Gold Standard
for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

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VERSION **v.1.5**

RELATED SUPPORT

- TEMPLATE GUIDE Key Project Information & Project Design Document

This document contains the following Sections

KEY PROJECT INFORMATION

GS ID of Project	GS7746
Title of Project	West Huaybong 3 wind farm project
Time of First Submission Date	22/01/2020
Date of Design Certification	29/04/2021
Version number of the PDD	9
Completion date of version	04/08/2025
Project Developer	First Korat Wind Company Limited
Project Representative	Kosher Climate India Private Limited
Project Participants and any communities involved	First Korat Wind Company Limited
Host Country (ies)	Thailand
Activity Requirements applied	☐ Community Service Activity ☒ Renewable Energy ☐ Land-Use and Forests Activity Requirements/Risks & Capacities ☐ N/A
Scale of the project activity	☐ Micro scale ☐ Small Scale ☒ Large Scale
Other Requirements applied	NA
Methodology (ies) applied and version number	ACM0002 "Grid-connected electricity generation from renewable sources" (Version 22)
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A
Project Cycle:	☐ Regular ☒ Retroactive

Table 1 – Estimated Sustainable Development Contributions

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
13 Climate Action (mandatory)	Amount of GHGs emissions avoided	132,339	GS VER
7 Affordable and Clean Energy	Total electricity produced: Renewable	232,500	MWh
8 Decent Work and Economic Growth	Total Number of Jobs	40	Number

SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

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The purpose of the First Korat Wind Company with this project activity is to construct a large scale commercial wind farm in Thailand to supply clean renewable electricity to the Thailand grid. The scenario existing prior to the start of the project, which is the same as the baseline scenario, is the supply of electricity from power plants connected to the grid. The project consists of 45 turbines 2.3 MW capacity with the total installed capacity of 103.5 MW. A wind resource and energy yield assessment performed at the project site predicts that it will yield an annual electricity production of 232.5 GWh. The project has been commissioned on 14th November 2012

It shall be noted that the project is already registered under CDM and the registration details are given below:

Project title: West Huaybong 3 wind farm project

Reference number: 7474

Registration Date: 29/10/2012

1st Crediting period: 01/12/2012 – 30/11/2019

2nd crediting period: 01/12/2019 – 30/11/2026

Weblink: https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view

Location:

The West Huaybong 3 wind farm project is located in Nakhon Ratchasima Province in the northeast of Thailand.

Project Milestone:

Start date of the project: 15th August 2011

CDM Stakeholder consultation: 15th September 2011

CDM Registration: 29th October 2012

Commissioning of project: 14th November 2012

Listing of the project in GS: 22nd June 2020

Online SFR: 6th July 2020 to 5th September 2020

This is the 2nd crediting period under Gold Standard. The details of the crediting period is given below

1st crediting period	01/12/2019 to 30/11/2024
2nd crediting period (current)	01/12/2024 to 30/11/2027

How the proposed activity reduces GHG emissions

The project generates electrical energy through sustainable means without causing any negative impact on environment. Use of renewable sources for power generation contributes to mitigation of greenhouse gases emissions. Since wind power is Greenhouse Gas (GHG) emissions free, the power generated will prevent the anthropogenic gas emissions generated by fossil fuel based thermal power stations comprising coal, diesel, furnace oil and gas. Hence, the generation by the proposed activity is non-GHG source and thus reduces the proportion of fossil fuel based generation in the grid leading to lesser carbon intensive grid.

Scenario existing prior to the implementation of project activity:

There was no activity at the site prior to implementation of the project activity. Hence the scenario existing prior to the project activity is same as baseline scenario which is continual use of highly carbon intensive electricity in the Thailand national grid.

Baseline Scenario:

As the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following as per applied methodology: 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, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system". Hence, pre-project scenario and baseline scenario are the same.

Estimated emission reduction:

The project is already registered under CDM (UNFCCC Ref No: 7474[1]). As per the CDM registered PDD, the estimation of GHG reductions by this project is limited to carbon dioxide (CO_2) only. Thus the project activity leads to an emission reduction of **661,695**

[1] https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view

tCO_2e for the chosen crediting period with the annual average emission reduction of **132,339 tCO_2e**.

Sustainable Development

The project activity will contribute to the sustainable development of Thailand by producing clean renewable electricity for use in the Thailand grid. The project will create jobs associated with site construction of the turbine towers, site facilities and access roads. At the time of submission there were no examples of large scale wind farms functioning in Thailand. The project will be an example of technology transfer because it will utilise imported wind turbines purchased from Siemens Wind Power A/S, a company incorporated in Denmark. The wind turbine supplier will provide training in concepts relevant to the equipment, systems and maintenance. The project is committed to engagement with all local stakeholders and as such a local stakeholder consultation meeting was organised to enable stakeholders concerns to be addressed.

A.1.1. Eligibility of the project under Gold Standard

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The project activity is a wind power project and hence is automatically eligible for Gold Standard Certification as per the approved Gold Standard Renewable Activity Requirements.

The project activity meets the eligibility criteria as per section 3.1.1 of GS4GG Principles & Requirements document as described below.

Eligibility Criteria	Eligible?	Justification of eligibility
a) Types of Project: Eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are identified in the Eligibility Principles and Requirements section.	Yes	The project involves physical action/implementation on the ground. The project type is a grid-connected renewable energy located in Thailand.
b) Location of Project: Projects may be located in any part of the world.	Yes	The project activity is located in Thailand. The project is not located in HCV areas.

c) Project Area, Project Boundary and Scale: The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).	Yes	The project boundary is defined as per the applied methodology ACM0002, version 22.0. The project is not submitted in any other voluntary or compliance standards.
d) Host Country Requirements: Projects shall be	Yes	The project activity has obtained all the required

in compliance with applicable Host Country's legal, environmental, ecological and social regulations.		approvals for the commissioning of the project from the Government of Thailand.
e) As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organisation (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	Yes	Refer Appendix 2 for the contact details.
f) Legal Ownership: Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from	Yes	Please refer to section A.1.2 for the legal ownership details.

project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.		
g) Other Rights: As well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further project implementation in affected areas.	Yes	Wind power generation project doesn't require any continuous natural material to operate except the wind flow. Therefore, no further consent to utilize the resources are required.
h) Official Development Assistance (ODA) Declaration: All Project Developers applying	Yes	The project had private funding and funding from bank. The PP hereby confirms that there is

for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the declaration at the time of Design Certification.		no public funding from Annex 1 countries and no diversion of Official Development Assistance (ODA) involved in the project activity. Please refer to section A.5 for the details related to funding of the project activity.

GS eligibility		**Justification**
3.1.1.1 A Project type is automatically eligible for Gold Standard Certification if there are Gold Standard published Activity Requirements and/or Gold Standard Approved Methodologies associated with it or as referenced in Gold Standard Product Requirements. These are published to the Gold Standard website and shall be followed where provided for a given Project type.	**OK**	The project is a wind power generation activity which is automatically eligible under the project type category (b) of Renewable energy activity requirement[2]: "(*b) Project shall comprise of renewable energy generation units, such as photovoltaic, tidal/wave, wind, hydro, geothermal, waste to energy and renewable biomass:*

[2] https://globalgoals.goldstandard.org/wp-content/uploads/2017/06/200-GS4GG-Renewable-Energy-Activity-Requirements-v1.1.pdf

		• *Supplying energy to a national or a regional grid; or* • *Supplying energy to an identified consumer facility via national/regional grid through a contractual agreement such as wheeling"* The CDM approved methodology ACM0002, Version 22, is applied to the project activity.
3.1.1.2 For Project types not currently published to the Gold Standard website, the Project Developer may submit to Gold Standard for approval. This shall be done at minimum as part of the Preliminary Review, though it is recommended to engage with Gold Standard earlier to establish the criteria and requirements for approval.	***NA***	The project type is approved and published on the GS website.
3.1.1.3 Project types applying for Gold Standard approval are referred to the Gold Standard Vision and Mission. The Project Developer shall demonstrate how the Project would contribute to these and how the Gold Standard for the Global Goals Requirements would be met in their application for approval.	***OK***	The project activity is implementation wind power plant in Thailand. The project avoids CO_2 emissions that would have occurred in the absence of the project at the grid connected fossil fuel power plants. Hence the project avoids the GHG emission that is responsible for climate change. The monitoring process required to achieve the Global Goals, are also explained in the project document. Therefore, the project activity is in line with the GS vision of "Climate security and sustainable development

		for all" and GS mission, "To catalyse more ambitious climate action to achieve the Global Goals through robust standards and verified impacts".
3.1.1.4 In reviewing a new Project type for approval, Gold Standard may establish new Requirements to be met by the Project in order to achieve Gold Standard Design Certification and ongoing Project Certification. Where required, Gold Standard shall engage expert peer reviewers to establish these Requirements, at the Project Developer's expense.	***NA***	*Non-Applicable*
3.1.1.5 Gold Standard does not support Project types associated with geo-engineering or energy generated from fossil fuel or nuclear, fossil fuel switch, or any project that supports, enhances or prolongs such energy generation. In certain cases, concerning energy efficiency involving fossil fuels (for example, LPG stoves), an exception is made. This is captured in the relevant Activity Requirements, Gold Standard Approved Methodologies and/or Product Requirements.	***NA***	*Non-Applicable*

A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

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The Project proponent has complete rights on the environmental attributes and other products detailed in the report. The project has not pledged any of the aforesaid products to any party and does not involve any double counting.

