn from the system separately, the net electricity amount supplied to the grid was calculated by electricity supplied minus electricity withdrawn which was taken from monthly settlement notifications.

Monthly data from EPIAS are stored electronically on EPIAS website and this data can be accessed by login of Project Developer. Çanres Elektrik also stores a hardcopy of the monthly meter reading protocols for back up of systematic storage of data.

Moreover, there are always internal reviews of the meters data that is checked by different parties. First, data of the meters is collected by technicians daily in written forms. The data collected daily is saved in plant manager computer and backed up and

shared by headquarter of Çanres Elektrik in Istanbul. Besides the data that can be gotten from meters, production amount can be checked from SCADA system of Nordex. SCADA figures differ a bit with meter data due to internal losses.

VER Team Members is expected to include the following staff :

Operation General Manager: Responsibility for running the plant and compliance with VER monitoring plan

Operation Manager: Responsible for keeping data about generation and consumption.

Operational technician: Ensuring the continuity of electricity generation, technical and administrative follow-up and management and

Life İklim ve Enerji LTD.ŞTİ.: Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

Operation and management diagram is presented in Figure 4.

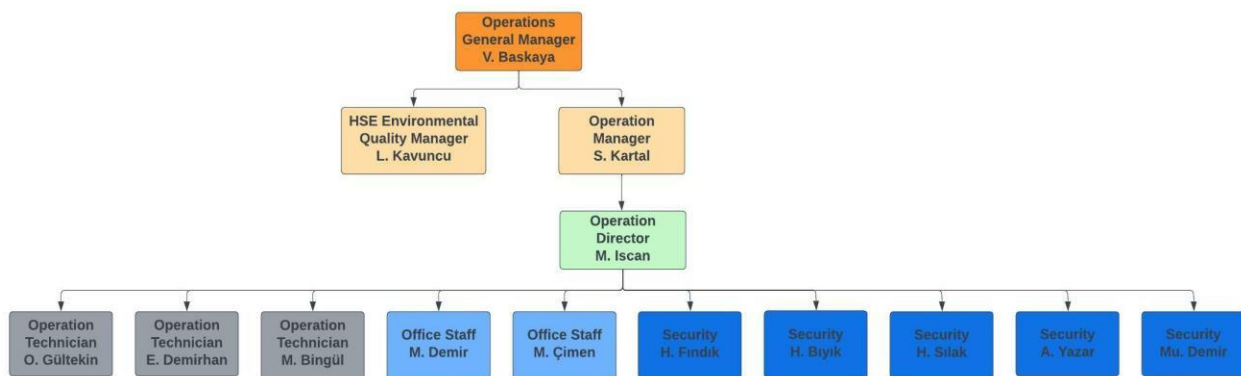


Figure 4. Operation and Management Diagram of the Sadilli WPP

The electrical single line diagram is shown in Figure 5.

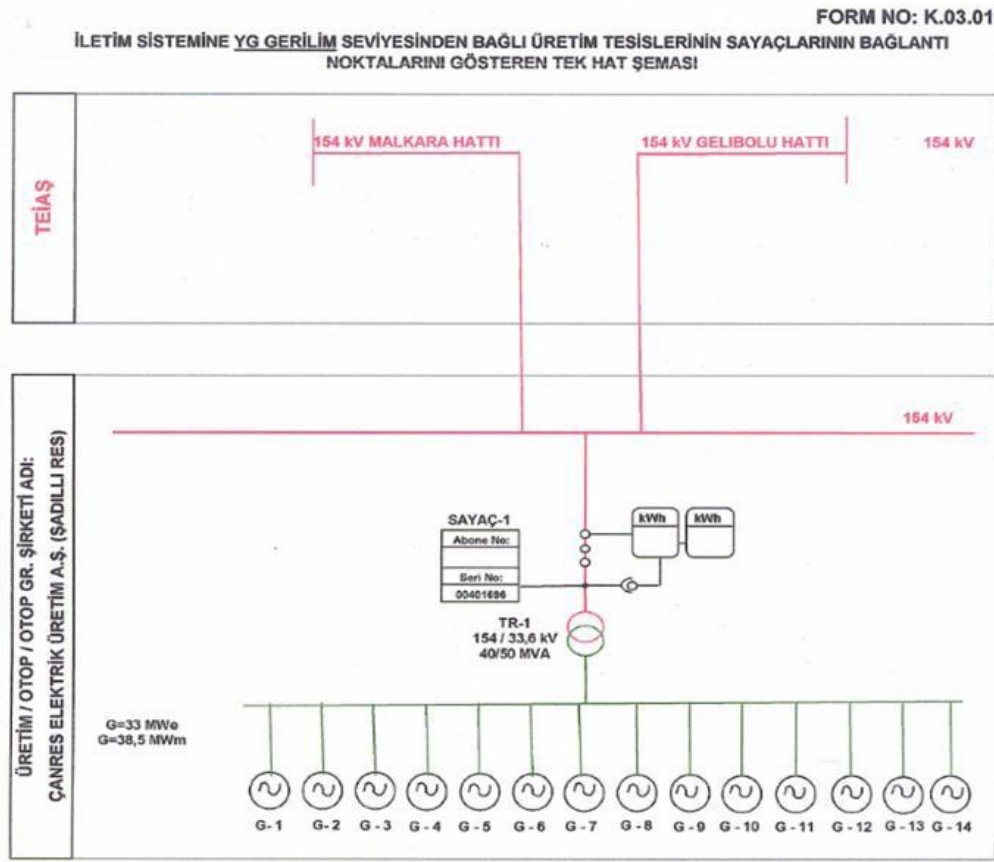


Figure 5. Electrical Single Line Diagram

The calibration of the monitoring equipment was carried out according to the information provided in the GS-VER PDD. The GS-VER PDD mainly includes the following obligation for the calibration of the appropriate meters:

"The Turkish Electricity Market Regulation Agency (EPDK) sets rules on the accuracy of electricity meters that are used by power plants feeding into the grid. The rules are part of the EPDK regulation 25056 from 22 March 2003. The table in Article 11 of the regulation specifies the use of electricity meters of the accuracy class 0.5S for power plants between 10 MW and 100 MW and refers to compliance with International Electro technical Commission's norm EN 60687. TEİAŞ conducts remote reading. In addition, another technician, employee of Çanres Elektrik, conducts reading from the project site and sends to TEİAŞ. By this way, a crosscheck is done. Also, with the readings from project site, continuously these two meters are compared with each other and if any differences are detected the necessary control measures are taken."