The legal ownership of the project with the respective project proponent which can be confirmed via the following documents:

- Commissioning Certificate

A.2 Location of project

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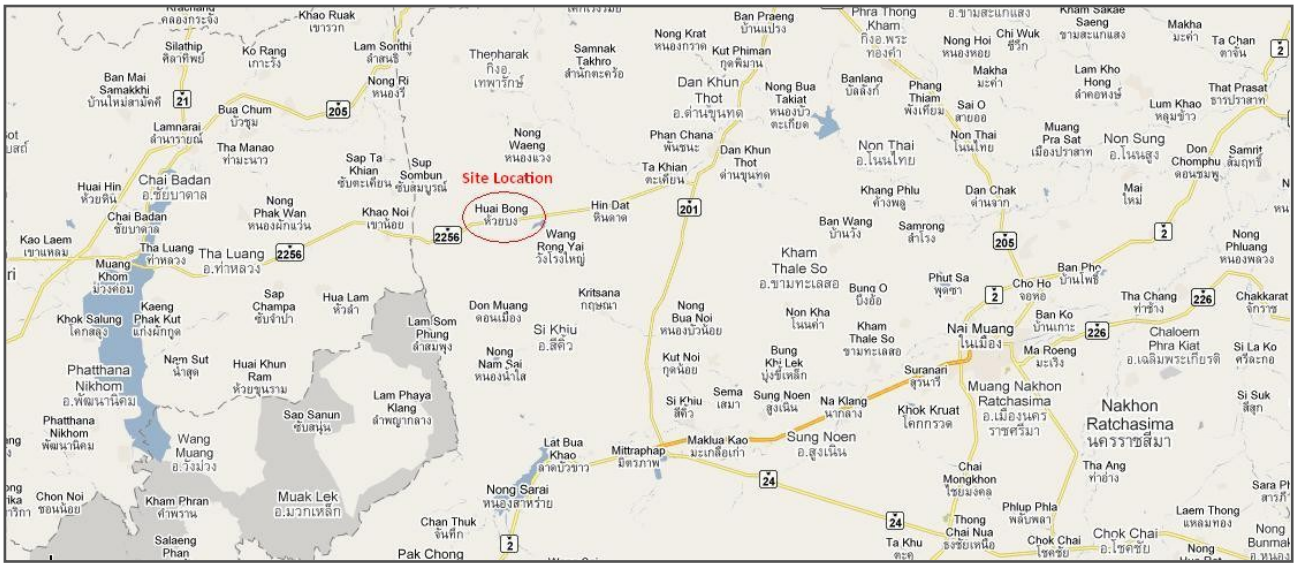
Tambol Huaybong of Amphur Dan Khun Thot and Tambol Nong Wang of Amphur Teparak, Nakhon Ratchasima Province, Thailand

The physical location of the wind farm is located within Tambol Huaybong of Amphur Dan Khun Thot and Tambol Nong Wang of Amphur Teparak, of Nakhon Ratchasima Province. Please refer to figure given below for more detail.

Nominal GPS co-ordinates for the project site are: N 15°12“ 24.18”, E 101°27“ 38.71”.



The coordinates of individual WTGs are given below:

No	WTG	Latitude (°N)	Longitude (°E)
1	01B	15.1798	101.4406

2	02B	15.1820	101.4398
3	03B	15.1850	101.4407
4	04B	15.1808	101.4478
5	05B	15.1782	101.4580
6	06B	15.1804	101.4567
7	07B	15.1831	101.4557
8	08B	15.1860	101.4539
9	09B	15.1885	101.4532
10	10B	15.1906	101.4525
11	11B	15.1934	101.4529
12	12B	15.2034	101.4297
13	13B	15.2034	101.4353
14	14B	15.2061	101.4361
15	15B	15.2079	101.4339
16	16B	15.2106	101.4287
17	17B	15.2106	101.4341
18	18B	15.2140	101.4320
19	19B	15.2172	101.4334
20	20B	15.2195	101.4327
21	21B	15.2215	101.4393
22	22B	15.2240	101.4342
23	23B	15.2244	101.4388
24	24B	15.2282	101.4372
25	25B	15.2059	101.4675
26	26B	15.2079	101.4663
27	27B	15.2097	101.4639
28	28B	15.2304	101.4488
29	29B	15.2321	101.4470
30	30B	15.2348	101.4479
31	31B	15.2006	101.4832
32	32B	15.2033	101.4829
33	33B	15.2068	101.4840
34	34B	15.2110	101.4867
35	35B	15.2118	101.4826
36	36B	15.2135	101.4808
37	37B	15.2159	101.4801
38	38B	15.2189	101.4815

39	39B	15.2221	101.4823
40	40B	15.2242	101.4800
41	41B	15.2266	101.4791
42	42B	15.2286	101.4773
43	43B	15.2312	101.4772
44	44B	15.2329	101.4761
45	45B	15.2353	101.4743

A.3 Technologies and/or measures

The West Huaybong 3 wind farm project produces renewable electricity for the Thailand national grid. Renewable electricity is generated by wind turbines exported to Thailand and installed in the North West of Nakhon Ratchasima Province. Prior to the project activity there was no equipment for generating electricity at the project site and the Thailand grid was comprised of a mixture of generation units which included fossil fuel fired power units. In the absence of the project activity, the Thailand grid would receive electricity from the existing grid-connected power plants and by the addition of new generation sources. The baseline scenario is the same as the scenario described above which existed prior to implementation of the project activity. The production of electricity in this way creates CO2 through the combustion of fossil fuels as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system". The CO_2 emissions from these baseline power plants is the only baseline emission source identified in section B.3 of the PDD. According to data published by the Thailand Greenhouse Gas Management Organisation (TGO), the Thailand grid produces 0.5692 tCO_2e per MWh of electricity produced

The wind farm is constructed on land administered by the Agricultural Land Reform Office. The project installed 45 individual 2.3MW Siemens SWT-2.3-101 turbines, which are based on a three blade horizontal axis turbine design and have a peak co-efficient of power (cp) of 0.46. The Design Operational Life of the turbines is 20-years based on the design power curve. The planned operational life of the project is 23 years based on the assumption that the turbines will be operated beyond the technical lifetime of 20 years. A wind resource and energy yield assessment was performed at the project site

which forecasts an annual electricity production of 232.5 GWh and a combined loss factor of 15.6% and a plant load factor of 25.64%. The quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity will be monitored with electricity meters located at the point of connection to the grid. The electricity meters are installed and operated in accordance with the Power Purchase Agreement (PPA) signed with the Energy Generating Authority of Thailand (EGAT). In accordance with the PPA, primary and backup export meters will be installed and the error specified by the meter manufacturer will not exceed +/- 0.2%. More details of the metering equipment are provided in section B.7. In accordance with section B.3 of the PDD, there are no project emissions associates with the project activity

A.4 Scale of the project

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The project activity is a 103.5 MW Wind Power Project and hence falls under "non-microscale" category as per para 3.1.3(b) of Renewable Energy Activity Requirements, v1.4

A.5 Funding sources of project

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The project activity is funded by debt and equity. Debt for this project is sourced from private Bank. No public funding is involved in this project

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

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Title: Grid-connected electricity generation from renewable sources

References: Approved Large Scale Consolidated Methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 22)[3]

ACM0002 draws upon the following tools which have been used in the PDD:

- Methodological Tool: Tool to calculate the emission factor for an electricity system - Version 7[4].

B.2. Applicability of methodology (ies)

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The project connected to the Thailand grid. Prior to the implementation of the project activity, no renewable power project was operated at the project site. Hence the project activity is a green field project activity. The Project activity will displace fossil fuel based electricity generation that would have otherwise been provided by the operation and expansion of the fossil fuel based power plants in Thailand electricity grid:

Applicability Criteria	Applicability status
This methodology is applicable to grid-connected renewable power generation project activities that: (a) install Greenfield power plant; (b) involve a capacity addition to (an) existing plant(s); (c) involve a retrofit of (an) existing	The project activity is a Green field, Thailand national grid connected renewable power plant. Therefore, it confirms to the said criteria

[3] https://cdm.unfccc.int/UserManagement/FileStorage/R0IJ1X9LQ7W2GOYHSMBFCPE3VKZ685

[4] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf/history_view

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) or (f) Install a Greenfield power plant together with a grid-connected Greenfield pumped storage power plant. The greenfield power plant may be directly connected to the PSP or connected to the PSP through the grid.	
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: (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 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) (e) Integrate a BESS together with a Greenfield power plant that is operating in coordination with a PSP. The BESS is located at site of the greenfield renewable power plant.	Not applicable as the project does not involve integration of BESS.