As the measuring devices are sealed by TEİAŞ, Çanres Elektrik cannot intervene with the devices. In case of unforeseen problems or failures of the meters or if any differences occur between primary and secondary devices TEİAŞ has to be informed for necessary maintenance and calibration. There is an agreement between Çanres Elektrik and TEİAŞ that in case of problems or failures of the meters TEİAŞ reacts as fast as possible to solve the problem.

As above mentioned, the data acquisition and management and quality assurance procedures that are anyway in place, no additional procedures necessarily to be

established for the monitoring plan. Also, operational technicians ensure the continuity of electricity generation, technical and administrative follow-up and management.

In addition, while periodic calibration of the meters is done every 10 years¹⁴, periodic test of the meters is also carried out once every 2 years¹⁵.

Table 7. Specification of the Electricity Meters

Name	Serial Number	Brand&Model	Accuracy Class	Year of Manufacture
Main Meter	8088831	EMH – LZQJ-XC	0.5S	2018
Back-up Meter	8088832	EMH – LZQJ-XC	0.5S	2018

Meter Exchange Protocol dated 03/10/2019¹⁶

For the Main and Back-up Meter Test dated 20/12/2021¹⁷.

When the meter exchange was taken place on 03/10/2019, a meter test was also conducted at the same time. In Türkiye, meter tests are carried out by TEİAŞ and the tests can be delayed by up to three months after two years. Hence, the test conducted on 03/10/2019 also covers the period from 27/10/2021 to 20/12/2021.

¹⁴ Please see the link <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5>

¹⁵ Please see: TEİAŞ System Usage Agreement

¹⁶ Please see: Meter Exchange Protocol dated 03-10-2019

¹⁷ Please see: Meter Test Protocol dated 20-12-2021

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data/parameter	EF _{grid,CM,y}
Unit	tCO ₂ /MWh
Description	For the combined margin CO ₂ emission factor that were used to calculate estimated emission reductions, publication of Turkish Ministry of Energy and Natural Resources which is indicating Turkey's National Electric Grid Emission Factor for the year of 2019 was used.
Source of data	Please see: https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/Bilgi_Formu_Web_Sitesi_2019_202110071443.pdf
Value(s) applied	0.6482 tCO ₂ /MWh
Choice of data or Measurement methods and procedures	The baseline emissions are the product of electrical energy baseline expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.
Purpose of data	To show CO ₂ e reduction in order to monitor the SDG 13 Indicator 13.3.1.
Additional comment	-

Data/parameter	EF _{grid,BM,y}
Unit	tCO ₂ /MWh
Description	For the emission BM factor, that were used to calculate estimated emission reductions, publication of Turkish Ministry of Energy and Natural Resources which is indicating Turkey's National Electric Grid Emission Factor for the year of 2019 was used. Publication includes calculated Emission Factor values that are Operating Margin (OM), Growth Based Margin (Build Margin-BM) and Combined Margin (CM) Emission Factors, for the relevant year with usage of the IPCC's Clean Development Methodology Tool 07-V06.0.
Source of data	Please see: https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/Bilgi_Formu_Web_Sitesi_2019_202110071443.pdf
Value(s) applied	0.4153 tCO ₂ /MWh

Choice of data or Measurement methods and procedures	Ministry of Energy and Natural Resources makes available the official data in Turkey. The latest data available during PDD preparation was for 2019.
Purpose of data	Used for baseline emissions
Additional comment	-

Data/parameter	EFgrid,OM,y
Unit	tCO ₂ /MWh
Description	For the emission OM factor, that were used to calculate estimated emission reductions, publication of Turkish Ministry of Energy and Natural Resources which is indicating Turkey's National Electric Grid Emission Factor for the year of 2019 was used. Publication includes calculated Emission Factor values that are Operating Margin (OM), Growth Based Margin (Build Margin-BM) and Combined Margin (CM) Emission Factors, for the relevant year with usage of the IPCC's Clean Development Methodology Tool 07-V06.0.
Source of data	Please see: https://enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular/Bilgi_Forumu_Web_Sitesi_2019_202110071443.pdf
Value(s) applied	0.7258 tCO ₂ /MWh
Choice of data or Measurement methods and procedures	Ministry of Energy and Natural Resources makes available the official data in Turkey. The latest data available during PDD preparation was for 2018.
Purpose of data	Used for baseline emissions
Additional comment	-

Data/parameter	Gross electricity generation
Unit	MWh
Description	Gross Electricity supplied to the grid (2019)
Source of data	Turkish Electricity Transmission Company (TEİAŞ), Annual Development of Turkey's Gross Electricity Generation of Primary Energy Resources (2019) TEİAŞ
Value(s) applied	TEİAŞ (2019), please see: https://webapi.teias.gov.tr/file/5b2fb3e8-bf05-48b1-b2f0-20139c0cc7fb?download