The methodology is applicable under the following conditions: (a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; (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 must have started commercial operation prior to the start of a minimum historical reference period of five years. The reference period is used for the calculation of baseline emissions and defined in the baseline emission section. Furthermore, 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; (c) In case of Greenfield project activities applicable under paragraph 7 (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); (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only	The project activity is the installation of a new grid connected renewable wind power project. Thus, it meets the first applicability condition

during exigencies2 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 than 2 per cent of the electricity generated by the project renewable energy plant 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. (e) In case the project activity involves PSP, the PSP shall utilize the electricity generated from the renewable energy power plant(s) that is operating in coordination with the PSP during pumping mode.	
In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of reservoirs; or (b) The project activity is implemented in an existing single or multiple reservoirs, where the volume of the reservoir(s) is	The proposed project activity is the installation of wind power plant. Therefore, the said criteria is not applicable

increased and the power density calculated using equation (3) is greater than 4 W/m2; or (c) The project activity results in new single or multiple reservoirs and the power density calculate equation (3), is greater than 4 W/m2. (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density of any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m2, and all of the following conditions shall apply. (i) The power density calculated using the total installed capacity of the integrated project, as per equation (4) is greater than 4W/m2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 are: (a) Lower than or equal to 15 MW; and (b) Less than 10% of the total installed capacity of integrated hydro power project	
In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill	The proposed project activity is the installation of wind power plants/units. Therefore, the said criteria is not applicable

directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (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 indifferent 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 five years prior to implementation of CDM project activity.	
In the case of PSP, the project participants shall demonstrate in the PDD that the project is not using water which would have been used to generate electricity in the baseline.	Not applicable as the project activity is does not involve PSP.
The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources 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;	The proposed project activity is the installation of wind power plant. Therefore, the said criteria is not applicable

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 proposed project activity is the installation of wind power plants. Therefore, the said criteria is not applicable
In addition, the above applicability conditions the applicability conditions of tool referred in the methodology ACM0002, version 22.0 has been referred here under:	
This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid(e.g. demand-side energy efficiency projects).	This condition is applicable. OM, BM and CM are estimated using the tool for calculating baseline emissions.
Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, the conditions specified in "Appendix 2: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at	Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly.

least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project activity is located in Thailand, a non-Annex I country. Therefore, this criterion is not applicable for the project activity
Under this tool, the value applied to the CO_2 emission factor of bio fuels is zero	The project activity is a grid connected wind power project and therefore, this criterion is not applicable for the project activity

Since the project generates and exports renewable electricity to the grid system, hence the choice of project Type and category is justified

B.3. Project boundary

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As per Para 22 of applied baseline and monitoring methodology ACM0002, Version-22 the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to. This includes the wind plant installation, pooling and sub-stations.

The project boundary for the purpose of calculating project and baseline emissions consists of the physical wind farm site and the Thailand electrical grid. The only relevant emission source is the CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. For more details refer to the table below.

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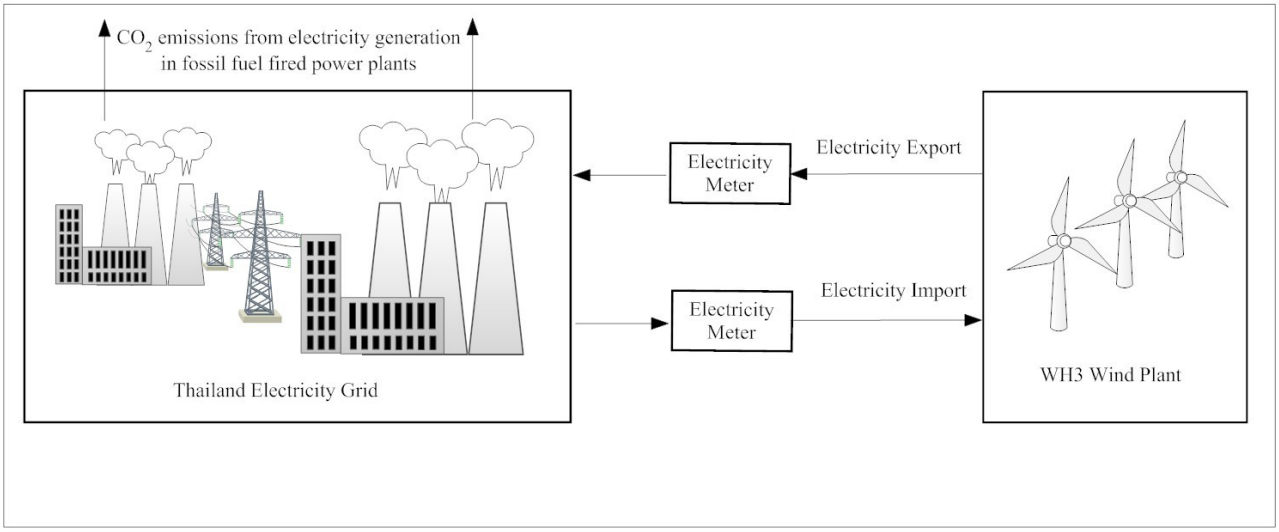
As per the approved methodology ACM0002, Version 22, following gases and emission sources have been included in the project boundary.

Source		GHGs	Included ?	Justification/Explanation
Baseline scenario	CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO_2	Yes	Main emission source.
		CH_4	No	Minor emission source.
		N_2O	No	Minor emission source.
Project scenario	For dry or flash steam geothermal power plants, emissions of CH4 and CO2 from non-condensable gases contained in geothermal steam	CO_2	No	The project is a not a geothermal project. Hence not applicable.
		CH_4	No	
		N_2O	No	
	For binary geothermal power plants, fugitive emissions of CH4 and CO2 from non-condensable gases contained in geothermal steam	CO_2	No	The project is a not a geothermal project. Hence not applicable.
		CH_4	No	
		N_2O	No	
	For binary geothermal power plants, fugitive emissions of hydrocarbons such as n-butane and isopentane (working fluid) contained in the heat exchangers	Low GWP hydrocarbon/ refrigerant	No	The project is a not a geothermal project. Hence not applicable.
	CO2 emissions from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants	CO_2	No	The project is neither solar thermal power plant nor geothermal power plant. Hence not applicable
		CH_4	No	
		N_2O	No	
	For hydro power plants, emissions of CH4 from the reservoir	CO_2	No	The project is not a hydro power plant. Hence, not applicable
		CH_4	No	
		N_2O	No	
	Utilization of electricity from grid or from fossil fuel generators by PSP for pumped mode.	CO_2	No	The project does not involve PSP. Hence, not applicable
		CH_4	No	
		N_2O	No	
		CO_2	No	

	For PSP, emissions of CH4 from the reservoir	CH_4	No	The project does not involve PSP. Hence, not applicable
		N_2O	No	



Project boundary & emission source

B.4. Establishment and description of baseline scenario

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Updated baseline for the second crediting period in line with the CDM tool "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. This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period. The tool stipulates the following steps to be carried out.

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

The following new national and/or sectoral policies or regulations identified which entered into force since the time of registration of the project activity:

- Power Development Plan (PDP 2018–2037): Sets out Thailand's electricity development strategy, including targets to increase the share of renewable energy in the national energy mix.
- Alternative Energy Development Plan (AEDP 2018–2037): Aims to raise the share of renewable energy to 30% of total final energy consumption by 2037.

- National Energy Plan and Thailand's Long-Term Low Greenhouse Gas Emission Development Strategy (LTS): Emphasize the transition toward a low-carbon economy.

While these policies offer strategic guidance and set indicative targets, they do not impose mandatory or exclusive use of renewable energy for electricity generation.

The baseline scenario—continuation of current conditions—remains valid under the existing regulatory framework. Furthermore, the composition of Thailand's national energy mix has not significantly changed since the beginning of the first crediting period.

Hence, the baseline scenario remains unchanged and is in compliance with all the relevant mandatory national and/or sectoral policies.

Step 1.2: Assess the impact of circumstances

The baseline scenario identified at the validation of the project activity was 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. Thus this project activity was a voluntary investment which intends to replace equivalent amount of electricity at grid from renewable source. PP was not bound to incur this investment; hence absence of project activity (i.e. the investment) does not lead to any continued baseline practice for PP within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid. Hence, the same baseline as identified in the previous crediting period is still valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under Gold Standard.

Nevertheless, there is an impressive growth attained by the Thailand Power Sector within the recent years, the installed capacity has grown from mere 907.70 MW in 1969 to 43,105.09 MW as on December 2023, consisting of 4,588.50 MW Coal, 315.00 MW furnace oil, 31,028.00 MW Natural Gas, 30.40 MW Diesel, 3,998.60 MW Hydro Power and 3,144.59 MW Renewable. Sector-wise details of installed capacity are shown in

Table 1. However, it is evident from Table 1[5] that the installed capacity is predominantly fossil fuel based power plants and therefore, is a major source of carbon dioxide emissions in Thailand. Hence, there exists scope for reducing the CO_2 emissions in the country by increased use of renewable energy sources.

Furthermore, project participant has considered the latest available report: ``' (dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation) at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances. Hence, the new circumstances do not have an impact on the baseline emission. As per below table, the fossil fuel based thermal power generation is dominant over the renewable based power generation, thus baseline scenario remains same as original.

Table 1: Sector- wise installed capacity (MW) as on 31 December 2013

Type	**EGAT (MW)**	**IPP (MW)**	**SPP (MW)**	**Total (MW)**
Coal	2,222.00	2,006.50	360.00	4,588.50
Fuel Oil	315.00			315.00
Natural Gas	9,552.00	15,642.00	5,834.00	31,028.00
Diesel	30.4	-	-	30.40
Hydro	3,986.40	-	12.2	3,998.60
Renewable	133.22	-	3011.37	3,144.59

Thus current baseline remain same and there is no impact if circumstances, existing at the time of requesting renewal of crediting period.

Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

[5] https://www.egat.co.th/home/en/wp-content/uploads/2024/08/EGAT-SR-2023-ENG.pdf
https://www.egat.co.th/en/images/statistics/2560/eng-private-power-plant-1260.pdf

As explained in step 1.2, the baseline scenario is the electricity import/generation from the power plants connected to the electricity grid. The project activity is green field project and there is no any baseline equipment or investment involved in project activity. Therefore this condition is not applicable to the project activity.

Step 1.4: Assessment of the validity of the data and parameters

This step stipulates that "Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity."

In the context of the present project activity the emission factor has been updated along with the approach used to calculate the emission factor.

Step 2: Update the current baseline and the data and parameters

Step 2.1: Update the current baseline

As evident from the explanation provided above the baseline scenario remains unchanged. Only the approach used to calculate the baseline emission factor is updated as per the latest version of emission factor database available at the time of PDD submission for renewal.

In line with the project standard version 02.0, the impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant EB guidance with regard to renewal of the crediting period at the time of requesting renewal of crediting period; and the correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period

Impact of the national and/or sectoral policies and circumstances upon the baseline scenario of the project activity

The primary legislation governing the electricity sector in Thailand is the Energy Industry Act B.E. 2550 (2007). The Energy Industry Act established the ERC, which is

the primary regulator of the electricity industry. In addition, the Electricity Generating Authority of Thailand Act, B.E. 2511 (1968) permits the EGAT to promulgate regulations in accordance with its objectives, relating primarily to the purchase of electricity from independent producers and the operation of the transmission system network. Energy Industry Act B.E. 2550 (2007) and Electricity Generating Authority of Thailand Act, B.E. 2511 (1968) were in force at the time of the completion of the baseline study for the registered PDD. These policy have not been revised since then and is currently in force as well.

Thought the renewable energy growth is increased during the last few years, the percentage of renewable energy capacity in the grid energy mix is less than 10% in the country.

The approved consolidated baseline methodology, ACM0002 (Version 22), has been used to determine the baseline and the estimation of emission reductions for the applicable crediting period. As referred in the methodology "Tool to calculate the emission factor for an electricity system" (version 07.0) has been used to determine continued validity of the baseline based on combined margin (CM) calculations.

As per EGAT statistics[6], the fossil fuel dominated electricity is more than renewable sector and is continuing with same pattern. In light of the above discussion it is to be concluded that in accordance with relevant guidelines stipulated in the Project Standard version 02.0, national and/or sectoral policies and circumstances had been considered towards formulating the OM & BM baseline scenario. Hence the baseline scenario as applied for the present project activity remains justified.

As per the approved consolidated Methodology ACM0002 (Version 22.0) para 27: "*If the project activity is the installation of a Greenfield power plant with or without a BESS as described under paragraph 5(a) or paragraph 7(a) or paragraph 7(e) above, the baseline scenario is electricity delivered to the grid by the project activity that would*

[6] https://www.egat.co.th/en/information/statistical-data?view=article&id=77:system-installed-generating-capacity-statistical&catid=15

have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in TOOL07".

The project activity involves setting up of wind project to harness the power of wind energy to produce electricity and supply to the grid. In the absence of the project activity, the equivalent amount of power would have been supplied by the Thailand national grid, which is fed mainly by fossil fuel fired plants.

In the absence of the project activity, the equivalent amount of power would have been drawn from the Thailand national grid. Hence, the baseline for the project activity is the equivalent amount of power from the Thailand national grid.

Step 2.2: Update the data and parameters

The combined margin ($EF_{grid, CM,y}$) is the result of a weighted average of two emission factor pertaining to the electricity system: the operating margin (OM) and build margin (BM). Calculations for this combined margin must be based on data from an official source (where available) and made publicly available. There is no latest data grid emission data published. The Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' (dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation) is still the latest available data at the time of submission of PDD to DOE for validation, hence same is considered for emission factor calculations.

The combined margin of the Thailand national grid used for the project activity is as follows:

Parameter	Value	Nomenclature	Source
$EF_{grid,CM,y}$	0.5692 tCO_2/MWh	Combined margin CO_2 emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand

			Greenhouse Gas Management Organisation (Public Organisation)[7]
$EF_{grid,OM,y}$	0.5719 tCO_2/MWh	Operating margin CO_2emission factor for the project electricity system in year y	Calculated as the last 3 year (2014, 2015 & 2016) generation-weighted average, sourced from Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation)
$EF_{grid,BM,y}$	0.5609 tCO_2/MWh	Build margin CO_2emission factor for the project electricity system in year y	Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation)

B.5. Demonstration of additionality

The project is already registered with UNFCCC. Please refer section B.5 of the CDM PDD for additionality justification

B.5.1 Prior Consideration

The project is already registered under Gold Standard. Hence not applicable.

B.5.2 Ongoing Financial Need

Previously issued CER/VERs have given support to the ongoing financial sustainability of the project. Both low demand for CER/VERs and a sharp decrease in prices caused

[7] http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf

Project Owner not to benefit from carbon revenue as expected. Even, the sales prices were so lower than the expected ones at the investment time, sold VERs provided contribution of the ongoing financial sustainability of the project. VER revenue from the project is mostly used for the operation costs of the project activity to be covered.

Further as required by the Gold standard principles and requirements Project owner has provided excel sheet with the quantitative contribution of carbon revenues to the total project revenues.

The OFN sheet with demonstration of the requirements of section 4.1.52 of Principles & Requirements has been submitted as confidential document.

B.6. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

		SDG IMPACT
SUSTAINABLE DEVELOPMENT GOALS TARGETED	MOST RELEVANT SDG TARGET	**INDICATOR (PROPOSED OR SDG INDICATOR)**
13 Climate Action (mandatory)	13.2: Integrate climate change measures into national policies, strategies and planning	Amount of GHGs emissions avoided
7 Affordable and Clean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	Total electricity produced: Renewable
8 Decent Work and Economic growth	8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Total number of Jobs

B.6.1 Explanation of methodological choices/approaches for estimating the SDG Impact

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SDG 7– Ensure access to affordable, reliable, sustainable and modern energy for all

The project produces electricity from wind which is clean electricity that is supplied to grid that improve renewable energy share in the grid. The clean energy supplied by the project is measured using the energy meter.

Monitoring parameter	Total electricity produced: Renewable
Baseline estimation approach	In the baseline scenario no wind power plant has been installed in the project area. Hence no clean electricity is generated and supplied to grid
Project Estimation approach	The clean electricity generated from the project and supplied to grid is monitored though calibrated energy meter. The meter reading will be recorded every month in the joint meter reading
Net estimation approach	Net benefit = Project estimate – Baseline estimate

SDG 8 – Promote inclusive and sustainable economic growth, employment and decent work for all

This project created new job opportunities to local people in construction and operation and maintenance of the power plant. Also the employees will be trained in various aspects of wind energy power plant operation and maintenance that will help to explore new upcoming job opportunities

Monitoring parameter	Total Number of Jobs
Baseline estimation approach	In the baseline scenario there won't be any wind project. Hence, in the baseline scenario no new jobs would have been created
Project Estimation approach	The number jobs created will be recorded in the employment records.
Net estimation approach	Net benefit = Project estimate – Baseline estimate

For the SDG 13, the emission reduction calculations were carried out as per the applied CDM methodology ACM0002, v22.