Choice of data or Measurement methods and procedures	TEİAŞ is the national electricity transmission company, which makes available the official data of all power plants in Turkey.
Purpose of data	Used for baseline emissions and to demonstrate the clean electricity generation in order to monitor the SDG 7 Indicator 7.2.1.
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	SDG 7: Affordable and clean energy Target: 7.2 by using renewable energy systems Indicator: 7.2.1
Data/parameter	Balance of payments and investment
Unit	-
Description	Savings on natural gas imports
Source of data	Monthly meter readings
Value(s) applied	Avoidance of around 26,825,974 m ³ natural gas import each year by net annual electricity generation (127.86 GWh/y) of project activity, which is worth about 5,999,843 EUR per year.
Choice of data or Measurement methods and procedures	According to TEİAŞ; 19,568,140 thousand m ³ natural gas is consumed for electricity generation in 2018. In 2018 Electricity generation amount from natural gas is 92,483 GWh. Since Turkey imports 99.16% of consumed natural gas, it is calculated that for 1 GWh electricity generation 209,809.44 m ³ natural gas is imported in 2018. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of EPIAŞ based on monthly meter readings, will be used to calculate correspondent amount of currency saved by project activity with help of above calculated factor.
Purpose of data	Ensure access to affordable, reliable, sustainable and modern energy.
Additional comment	

Data/parameter	Average amount of wastewater discharged
Unit	m ³ /GWh
Description	Average amount of wastewater discharged per GWh
Source of data	Turkish Electricity Transmission Company (TEİAŞ), Annual Development of Turkey's Gross Electricity Generation of Primary Energy Resources (2018) Turkish Statistical Institute (TURKSTAT), Wastewater Discharged by Thermal Power Plants (2018)
Value(s) applied	24.69 m ³ /GWh (According to official data links given below, 24.69 m ³ wastewater is discharged the environment due to each GWh electricity produced) TEİAŞ (2018) please see; https://webapi.teias.gov.tr/file/512cbf1d-0ca3-4492-b901-3722c7b682f7?download TURKSTAT (2018) please see; https://data.tuik.gov.tr/Bulten/Index?p=Sektorel-Su-ve-Atiksu-Istatistikleri-2018-30673
Choice of data or Measurement methods and procedures	Coefficient for wastewater avoidance from potential cooling water operations calculated by taking Total Waste Water Discharged by Thermal Power Plants in the related year (publication of TURKSTAT data for the year of 2018, which is the most recent available data, was used) and Net Electricity Generation in the related year (publication of TEİAŞ data for the year of 2018 was used) TEİAŞ is the national electricity transmission company, which makes available the official data of all power plants in Turkey. TURKSTAT compile, evaluate, analyses and publish official statistics in the fields of economy, social issues, demography, culture, environment, science and technology, and in the other required areas in Turkey.
Purpose of data	Avoidance wastewater discharge to the environment and to demonstrate the average amount of wastewater discharged in order to monitor the SDG 6 Indicator 6.3.1.
Additional comment	-

D.2. Data and parameters monitored

Relevant SDG Indicator/Safeguarding Principle	SDG 13: Climate action Target: 13.3 by emission reduction Indicator: 13.3.1
Data / Parameter	ERy
Unit	tons of CO2e/year
Description	Baseline emissions correspond to emission reductions and are calculated as the net electricity generated by the project activity, multiplied with combined margin CO2 emission factor for grid connected power generation in year y.
Source of data	Both measured and calculated Emission reductions are be calculated as considering the EPIAS records for the net electricity generated and the emission factor for the grid, 0.6482 tCO2/MWh, which is calculated and published by the Ministry of Energy and Natural Resources of Turkey ¹⁸ . As per monitoring plan sheet of registered CM Excel. During the verification, the results shall be obtained from the Actual ER excel file.
Value(s) applied	82,872.00 tCO2/year
Measurement methods and procedures	Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate estimated CO2 emission reduction by project activity.
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	Calculation of combined margin CO2 emission factor and thus the baseline emissions-to demonstrate contribution to SDG Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Additional comment	However it has been stated that the amount of annual net electricity generation calculated by monthly settlement notifications of PMUM based on monthly meter readings (EPIAŞ data) will be used to calculate estimated CO ₂ emission reduction by project activity, for the conservativeness approach, the lowest electricity generation data among EPIAŞ and TEİAŞ data sources and the highest electricity

¹⁸ <https://enerji.gov.tr/evced-cevre-ve-iklim-turkiye-ulusal-elektrik-sebekesi-emisyon-faktoru> or <https://enerji.gov.tr/Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/T%C3%BCrkiyeUlusalElektrik%C5%9EebekesiEmisyonFakt%C3%B6r%C3%BC/Belgeler/EK-2.pdf>

	consumption data among EPIAŞ and TEİAŞ data sources have been taken to calculate the lowest net electricity generation data (Please see the "Conservativeness" named table in the emission reduction calculation spreadsheet).
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Relevant SDG Indicator/Safeguarding Principle	SDG 6: Clean water and Sanitation Target: 6.3 Indicator: 6.3.1
Data / Parameter	Water Quality and Quantity
Unit	m3
Description	Average amount of wastewater discharged per GWh
Source of data	EPIAŞ based on monthly meter readings ¹⁹
Value(s) applied	Avoidance of around 6,063.10 x1000 m ³ wastewater discharge to the environment during MP.
Measurement methods and procedures	Coefficient for wastewater avoidance from potential cooling water operations calculated by taking Total Wastewater Discharged by Thermal Power Plants in the related year and Net Electricity Generation in the related year.
Monitoring frequency	Annually
QA/QC procedures	The calculation is computed with the EPIAŞ electricity generation based on monthly meter readings.

Relevant SDG Indicator/Safeguarding Principle	SDG 8: Decent work and economic growth Target: 8.8 by employment and decent work Indicator: 8.8.2
Data / Parameter	Quality of employment
Unit	-
Description	Quality of employment
Source of data	Health & Safety trainings
Value(s) applied	All employees attended trainings on Health and Safety. HSE trainings are held for employees at the plant.
Measurement methods and procedures	Training attendance list and/or certificates
Monitoring frequency	Annually (Once at the end of each monitoring period). After first verification period, only new cases will be reported.
QA/QC procedures	Attendance records or training certificates are provided during each monitoring period
Purpose of data	To exhibit employment performance of the plant
Additional comment	-

¹⁹ Please see the ER Excel sheet.