The baseline emission is calculated in line with para 57 of ACM0002, Version 22.0, using equation below

$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$

Where,

BE_y	Baseline emissions in year y (t CO_2/yr)
$EG_{PJ,y}$	Quantity of net electricity generation that is produced and supplied to the grid as a result of the implementation of the project activity in year y (MWh/yr)
$EF_{grid,CM,y}$	Combined margin CO2 emission factor for grid connected power generation in year y calculated using TOOL07 (t CO_2/MWh)

AS per para 59 of ACM0002, version 22.0, when the project activity is installation of Greenfield power plant, then:

$EG_{PJ,y} = EG_{facility,\ y}$

Where,

$EG_{PJ,y}$	Quantity of net electricity generation that is produced and supplied to the grid as a result of the implementation of the project activity in year y (MWh/yr)
$EG_{facility,\ y}$	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Hence the baseline emission equation is as below:

$BE_y = EG_{facility,\ y} * EF_{grid,CM,y}$

Estimation of $EF_{grid,CM,y}$

The methodology follows the latest version of "tool to calculate the emission factor of an electricity system" provides following approaches for emission factor calculations:

(a) Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the approved methodology "Tool to calculate the emission factor for an electricity system". OR

(b) The weighted average emissions (in t CO2/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

Option (a) has been considered to calculate the grid emission factor as per the 'Tool to calculate the emission factor for an electricity system' since data is available from an official source.

Thailand Grid Emission Factor for GHG Reduction Project/Activity dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation)[8] has been used for the calculation of emission factor.

As per the "Tool to calculate the emission factor for an electricity system" Version 07.0, the following steps have been followed.

STEP 1: Identify the relevant electricity systems;
STEP 2: Choose whether to include off-grid power plants in the project electricity system (optional);
STEP 3: Select a method to determine the operating margin (OM);
STEP 4: Calculate the operating margin emission factor according to the selected method;
STEP 5: Calculate the build margin (BM) emission factor;
STEP 6: Calculate the combined margin (CM) emission factor.

STEP 1: Identify the relevant electricity systems
For the purpose of determining the electricity emission factor, the project electricity system is defined as the electricity transmission system of Thailand which is a single system connected by transmission lines throughout the country[9] and owned by the Electricity Generating Authority of Thailand (EGAT). Electricity imports from a connected electricity system are included and as per Tool to calculate emission factor of an electricity system, for the purpose of determining the operating margin emission factor, 0 tCO_2/MWh is applied.

STEP 2: Choose whether to include off-grid power plants in the project electricity system (optional_:
Only grid connected power plants are included in the calculation, as per Option I of the "Tool to calculate the emission factor for an electricity system" version 07.0.0

STEP 3: Select a method to determine the operating margin (OM);

[8] http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf

[9] http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods:
1) Simple OM
2) Simple adjusted OM
3) Dispatch data analysis OM
4) Average OM

The simple OM method (Option a) is used for this study as the low-cost/must-run resources (LC/MR) constitute less than 50% of total electricity production. The share of low-cost/must run power plants in the last two years are in the range of 4.55% to 6.69 as shown in the below table.

ปี พ.ศ.	การผลิตพลังงานไฟฟ้ารวม (GWh)	LC/MR Analysis			
		Hydro	RE	Total LC/MR	% of LC/MR
2555	166,446	8,431	2,701	11,132	**6.69**
2556	164,826	5,412	3,427	8,839	**5.36**
2557	168,685	5,164	3,993	9,157	**5.43**
2558	169,040	3,724	4,230	7,954	**4.71**
2559	169,168	3,019	4,685	7,704	**4.55**

Source: EGAT(2017)

As per tool to calculate emission factor for an electricity system (Version 07), The simple OM method (option a) can only be used if low-cost/must-run resources constitute less than 50% of total grid generation in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production. Since the low cost/must run resources constitute less than 50% of total grid generation as seen from the average of five most recent years, the Simple OM method can be used to calculate the Operating Margin Emission factor.

PP has chosen ex ante option, thus, no monitoring and recalculation of the emissions factor during the crediting period is required. PP has considered a data vintage of 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation.

STEP 4: Calculate the operating margin emission factor according to the selected method

The simple OM emission factor is calculated as the generation-weighted average CO_2 emissions per unit net electricity generation (tCO_2/MWh) of all generating power plants serving the system, not including low-cost / must-run power plants / units.

The simple OM may be calculated:

Option A: Based on the net electricity generation and a CO2 emission factor of each power unit; or

Option B: Based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system.

Thailand Greenhouse Gas Management Organisation (Public Organisation) has published the Thailand Grid Emission Factor for GHG Reduction Project/Activity on 28/09/2017 based on detailed authenticated information obtained from EGAT. This provides information about the Combined Margin Emission Factor of Thailand national grid. The Combined Margin is calculated ex ante using the guidelines provided by the UNFCCC in the "Tool to calculate the emission factor for an electricity system, Version 07". We have, therefore, used the Combined Margin data published in the Grid Emission Factor for GHG Reduction Project/Activity, for calculating the Baseline Emission Factor.

As per "Tool to calculate the emission factor for an electricity system", Option B ("Calculation based on total fuel consumption and electricity generation of the system") is used to calculate simple OM emission factor. Where Option B is used, the simple OM emission factor is calculated based on the net electricity supplied to the grid by all power plants serving the system, not including lowcost/must-run power plants/units, and based on the fuel type(s) and total fuel consumption of the project electricity system, as follows:

$$EF_{grid,OMsimple,y} = \frac{\sum_i FC_{i,y} \times NCV_{i,y} \times EF_{CO2,i,y}}{EG_y}$$

Where:

$EF_{grid,OMsimple,y}$ Simple operating margin CO_2 emission factor in year y (tCO_2/MWh)
$EG_{m,y}$ - Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)
$FC_{i,y}$ - Amount of fuel type i consumed in the project electricity system in year y (mass or volume unit)
$NCV_{i,y}$ - Net calorific value (energy content) of fuel type i in year y (GJ/mass or volume unit)
$EF_{CO2,i,y}$ - CO2 emission factor of fuel type i in year y ($t\ CO_2/GJ$)
EG_y - Net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost/must-run power plants/units, in year y (MWh)
i - All fuel types combusted in power sources in the project electricity system in year y
y- the relevant year as per the data vintage chosen in STEP 3

The Net Calorific Value (NCV) is obtained from data that provided by Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy. The CO_2 emission factor of fossil fuel follows IPCC default values in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Table: NCV & Emission factor considered

Fuel Type	NCV_i		$EF\ CO_2, i, y$			
	Default	Unit	Lower	Unit	Conversion Factor	Unit
Natural Gas	1.02	MJ/scf	54300	kg CO_2/TJ	55.39	tCO_2/MMscf
Coal - lignite	10.47	MJ/kg	90900	kg CO_2/TJ	0.951723	tCO_2/tonne
Coal - Bituminous	26.37	MJ/kg	89500	kg CO_2/TJ	2.360115	tCO_2/tonne
Diesel	36.42	MJ/litre	72600	kg CO_2/TJ	0.002644	tCO_2/litre
Bunker Oil	39.77	MJ/litre	75500	kg CO_2/TJ	0.003003	tCO_2/litre

The quantity of electricity was generated and transmitted to the national grid can be obtained from Energy Policy & Planning Office (EPPO) under Ministry of Energy. The result of calculation of $EF_{grid, OM, y}$ is given below:

Table: Calculation of $EF_{grid, OM, y}$

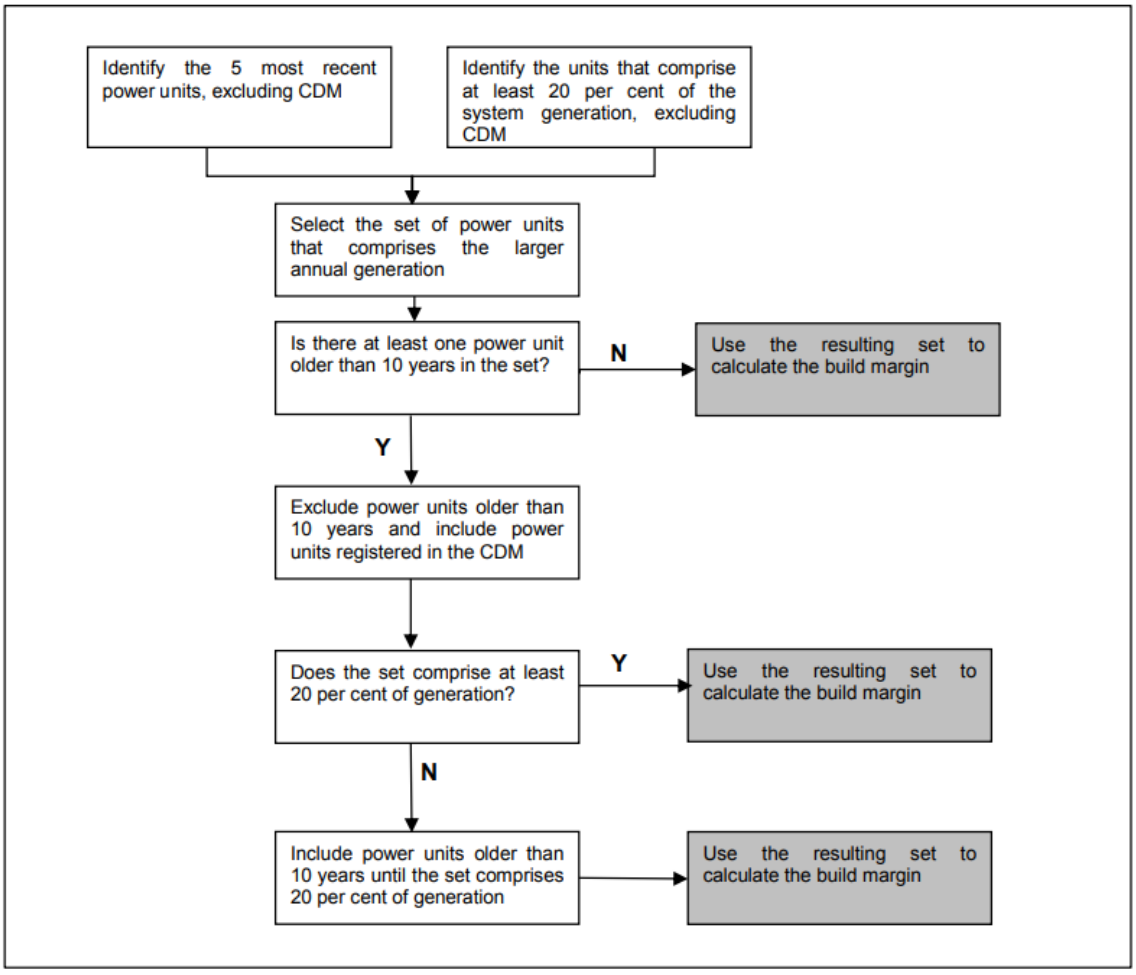
Year	Fuel Type	Fuel Consumption FC_i	Unit	Net Calorific Value NCV_i	Unit	CO_2 Emission Factor $EF_{CO2,i,y}$	Unit	CO_2 Emission	Unit
2557	Natural Gas	830,684.19	MMscf	1.02	MJ/scf	55.39	t CO_2/MMscf	46,008,274.55	t CO_2
	Coal - Lignite	17,200,000.00	tonne	10.47	MJ/kg	0.951723	t CO_2/tonne	16,369,635.60	
	Coal - Bituminous	6,310,000.00	tonne	26.37	MJ/kg	2.360115	t CO_2/tonne	14,892,325.65	
	Diesel	37.65	M litre	36.42	MJ/litre	0.002644	t CO_2/litre	99,550.06	
	Bunker Oil	457.91	M litre	39.77	MJ/litre	0.003003	t CO_2/litre	1,374,936.59	
Total CO_2 Emission								**78,744,722.45**	
Total Electricity Generation								**133,965,550.00**	**MWh**
Operating Margin CO_2 Emission Factor: $EF_{grid, OM, 2557}$								**0.5878**	**t CO_2/MWh**
2558	Natural Gas	867,235.82	MMscf	1.02	MJ/scf	55.39	t CO_2/MMscf	48,032,723.13	t CO_2
	Coal - Lignite	14,400,000.00	tonne	10.47	MJ/kg	0.951723	t CO_2/tonne	13,704,811.20	
	Coal - Bituminous	5,900,000.00	tonne	26.37	MJ/kg	2.360115	t CO_2/tonne	13,924,678.50	
	Diesel	25.46	M Litre	36.42	MJ/litre	0.002644	t CO_2/litre	67,318.58	
	Bunker Oil	269.02	M Litre	39.77	MJ/litre	0.003003	t CO_2/litre	807,768.87	
Total CO_2 Emission								**76,537,300.28**	
Total Electricity Generation								**136,945,870.00**	**MWh**
Operating Margin CO_2 Emission Factor: $EF_{grid, OM, 2558}$								**0.5589**	**t CO_2/MWh**
2559	Natural Gas	799,335.29	MMscf	1.02	MJ/scf	55.39	t CO_2/MMscf	44,271,984.37	t CO_2
	Coal - Lignite	16,410,000.00	tonne	10.47	MJ/kg	0.951723	t CO_2/tonne	15,617,774.43	
	Coal - Bituminous	6,210,000.00	tonne	26.37	MJ/kg	2.360115	t CO_2/tonne	14,656,314.15	
	Diesel	25.85	M Litre	36.42	MJ/litre	0.002644	t CO_2/litre	68,349.78	
	Bunker Oil	178.70	M Litre	39.77	MJ/litre	0.003003	t CO_2/litre	536,570.87	
Total CO_2 Emission								**75,150,993.60**	
Total Electricity Generation								**132,075,390.00**	**MWh**
Operating Margin CO_2 Emission Factor: $EF_{grid, OM, 2559}$								**0.5690**	**t CO_2/MWh**
Average Operating Margin CO_2 Emission Factor: $EF_{grid, OM, y}$								**0.5719**	**t CO_2/MWh**

Note: Year 2557, 2558 & 2559 refers to English calendar year 2014, 2015 & 2016 respectively.

As per the Thailand emission factor database published on 28th September 2017, the calculated weighted average operating margin is as below:
EF $_{grid,OM,y}$ = 0.5719 tCO_2/MWh

STEP 5: Calculate the build margin (BM) emission factor, EF' $_{grid',BM,y}$

The project participants have chosen Option I, (i.e. fixing build margin emission factor ex ante). For the second crediting period, the build margin emission factor has been updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. The build margin emissions factor is the generation-weighted average emission factor (tCO2/MWh) of a sample group of power units, during the most recent year y for which power generation data is available. The Sample group of power units m used to calculate the build margin and it has been determined via the procedure summarised in the diagram of the Tool



Following this procedure, AEGSET >/20% is larger than AEGSET 5-units and all of these power units started supplying electricity to the grid less than 10 years ago, therefore AEGSET >/20% is applied as power units m for the Build Margin

Using the equation given in the step 5 for the OM calculation, the Built margin is calculated for the year 2016. The summary of calculation of build margin is given below.

Table Calculation of $EF_{grid, OM, y}$

Year	Fuel Type	Fuel Consumption FC_i	Unit	Net Calorific Value NCV_i	Unit	CO_2 Emission Factor $EF_{CO2,i,y}$	Unit	CO_2 Emission	Unit
2559	Natural Gas	361,282.01	MMscf	1.02	MJ/scf	55.39	t CO_2/MMscf	20,011,410.51	
	Coal-Bituminous	40,996.80	tonne	26.37	MJ/kg	2.360115	t CO_2/tonne	96,757.16	
	Diesel	-	M litre	36.42	MJ/litre	0.002644	t CO_2/litre	-	t CO_2
	Bunker Oil	-	M litre	39.77	MJ/litre	0.003003	t CO_2/litre	-	
Total CO_2 Emission								**20,108,167.67**	
Total Electricity Generation								**35,849,336.40**	**MWh**
Build Margin CO_2 Emission Factor: $EF_{grid, BM, 2559}$								**0.5609**	**t CO_2/MWh**

Note: Year 2559 refers to English calendar year 2016 respectively.

As per the Thailand emission factor database published on 28th September 2017, the calculated build margin is as below:

$$EF_{grid,BM,y} = 0.5609\ tCO_2/MWh$$

Step 6: Calculate the combined margin (CM) emissions factor

The combined margin is the weighted average of the simple operating Margin and the build margin. In particular, for intermittent and non-dispatchable generation types such as wind and solar photovoltaic, the 'Tool to calculate the emission factor for an electricity system (Version 07.0.0)', allows to weigh the operating margin and Build margin at 75% and 25%, respectively

$$EF_{grid,y} = (EF_{grid,OM,y} \times w_{OM}) + (EF_{grid,BM,y} \times w_{BM})$$
$$= (EF_{grid,OM,y} \times 75\%) + (EF_{grid,BM,y} \times 25\%)$$

Electronic spreadsheet showing calculation of all these parameters is being submitted separately and the final values are presented below:

Parameter	Value	Units
Operating Margin : $EF_{grid,OM,y}$	0.5719	tCO_2e/MWh
Build Margin : $EF_{grid,BM,y}$	0.5609	
Combined Margin : $EF_{grid,CM,y}$	=0.5719*75%+0.5609*25%	
Combined Margin : $EF_{grid,CM,y}$	0.5692	

PROJECT EMISSION:

The project activity involves in harnessing wind power. As per the approved consolidated Methodology ACM0002 (Version 22.0) para 40:

"For most renewable energy power generation project activities, PEy = 0. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:

$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y} + PE_{BESS,y} + PE_{PSP,y}$

Where,

PE_y	*Project emissions in year y (t CO2e/yr)*
$PE_{FF,y}$	*Project emissions from fossil fuel consumption in year y (t CO2/yr)*
$PE_{GP,y}$	*Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (t CO2e/yr)*
$PE_{HP,y}$	*Project emissions from water reservoirs of hydro power plants in year y (t CO2e/yr)"*
$PE_{BESS,y}$	*Project emissions from charging of a BESS using electricity from the grid or from fossil fuel electricity generators (t CO2e/yr)*
$PE_{PSP,y}$	*Project emissions from utilizing electricity from the grid for pumping operation of PSP in excess to the production of the renewable power plant operating in coordination with the PSP (t CO2e/yr)*

As the project activity is the installation of a new grid-connected wind power plant/ unit and does not involve any project emissions from fossil fuel, operation of dry, flash steam or binary geothermal power plants, and from water reservoirs of hydro power plants. Also the project does not involve BESS or PSP.