Purpose of data	Avoidance wastewater discharge to the environment
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	SDG 7: Affordable and clean energy Target: 7.2 by using renewable energy systems Indicator: 7.2.1
Data / Parameter	EGfacility,y
Unit	MWh/yr
Description	Quantity of net electricity generation supplied by the project plant to the grid in year y
Source of data	Electricity meter(s)
Value(s) applied	127,858.76 MWh/year
Measurement methods and procedures	Regarding the electricity meters: two meters are placed (one main and one reserve) at the Sadilli WPP which meters the electricity transferred to TEİAŞ substation. These meters are sealed by TEİAŞ and intervention by project proponent is not possible. The fact that two meters are installed in a redundant manner keeps the uncertainty level of the only parameter for baseline calculation low. High data quality of this parameter is not only in the interest of the emission reduction monitoring, but paramount for the business relation between the plant operator and the electricity buyers. Measured hourly and readings monthly. Monthly settlement notifications of PMUM (Piyasa Mali Uzlaştırma Merkezi) consist hourly electricity production and withdrawn from the grid. Since the meters are reading electricity supplied to the system and withdrawn from the system separately, the net electricity amount supplied to the grid is calculated by electricity supplied minus electricity withdrawn which is be taken from monthly settlement notifications. The above described measurement method follows Article 81 of the official regulation "Electricity Market Balancing And Settlement Regulation"²⁰
Monitoring frequency	Monthly
QA/QC procedures	According to the Article 2 of the Communiqué of Meters in Electricity Sector ²¹ : <i>'The meters to be used in the electricity market shall be compliant with the standards</i>

²⁰ See, http://www.epdk.gov.tr/documents/elektrik/mevzuat/yonetmelik/elektrik/dengeleme_uzlastirma/DUYson.doc page 55

²¹ See, <http://www.epdk.org.tr/documents/10157/81c16fc9-7777-46d6-a1bf-15c5ac8795c7>

of Turkish Standards Institute or IEC and have obtained **"Type and System Approval" certificate from the Ministry of Trade and Industry.** Therefore, Ministry of Trade and Industry (Ministry is responsible from control and calibration of the meters. Also according to Article 11 of this Communiqué, meters shall be in class of 0.5s, which means error interval for measuring is in $\pm 0.5\%$ range which is well acceptable according to rules.

Paragraph b) of the Article 9 of the 'Regulation of Metering and Testing of Metering Systems'²² (Regulation) of Ministry states that: ' b) Periodic tests of meters of electricity, water, coal gas, natural gas and current and voltage transformers are done **every 10 years.**' Therefore, periodic calibration of the meters will be done every 10 years. Periodic test of the meters is also carried out once every 2 years.

Also according to Article 67 (page 20) of this regulation, the calibration shall be done in calibration stations which have been tested and approved by Ministry of Trade and Industry. Article 10 d) of Communiqué requires the meters shall be three phase four wire and Article 64 of Regulation clearly states how calibration shall be performed for this kind of meters.

On 03.10.2019, both main and backup meters have been changed as their official seals were expired. After 03.10.2019, following meters are being used²³. The specification of current electricity meters are provided below:

Name	Serial Number	Brand& Model	Accuracy Class	Year of Manufacture
Main Meter	808883 1	EMH - LZQJ- XC	0.5S	2018
Back-up Meter	808883 2	EMH - LZQJ- XC	0.5S	2018

Meter Exchange Protocol dated 03/10/2019²⁴
For the Main and Back-up Meter Test dated 20/12/2021²⁵.

As above mentioned, the data acquisition and

²² See, <http://www.mevzuat.adalet.gov.tr/html/21179.html>

²³ See, "Sayaç Değişim Protokolü" has been provided to VVB.

²⁴ Please see: Meter Exchange Protocol dated 03-10-2019

²⁵ Please see: Meter Test Protocol dated 20-12-2021

	management and quality assurance procedures that are anyway in place, no additional procedures have to be established for the monitoring plan.
Purpose of data	To exhibit renewable electricity generation performance the plant
Additional comment	Plant Manager is responsible for monitoring data.

Relevant SDG Indicator/Safeguarding Principle	SDG 8: Decent work and economic growth Target: 8.8 by employment and decent work Indicator: 8.8.2																					
Data / Parameter	Quantitative employment and income generation																					
Unit	-																					
Description	Number of employments																					
Source of data	Social security records																					
Value(s) applied	The Project employs 9 people (4 of them are local) during operation. All the employees have been paid at least minimum wage in accordance with the Labour Law in Türkiye (law number: 4857, Official Gazette Issue 25134). Social security records of all 9 employees have been provided. <table><tr><th>Name – Surname</th><th>Local or Not</th></tr><tr><td>1. E. Demirhan</td><td>Not Local</td></tr><tr><td>2. L.Ö. Kavuncu</td><td>Not Local</td></tr><tr><td>3. M. Demir</td><td>Local</td></tr><tr><td>4. M. Bingül</td><td>Not Local</td></tr><tr><td>5. M. İşcan</td><td>Local</td></tr><tr><td>6. M. Çimen</td><td>Local</td></tr><tr><td>7. O. Gültekin</td><td>Local</td></tr><tr><td>8. V. Başkaya</td><td>Not Local</td></tr><tr><td>9. S. Kartal</td><td>Not Local</td></tr></table>		Name – Surname	Local or Not	1. E. Demirhan	Not Local	2. L.Ö. Kavuncu	Not Local	3. M. Demir	Local	4. M. Bingül	Not Local	5. M. İşcan	Local	6. M. Çimen	Local	7. O. Gültekin	Local	8. V. Başkaya	Not Local	9. S. Kartal	Not Local
Name – Surname	Local or Not																					
1. E. Demirhan	Not Local																					
2. L.Ö. Kavuncu	Not Local																					
3. M. Demir	Local																					
4. M. Bingül	Not Local																					
5. M. İşcan	Local																					
6. M. Çimen	Local																					
7. O. Gültekin	Local																					
8. V. Başkaya	Not Local																					
9. S. Kartal	Not Local																					
Measurement methods and procedures	Social Security System (SGK) records. Project owner will employ workers from the local villages in the Sadilli WPP.																					
Monitoring frequency	Each monitoring period.																					
QA/QC procedures	SGK records of employees are provided during each monitoring period																					
Purpose of data	Employment and decent work for all																					
Additional comment	-																					