Therefore $PE_{FF,y}$, $PE_{GP,y}$, $PE_{HP,y}$, $PE_{BESS,y}$ & $PE_{PSP,y}$ are equal to zero and thus, $PE_y = 0$.

So the emissions from the project are zero.

LEAKAGE

As per the approved consolidated Methodology ACM0002 (Version 22.0) para 71, no leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected

EMISSION REDUCTION (ER_Y):

The project activity mainly reduces carbon dioxide through substitution of grid electricity generation with fossil fuel fired power plant by renewable electricity. The emission reduction ER_y by the project activity during a given year y is the difference between Baseline emission and Project emission & Leakage emission. As per the applied methodology, leakage emissions are excluded for wind projects and hence the same is not used. The emission reduction is calculated in line with para 72 of ACM0002, Version 22, using equation below:

$ER_y = BE_y - PE_y$

Where,

ER_y = Emission Reduction in tCO_2/year

BE_y = Baseline emission in tCO_2/year

PE_y = Project emissions in tCO_2/year

B.6.2 Data and parameters fixed ex ante

SDG13

Data/parameter	EF_{CM}
Unit	tCO_2eq/MWh
Description	Combined margin CO2 emission factor in the year y
Source of data	Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation) http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf
Value(s) applied	0.5692
Choice of data or Measurement methods and procedures	The combined margin CO2 emission factor for the Thailand grid is published by the DNA of Thailand. The data has been considered in accordance to the Tool to calculate emission factor of an electricity system. The tool guides to take 75% weightage of $EF_{grid,OMsimple}$, & 25% weightage of $EF_{grid,BM,y}$
Purpose of data	Baseline Emission calculation
Additional comment	The above value is fixed and it is same for the entire crediting period

Data/parameter	$EF_{grid,BM,y}$
Unit	tCO2/MWh

Description	B Build margin CO2 emission factor for grid connected power generation in year *y* calculated using the latest version of the "Tool to calculate the emission factor for an electricity system version 7"
Source of data	Thailand Greenhouse Gas Management Organisation (TGO), the Designated National Authority (DNA) of Thailand for 2016 http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf
Value(s) applied	0.5609
Choice of data or Measurement methods and procedures	Calculated in Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation) in line with "Tool to calculate the emission factor for an electricity system".
Purpose of data	Baseline Emission calculation
Additional comment	The Build Margin would be calculated ex ante and fixed during the crediting period. For ex ante calculation the most recent data (2016) available has been used and the build margin is thus calculated.

Data/parameter	$EF_{grid,OM,y}$
Unit	tCO2/MWh
Description	Operating margin CO2 emission factor for grid connected power generation inyear *y* calculated using the latest version of the "Tool to calculate the emission factor for an electricity system version 7"
Source of data	Thailand Greenhouse Gas Management Organisation (TGO), the Designated National Authority (DNA) of Thailand for 2016 http://ghgreduction.tgo.or.th/images/Grid_Emission_Factor_2559_-_Finalised.pdf

Value(s) applied	0.5719
Choice of data or Measurement methods and procedures	Calculated in Report 'Thailand Grid Emission Factor for GHG Reduction Project/Activity' dated 28/09/2017 Published by Thailand Greenhouse Gas Management Organisation (Public Organisation) in line with "*Tool to calculate the emission factor for an electricity system*". The value used is calculated ex-ante as generation based weighted average of last three years of the operating margin provided in the Thailand Grid Emission Factor for GHG Reduction Project/Activity' Weighted average = $\sum_{i=1 \text{ to } n}$ (Net generation in operating margin in year i * Simple operating margin in year i)/$\sum_{i= 1 \text{ to } n}$ (Net generation in operating margin of year i)
Purpose of data	Baseline Emission calculation
Additional comment	The operating margin emission factor is a 3-year generation-weighted average (2014, 2015 & 2016). The operating Margin is calculated ex ante and fixed during the crediting period

B.6.3 Ex ante estimation of SDG Impact

SDG	**Parameter**	**Baseline impact**	**Project impact**	**Net impact** **(baseline – project)**
SDG 13	Amount of GHGs emissions avoided (refer the detail calculation below)	0	132,339	132,339
SDG 7	Total electricity produced: Renewable (MWh)	0	232,500	232,500

SDG 8	Total Number of Jobs	0	40	40

13. GHG Emission Reduction

Baseline Emission:

As mentioned above, the baseline emission shall be estimated using the below formula:

$BE_y = EG_{facility,\ y} * EF_{grid,CM,y}$

The $EG_{facility,\ y}$ is estimated from the PLF provided as per the third party engineering company report which is estimated to be 232,500 MWh/Annum

As per section B.6.1 above, the combined margin grid emission factor ($EF_{grid,CM,y}$) is 0.5692 tCO_2/MWh

Hence the annual baseline emission is calculated as below:

$BE_y = EG_{facility,\ y} * EF_{grid,CM,y}$ = 232,500 MWh **x** 0.5692 tCO_2/MWh = 132,339 tCO_2

Project Emission:

As per section B.6.1, the project emission is zero.

PE_y = 0 tCO_2

Leakage:

As per section B.6.1, the no leakage emission is considered.

LE_y = 0 tCO_2

Emission Reduction:

$ER_y = BE_y - PE_y$ = 132,339– 0 = 132,339 tCO_2

B.6.4 Summary of ex ante estimates of each SDG Impact

SDG 13: Amount of GHGs emissions avoided

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01/12/2024 - 30/11/2025	132,339	0	132,339
01/12/2025 - 30/11/2026	132,339	0	132,339
01/12/2026 - 30/11/2027	132,339	0	132,339

Total	**397,017**	**0**	**397,017**
Total number of crediting years	3		
Annual average over the crediting period	**132,339**	**0**	**132,339**

SDG 7: Total electricity produced: Renewable (MWh)

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01/12/2024 - 30/11/2025	0	232,500	232,500
01/12/2025 - 30/11/2026	0	232,500	232,500
01/12/2026 - 30/11/2027	0	232,500	232,500
Total	0	**697,500**	**697,500**
Total number of crediting years	5		
Annual average over the crediting period	0	232,500	232,500

SDG 8: Total Number of Jobs

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
01/12/2024 - 30/11/2025	0	40	40
01/12/2025 - 30/11/2026	0	40	40
01/12/2026 - 30/11/2027	0	40	40
Total	0	NA	NA
Total number of crediting years	5		
Annual average over the crediting period	0	40	40

B.7. Monitoring plan

B.7.1 Data and parameters to be monitored

SDG 13:

Data / Parameter	Emission Reduction
Unit	tCO_2e
Description	GHG Emission reduction during the year y
Source of data	ER Calculation sheet
Value(s) applied	132,339
Measurement methods and procedures	The emission reduction will be calculated using as per the applied CDM methodology ACM0002, v22 Refer Section B.6.1 above for detailed calculation method
Monitoring frequency	Yearly Once
QA/QC procedures	This parameter is calculated, and no any QA/QC procedure required.
Purpose of data	To monitor the contribution to SDG 13 (Climate Action)
Additional comment	-

SDG 7:

Data / Parameter	$\mathbf{EG}_{facility,y}$
Unit	MWh
Description	Quantity of net electricity generation supplied by the project plant to the grid in year *y*
Source of data	Monitored at the project activity site with electricity meters and calculated by subtracting imported electricity from exported electricity.
Value(s) applied	232,500 MWh (Estimation)
Measurement methods and procedures	The electricity imported will be measured with electricity meter installed at installed at export line. A backup energy meter is installed and used to measure electricity exports if the primary meter fails. Electricity will be measured continuously and recorded monthly. A separate grid connection is installed to enable electricity to be imported from the PEA. An energy meter (import meter) is installed at import line to measure the electricity imported from grid. A backup meter is not installed on the import line. If the primary import meter on this import electricity line fails, the data for that month will be replaced with data from

<table>
<tr><td></td><td>the month with the highest electricity consumption recorded during the monitoring period.

Net electricity will be calculated by subtracting total imported electricity from total exported electricity.
The details of the energy meters installed at site are given below:
<table>
<tr><th rowspan="2">Details</th><th colspan="2">Export meter</th><th rowspan="2">Import meter</th></tr>
<tr><th>Main</th><th>Backup</th></tr>
<tr><td>Serial No</td><td>96499384</td><td>96499385</td><td>22069212</td></tr>
<tr><td>Make</td><td>Landis & Gyr</td><td>Landis & Gyr</td><td>Elster</td></tr>
<tr><td>Accuracy class</td><td>0.2s</td><td>0.2s</td><td>0.5s</td></tr>
</table></td></tr>
<tr><td>Monitoring frequency</td><td>Measurement: Continuous
Recording: Monthly</td></tr>
<tr><td>QA/QC procedures</td><td>Measurement results will be cross checked with records for sold electricity. In accordance with the PPA regarding the export meter, the error specified by the meter manufacturer will not exceed +/- 0.2%. In case of meter failure, and a replacement export meter is required, it may be installed and the error specified by the meter manufacturer will not exceed +/- 0.2%.