Relevant SDG	SDG 7: Affordable and clean energy
Indicator/Safeguarding Principle	Target: 7.2 by using renewable energy systems Indicator: 7.2.1
Data / Parameter	Balance of payments and investment
Unit	-
Description	Savings on natural gas imports
Source of data	Monthly meter readings
Value(s) applied	According to TEİAŞ; 19,568,140 thousand m ³ natural gas is consumed for electricity generation in 2018. In 2018 Electricity generation amount from natural gas is 92,483 GWh. Since Turkey imports 99.16% of consumed natural gas, it is calculated that for 1 GWh electricity generation 209,809.44 m ³ natural gas is imported in 2018. Avoidance of around 51,520,559.77 m ³ natural gas import during MP by generation of project activity, which is worth about 11,522,985.74 EUR during MP.
Measurement methods and procedures	TEİAŞ statistics for natural gas share in the electricity mix shall help to demonstrate the high import dependency. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of EPIAŞ based on monthly meter readings, is used to calculate correspondent amount of currency saved by project activity with help of above calculated factor.
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	Ensure access to affordable, reliable, sustainable, and modern energy.
Additional comment	-

D.3. Comparison of monitored parameters with last monitoring period

N/A

D.4. Implementation of sampling plan

N/A

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

Used Formulas:

FOR SDG 13

There is no similar activity to combat with climate change on project site and nearby area for baseline situation. This project generates clean energy which also does not cause greenhouse gas emission during electricity generation. The project leads to mitigation of 159,160 tCO₂ for this monitoring period contributed to the target of SDG 13.

Realized baseline emissions.

$$BE_{2021} = (28,897.61 \text{ MWh}) \times (0.6482 \text{ tCO}_2/\text{MWh}) = 18,730 \text{ tCO}_2$$

$$BE_{2022} = (130,972.92 \text{ MWh}) \times (0.6482 \text{ tCO}_2/\text{MWh}) = 84,890 \text{ tCO}_2$$

$$BE_{2023} = (85,688.35 \text{ MWh}) \times (0.6482 \text{ tCO}_2/\text{MWh}) = 55,540 \text{ tCO}_2$$

Total: 159,160 tCO₂

E_{Gbaseline} is considered as zero.

The energy generating equipment is not transferred from or to another activity. Therefore, leakage is also considered as "0".

$$LE_y = 0$$

The project activity involves the generation of electricity by a wind power plant therefore project activity does not result in greenhouse gas emissions.

$$PE_y = 0$$

FOR SDG 6

The project activities replace the grid electricity, which is constituted of different fuel sources causing greenhouse gas emissions. By replacing in the consumption of these fuels, it contributes to conservation of water. Amount of wastewater to be discharged to the environment is decreased.

$$\begin{array}{l} \text{Amount of Avoided Cooling} \\ \text{Wastewater Discharge by} \\ \text{Project Activity per year} \end{array} = \begin{array}{l} \text{Annual} \\ \text{Electricity} \\ \text{Generation of} \\ \text{Project Activity} \\ \text{within in MP} \end{array} \times \begin{array}{l} \text{Average} \\ \text{Wastewater} \\ \text{each GWh} \\ \text{Generation} \end{array} \begin{array}{l} \text{Amount} \\ \text{Discharged per} \\ \text{Electricity} \end{array}$$

The project is to avoid of 6081.51 x 1000 m³ cooling wastewater discharge to the environment during this monitoring period.

Additionally, the project activity causes a domestic wastewater discharge, which is

calculated as follow:

$$\frac{\text{Amount of Wastewater Discharged by Project Activity per year}}{\text{Number of employees}} \times \frac{\text{Daily water usage per worker}}{\text{365}} = \text{Net Amount of Avoided Wastewater Discharge by Project Activity}$$

Daily wastewater discharge of a person is found to be 0.150 m³ by the TURKSTAT. Assuming the project employs at least 9 people, the total wastewater discharge of these 9 people in one year will amount to 9 x 0.150 x 365 = 492.75 m³ which is equal to 0.493 x 1000 m³ /yr.

So that,

Net Amount of Avoided Wastewater Discharge by Project Activity = Amount of Avoided Cooling Wastewater Discharge by Project Activity - Amount of Generated Domestic Wastewater Discharge by Project Activity

Net Amount of Avoided Wastewater Discharge by Project Activity per Year = 3,157.46 - 0.49 = 3,156.96 x 1000 m³/yr which is equal to 6,063.10 x 1000 m³ during monitoring period²⁶.

FOR SDG 7

There is no clean energy generation for the baseline situation of the project site. The project generates 245,558.88 MWh for this monitoring period according to generation report and contributes to share of low-cost / must-run sources. The on-site meter and EPIAS records are used to calculate the electricity generation during the monitoring period.

Balance of Payments and Investment:

With 127,858.76 MWh power generation annually, the project is expected to avoid around 26,825,974 m³ natural gas import each year by generation of project activity, which is worth about 5,999,843 EUR per year.

Annual avoided natural gas import will be calculated as follows:

$$\text{Annually Avoided Natural Gas Import} = \left(\frac{\text{Amount of Natural Gas Combusted for Electricity Generation}}{\text{Amount of Electricity Generated with Natural Gas}} \right) \times (\text{Share of Import for Natural Gas Consumption in Turkey}) \times (\text{Net Annual Electricity Generation of Project Activity})$$

Value Avoided Imported Natural Gas by Project Activity (TL) will be calculated as follows:²⁷

²⁶ Please see the ER Excel sheet.

²⁷ Reference of Price of Gas (TL/ m³) in Turkey for related year has been given in ER excel sheet.

= Value Avoided Imported Natural Gas by Project Activity (TL)

= Amount of Avoided Imported Natural Gas by Project Activity (m3) x Price of Gas (TL/ m3) in Turkey

Value Avoided Imported Natural Gas by Project Activity (EUR) will be calculated as follows²⁸:

$$\text{Value Avoided Imported Natural Gas by Project Activity (EUR)} = \frac{\text{Value Avoided Imported Natural Gas by Project Activity (TL)}}{\text{EUR/TL (rate of Exchange for 2018)}}$$

FOR SDG 8

There is no employment opportunity and training for employee as project created within the project area and nearby settlements for baseline situation. Project contributes to qualified decent work and economic growth could be expressed as following target:

Target 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 8.8: "Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment".

E.2. Calculation of project value or estimation of project situation of each SDG Impact

FOR SDG-13

The proposed project activity involves the generation of electricity by development of a wind farm. The generation of electricity does not result in greenhouse gas emissions and therefore is taken as 0 tCO₂/year.

FOR SDG 6

SDG 6 parameter has been evaluated and discharge wastewater is negligible during the monitoring period.

Therefore, domestic wastewater discharge is 0.946 x1000 m3 for this monitoring period.

FOR SDG 8

The employment of local people that have necessary technical qualifications for the required post has been the priority and enhanced by all project activities during construction and operation of wind farm. As a result, local poverty and unemployment has been partially eliminated by increased job opportunities and project business activities. The number of employees has been reached via the Social Security Institution records. 9 workers are employed and 4 of them are locals. All employees at the plant are provided Health&Safety Trainings annually.

Name – Surname	Local or Not
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²⁸ Reference of Rate of exchange (EUR/TL) for related year has been given in ER excel sheet.

1. E. Demirhan	Not Local
2. L.Ö. Kavuncu	Not Local
3. M. Demir	Local
4. M. Bingül	Not Local
5. M. İşcan	Local
6. M. Çimen	Local
7. O. Gültekin	Local
8. V. Başkaya	Not Local
9. S. Kartal	Not Local

FOR SDG 7

The project generates 245,558.88 MWh for the whole monitoring period (701 days) and contributes to share of low-cost / must-run sources.

There is no natural gas import caused by the Project.

E.3. Calculation of leakage

LE_y is 0, as it is not considered according to ACM0002. PE_y is 0 because project is a wind power generation activity.

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	CO ₂ Emission Reduction	CO ₂ Emission: 159,160 tCO ₂	CO ₂ Emission: 0 tCO ₂	CO ₂ Emission: 159,160 tCO ₂
7	Electricity Generation	Access to affordable and clean energy services: 0 MWh Balance of payments and investment: 11,522,985.74 EUR natural gas import	Access to affordable and clean energy services: 245,558.88 MWh Balance of payments and investment: 0 EUR natural gas import	Access to affordable and clean energy services: 245,558.88 MWh Balance of payments and investment: Avoidance of 11,522,985.74 EUR natural gas import

8	Quantitative Employment And Income Generation & Qualitative Employment	Quantitative Employment: No employment. Qualitative Employment: No training	Quality of Employment: Training certificates are provided. Health&Safety Trainings have been held annually and 9 plant employees have attended to those trainings. Quantitative Employment and Income Generation: Current employment records are presented. There are 9 employees working in the plant.	Quality of Employment: Training certificates are provided. Health&Safety Trainings have been held annually and 9 plant employees have attended to those trainings. Quantitative Employment and Income Generation: Current employment records are presented. There are 9 employees working in the plant.
6	Water Quality	Around 6081.51 x1000 m ³ cooling wastewater discharge.	0.946 x1000 m ³ domestic wastewater discharge.	Avoidance around 6,063.10 x1000 m ³ wastewater discharge.

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values achieved during this monitoring period
13	Emission Reduction: 139,428 tCO ₂	Emission Reduction: 159,160 tCO ₂
7	Access to affordable and clean energy services: 215,101 MWh Balance of payments and investment: 10,093,750.85 EUR natural gas import was avoided by generation of project activity.	Access to affordable and clean energy services: 245,558.88 MWh Balance of payments and investment: 11,522,985.74 EUR natural gas import was avoided by generation of project activity.
8	Quality of Employment: All employees at the plant are provided Health&Safety Trainings annually. Quantitative Employment and Income Generation: The project provides between 5 and 15 employments.	Quality of Employment: 9 employees at the plant are provided Health&Safety Trainings annually. Quantitative Employment and Income Generation: 9 employees have been hired during the operation of the project and all the employees have been paid at least minimum wage in accordance with the Labour Law in Türkiye (law number: 4857, Official Gazette Issue 25134).
6	Water Quality: Avoidance around 5,310.89 x1000 m³ wastewater discharge. Wastewater disposal: The Project is expected to generate 3 m³/day household type wastewater, which will be stored in a septic tank on site and disposed of in accordance with regulations.	Water Quality: Avoidance around 6,063.10x 1000 m³ wastewater discharge. Wastewater disposal: The Project generated 1.5 m³/day (9 workers x0.15 m³/workers.day=1.35 m³/day) household type wastewater, which is stored in a septic tank on site and disposed of in accordance with regulations. Wastewater transfer receipts are provided.