For the import electricity meter, the error specified by the meter manufacturer will not exceed +/- 0.5%.

The PPA specifies that the meters shall be calibrated once during each calendar year (the maximum time between two calibration events is 24 months). The import line electricity meter is in the control of PEA. Hence, the calibration will be done as per PEA requirement.</td></tr>
<tr><td>Purpose of data</td><td>Calculation of baseline emissions and
To monitor the contribution to SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all)</td></tr>
<tr><td>Additional comment</td><td>-</td></tr>
</table>

SDG 8:

Data / Parameter	Total number of Jobs
Unit	-

Description	Total employment generated due to the implementation of project activity
Source of data	Plant employment records
Value(s) applied	40
Measurement methods and procedures	Maintaining Employment records
Monitoring frequency	Yearly Once
QA/QC procedures	-
Purpose of data	To monitor the contribution to SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)
Additional comment	-

Safeguarding Principle 8.2:

Data / Parameter	Soil Erosion mitigation measures
Unit	-
Description	Construction phase: • Fast-growing and earth-bounding plants such as vetiver grass should be planted in the construction area of the project's road in order to prevent the collapse of soil layers • Stone structure examination and soil test will be conducted in the project's construction area or wind turbine installation area in order to prevent the collapse of soil layers efficiently • Avoid the construction during the rain in order to prevent the soil washed down in the project area Operational phase: Fast-growing and earth-bounding plants should be planted in the area of the project's road in order to prevent the collapse of soil layers
Source of data	Interview with maintenance staff.
Value(s) applied	All mitigation measures are followed at site
Measurement methods and procedures	-
Monitoring frequency	Yearly Once
QA/QC procedures	-
Purpose of data	To monitor compliance to Safeguarding Principle 8.2 (Erosion and/or Water Body Instability)

Additional comment	-

Safeguarding Principle 9.5:

Data / Parameter	Hazardous waste management
Unit	-
Description	The following management measures shall be followed: • Provision of proper temporary storage for hazardous waste • Waste segregation Waste disposal by an appointed/accredited waste disposer company
Source of data	Project O&M HSE logbook, or interview with maintenance staff.
Value(s) applied	All mitigations measures are followed at the site
Measurement methods and procedures	-
Monitoring frequency	Yearly Once
QA/QC procedures	-
Purpose of data	To monitor compliance to Safeguarding Principle 9.5 (Hazardous and Non-hazardous Waste)
Additional comment	-

B.7.2 Sampling plan

Not applicable

B.7.3 Other elements of monitoring plan

>>

Details of Data to be Monitored:

The emission reductions achieved by the project will be monitored and calculated in accordance with the methodology ACM0002. The methodology defines the equations and monitoring parameters for calculating emission reductions. On-site data collection will involve metering the net electricity supplied by the project activity to the grid. Also other SDG parameters and safeguarding principle parameters will be monitored. The parameters to be monitored are:

- Emission Reduction (calculated)

- Net electricity supplied to grid
- Number of jobs created

Monitoring Procedure

Electricity exported to the grid will be monitored continuously with the electricity meters of the power authority. The electricity imported from grid will be measured through the import meter which owned by PEA.

Monthly records of export and import reading will be used to calculate the net electricity generation supplied by the project plant to the grid. Net electricity will be calculated as follows:

$EG_{facility,y} = EG_{facility,export,y} - EG_{facility,import,y}$

The monitoring procedures for all the parameters are provided in section B.7.1 above

Data Management

Monthly meter readings will be conducted by the power authority. After receiving the receipt of power sales from the power authority, the meter data will be input into an electronic data file. West Huaybong 3 operations personnel will check the data file for consistency and completeness. At the end of the monitoring period, the entire data file will be printed and reviewed by the Responsible Manager. An electronic copy of the data file will be backed up in the West Huaybong 3 head office at least once per month

All other parameter data will be monitored by site in-charge and it will be submitted to responsible manager every year for review. After the review of data, it will be submitted to consultant to prepare the monitoring report.

Data recording & archiving

All the data will be recorded in electronic format and/or in the form of hard copy. All data collected as part of the monitoring process will be retained for at least two years after the end of the crediting period during which the data was recorded.

Quality Assurance

The following quality assurance measures will be taken relating to the monitoring equipment and its installation and operation:

- Prior to operation, the Responsible Manager will validate that the monitoring equipment is calibrated according to the appropriate standards.
- All monitoring equipment will be located in secure locations to prevent accidental damage
- Routine calibration of all monitoring equipment will be performed to ensure that the data remains accurate.

To ensure the quality of the recorded data, all relevant personnel will be trained in accordance with this monitoring plan.

Quality Control Procedures

To ensure malfunction is identified promptly, the operations personnel will check the data records and report any data outages or inconsistencies in the data to the Responsible Manager. Any equipment faults or loss of data will be recorded in an operational log with details of the fault and length of time over which data was affected. All meter data will be checked against the official receipts

In accordance with the PPA, the error specified by the manufacturer of the export meter will not exceed +/-0.2%. In case of meter failure, replacement export meters may be installed and the error specified by the meter manufacturer will not exceed +/-0.2%. The meters will be calibrated once during each calendar year (the maximum time between two calibration events is 24 months).

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1 Start date of project

15/08/2011 (Date the company issued the Notice to Proceed to the turbine suppler Siemens Wind Power A/S)

C.1.2 Expected operational lifetime of project

23 years 0 months

C.2. Crediting period of project

C.2.1 Start date of crediting period

01/12/2024 (2nd crediting period)

C.2.2 Total length of crediting period

3 years (till 30/11/2027)

(The start date of 1st CDM crediting period is 01/12/2012. Hence, the total crediting period (CDM + GS4GG) within the maximum crediting period allowed for renewable energy project under GS4GG ie, 15 years)

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1 Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarised below.

PRINCIPLES	MITIGATION MEASURES ADDED TO THE MONITORING PLAN
Principle 3	The following management measures shall be followed: • Provision of proper temporary storage for hazardous waste • Waste segregation • Waste disposal by an appointed/accredited waste disposer company
Principle 9	Construction phase: • Fast-growing and earth-bounding plants such as vetiver grass should be planted in the construction area of the project's road in order to prevent the collapse of soil layers • Stone structure examination and soil test will be conducted in the project's construction area or wind turbine installation area in order to prevent the collapse of soil layers efficiently • Avoid the construction during the rain in order to prevent the soil washed down in the project area Operational phase: Fast-growing and earth-bounding plants should be planted in the area of the project's road in order to prevent the collapse of soil layers

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	From the pre-feasibility study stage to the operation time, from the stakeholder investigation to the employment, fair chance and gender equality to access the source, information and to reflect their opinions as a main consideration is taken by the project owner. Further, even if the customers both including suppliers and power buyer are also investigated by the project owner for gender equality issues.

Question 2 - Explain how the project aligns with existing country policies, strategies and best practices

Thailand is one of the founding members of International Labour Organization (ILO), which formed in 1961. The country has ratified 15 ILO Conventions, one of which is the core convention related to gender inequality (C100 on equal remuneration)[10]. Also, Thailand has been a member of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) since 1995. The implementation of the CEDAW and the Beijing Platform for Action (BPFA) have had a visible impact on the Thai's legislation in the aspects of women protection and the progress toward gender equality in the country. The legal changes that reflect gender sensitivity and women's human rights include the enactment of the Protection of Domestic Violence Victims Act (2007), the amendment made to the Penal Code to prevent women from being raped by their own spouse, and the indications of gender inequality are also implemented in the recent constitutions.

In 2015, Thailand has implemented Gender Equality Act, B.E. 2558 which Establishes the Gender Equality Promotion Committee and the Committee on Consideration of Unfair Gender Discrimination (WorLorPor). It defines the meaning of gender discrimination and sets out penalties and compensation. Thailand is ranked 84 out of 189 countries in 2018 on its Gender Inequality Index (GII)[11]. Moreover, the Human Development Index (HDI) is for females (0.763) is on par with male (0.766), which shows the gender policies are effectively implemented in Thailand. Hence, the project implemented in Thailand complies with all the laws and policies of the gender equality as follows.

- The project activity promotes and encourages active participation of women and men during the stakeholder meetings, giving an equal opportunity to both genders.
- The project provides equal employment opportunities for men and women.

	• Equal pay for equal work is followed. No discrimination is made in the salaries of men and women. Hence, the project aligned with existing country policies, strategies and best practices.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	The relevant questions raised in the Gold Standard Safeguarding Principles & Requirements assessment are provided in Principle 2 of Appendix 1. As per the GS preliminary review report, Gold Standard did not mention any requirement for an expert stakeholder opinion (with a specific emphasis on gender and environment expertise) to support the gender safeguards assessment process.
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	The project applies Gold Standard Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines. However, PP has taken deviation from conducting physical stakeholder consultation which is require prior to design review. As per the approved deviation, the