Names of Employees:

Name – Surname	Local or Not
10.E. Demirhan	Not Local
11.L.Ö. Kavuncu	Not Local
12.M. Demir	Local
13.M. Bingül	Not Local
14.M. İşcan	Local
15.M. Çimen	Local
16.O. Gültekin	Local
17.V. Başkaya	Not Local
18.S. Kartal	Not Local

Occupational Health & Safety Training Records of Employees:

Name – Surname	Date			
E. Demirhan	25/05/2022	04/07/2023	26/12/2023	
L.Ö. Kavuncu	09/08/2021	26/07/2021	23/08/2022	07/11/2023
	12/12/2023			
M. Demir	11/05/2022	04/07/2023	26/12/2023	
M. Bingül	05/04/2022	04/07/2023	07/11/2023	
M. İşcan	11/05/2022	26/12/2023		
M. Çimen	07/03/2022	07/11/2023		
O. Gültekin	11/04/2022			
V. Başkaya	09/08/2021	26/07/2021	29/08/2022	02/09/2022
	07/11/2023	12/12/2023		
S. Kartal	03/06/2021	10/06/2022	04/07/2023	

Occupational health and safety trainings have been provided in 2021, 2022, 2023 and 9 employees are attended to the trainings.

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

Estimated annual emission reduction in ex ante calculation of registered PDD is 72,598 tCO₂, which corresponds to 139,428 tCO₂ for 701 days. And actual emission reduction achieved during this monitoring period is 159,160 tCO₂ (for (27/10/2021 - 27/09/2023), 701 days).

Estimated annual electricity generation calculation of registered PDD is 112,000 MWh/y, which corresponds to 215,101 MWh for 701 days. And actual electricity generated achieved during this monitoring period is 245,558.88 MWh (for (27/10/2021 - 27/09/2023), 701 days).

Estimated annual natural gas import avoided calculation of registered PDD is 6,017,117 EUR, which corresponds to 10,093,750.85 EUR for 701 days. And actual natural gas import avoided during this monitoring period is 11,522,985.74 EUR (for (27/10/2021 - 27/09/2023), 701 days).

Annual amount of avoided wastewater discharge calculation of registered PDD is $2,765.30 \times 1000 \text{ m}^3/\text{y}$, which corresponds to $5,310.89 \times 1000 \text{ m}^3$ for 701 days. And actual avoided wastewater discharge achieved during this monitoring period is $6,063.10 \times 1000 \text{ m}^3$.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

Initial investment analysis, which was made during the validation process of the project, has 112,000 MWh annual electricity generation according to the feasibility study. The Project IRR calculations were carried out for two scenarios which are IRR with carbon credits and IRR without carbon credits. Project IRR was 5.0% with carbon credits and it was 4.2% without carbon credits. The benchmark discount rate was determined as 8.4%.

In this monitoring period, the annual electricity generation is 127,858.76 MWh. However, there is a difference between estimated electricity generation value, which is 112,000 MWh, and actual electricity generation value, which is 127,858.76 MWh, calculated as 14.15961%. This difference is due to the change in wind potential. Hence, the project IRR has been checked by using the actual electricity generation which is 127,858.76 MWh. According to this, the project IRR is calculated as 6.894% with carbon credits whereas it was calculated as 6.022% without carbon credits, which are still lower than the calculated benchmark (8.4%). Consequently, the difference in electricity generation is not impacting the additionality of the project since the calculated IRR with actual annual generation is well below the benchmark. For this reason, the project is still additional.

The estimated emission reduction in ex ante calculation is 139,428 tCO₂ for this monitoring period whereas the actual emission reduction achieved during this monitoring period is 159,160 tCO₂. The difference between these two values is 14.15%, and an increase in electricity production is observed in each year of this monitoring period. (Please see the emission reduction calculation spreadsheet to observe these increase rates in each year of the monitoring period). This situation is considered to be due to the change in wind potential. As the change in emission reductions is more than 10% each year in this monitoring period and higher emission reductions are observed in many monitoring periods, the claimed emission reduction for this monitoring period has been calculated capping the estimated emission reduction each year in the monitoring period at the upper bound of the sensitivity analysis, set at 10%, in accordance with paragraphs 2.1.3(b) and 2.1.4 of the Rule Clarification on the Assessment Approach for Reporting Higher Ex-Post Emission Reductions. **Hence, it has been calculated as 153,369 tCO₂ and this value be the only claimed emission reduction for this monitoring period.** The details of the calculation results have been provided below (For details of the calculation, please see the page named "Sadilli" in the emission reduction calculation spreadsheet);

Vintage		Estimated ER _y (tCO ₂ e)	The Upper Bound of the Sensitivity Analysis which is set at 10% (tCO ₂ e)*
27/10/2021	31/12/2021	13,127	14,440
1/01/2022	31/12/2022	72,598	79,857
1/01/2023	27/09/2023	53,703	59,072

Total	139,428	153,369
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*(The values in this column, have been calculated by adding 10% to the estimated ER_y value for each year in the monitoring period. For detailed analysis, please see the worksheet where the emission reduction calculation is provided)

Estimated values for electricity generation, and natural gas import avoided calculation of registered PDD are 215,101.00 MWh, and 10,093,750.85 EUR respectively for this monitoring period. Actual values are 245,558.88 MWh, and 11,522,985.74 EUR respectively. The values such as emission reduction and natural gas import avoided are calculated directly based on electricity generation. Therefore, net difference between estimated and actual values is 14.16% for electricity generation, CO₂ and natural gas import avoided. This difference is also due to the change in wind potential. Amount of avoided wastewater discharge calculation is also related with the electricity generation, and it is also expected that there will be a difference between estimated and actual values because of the wind potential.

However, amount of wastewater discharged by the employees should also be considered for the calculation of avoided wastewater discharge. Estimated Amount of avoided wastewater discharge 5,310.89 x1000 m³ and actual value is 6,063.10 x1000 m³ during the monitoring period. So, the net difference between estimated and actual amount of avoided wastewater discharge for the project activity is 14.16%.

SECTION F. SAFEGUARDS REPORTING

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle: 3.9.1 Landscape Modification and Soil
Data / Parameter	Other
Unit	N/A
Description	Erosion risk control at new roads
Source of data	Observation
Value(s) applied	According to the interview with Sadilli WPP personnel, there is no problem with erosion at the new roads. The roads are maintained regularly.
Measurement methods and procedures	Visual inspection whether the roads have caused significant erosion.
Monitoring frequency	Only once during the first verification for second crediting period
QA/QC procedures	-
Purpose of data	Soil Condition
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle: 3.9.2 Vulnerability to Natural Disaster
Data / Parameter	Other
Unit	N/A
Description	Earthquake risk
Source of data	EIA study
Value(s) applied	In the HSE (occupational health and safety) trainings, all employees are informed related to the earthquake. Employees are provided with earthquake awareness trainings on what to do during and after an earthquake. Please see the training documents about the earthquake.
Measurement methods and procedures	Earthquake insurance is taken out for the project.
Monitoring frequency	Only once during the first verification for second crediting period
QA/QC procedures	-
Purpose of data	Soil Condition
Additional comment	-

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle: 3.9.4 Release of pollutants
Data/parameter:	Other Pollutants
Unit	N/A
Description	a) Noise level during operation of the project activity. b) Waste oil amount c) Solid household waste
Source of data	a) Interview with the head of village b) Removal receipts c) Garbage bins' photos
Value(s) applied)	a) The project owner has good communication with local people and will take an action if local people have any complaints about noise in the future. During the site visit, it was conducted a meeting with head of village and stakeholders. According to the interview, no negative feedback has been received regarding noise. b) Solid household waste from daily operations is disposed of properly. Waste oil etc. (gearbox oil waste, oil filters etc.) is collected on site and disposed by licensed companies according to legal requirements. Removal receipts and garbage bins'

	photos are checked. c) Garbage bins' photos are provided.
Measurement methods and procedures	a) The noise level from turbines is interviewed to the head of village b) Receipts of transfer of waste oil are checked c) Garbage bins' photos are checked
Monitoring frequency	a) At least once for each monitoring period b) At least once for each monitoring period c) At least once for each monitoring period
Purpose of data	Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.
Additional comments	-

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle:3.9.10 High Conservation Value Areas and Critical Habitats
Data/parameter:	Biodiversity
Unit	N/A
Description	Impact on bird migration routes
Source of data	Letter from the personnel or Ornithology report
Value(s) applied)	PP conducted an assessment of the impact of project on bird life during reproduction period in 2020. After that, it was decided that Ornithology report is repeated every 3 years. Therefore, new ornithology report are completed for the year 2023. According to the findings of the studies, It has been observed that the mortality effect of turbines on birds in the Sadilli WPP is very low.
Choice of data or measurement methods and procedures	No bird mortality. The ornithological study states that the project is not expected to have a negative impact on birds.
Monitoring frequency	Once in a monitoring period
QA/QC procedures	-
Purpose of data	Preventing bird collisions.

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle: 3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement
Data/parameter:	Livelihood of the Poor
Unit	-
Description	Land acquisition
Source of data	Interview with stakeholders
Value(s) applied	100% of the land acquisition process has been completed. These land acquisitions were carried out in accordance with the law and land owners were fairly compensated. In addition, this situation was discussed with local people during the site visit. Local people stated that they had no problems in this regard and that everything was carried out fairly and that they were satisfied with this.
Choice of data or measurement methods and procedures	Interviews to check whether the process is carried out properly according to legal requirements and that land owners are compensated fairly.
Monitoring frequency	Only once during the first verification for second crediting period
QA/QC procedures	-
Purpose of data	Land acquisition
Additional comments	-

Relevant SDG Indicator/Safeguarding Principle	Other Safeguarding Principle: 3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement
Data/parameter:	Livestock feeding
Unit	-
Description	Livestock feeding
Source of data	Interview with stakeholders.
Value(s) applied	During the site visit, interview with the local people has been carried out and there is no negative comment about the project activity and the livestock feeding. No access limitation at the Project site for livestock.
Choice of data or measurement methods and procedures	No access limitation at the Project site for livestock.
Monitoring frequency	Continuously.
QA/QC procedures	-
Purpose of data	Livestock feeding
Additional comments	-

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

For the Sadilli WPP, stakeholder engagement procedure was conducted with the headman of Elmali village and the two local stakeholders who were man and woman from Elmali Village onsite on 20/07/2023.

Since this project is in second crediting period and project will not have different impacts from previous vintages, currently the grievance mechanism does mainly rely on the existed grievance mechanism by using logbook as same with previous monitoring periods. Logbook is located in headman of the Elmali village.

As validated during the site visit, mukhtar (head of the village) had already taken the contact information of Company Executive of the company so that the stakeholders are able to reach company executive whenever they have any complaints, suggestions or ideas about the project. Headman is the contact person between the project owner and the stakeholders. The contact information of project owner is listed on the first page of the logbook. Stakeholders can always reach the headman if they have any grievances or suggestions, so the grievance mechanism is carried out in a healthy way. During the site visit, it is validated that there were no negative comments from the stakeholders.

There is no grievance received related to the project during this monitoring period.

G.2. Report on any stakeholder mitigations that were agreed to be

monitored.

There have been no stakeholder mitigations agreed to be monitored.

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

No legal contest or dispute that has arisen with the project during the monitoring period.

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption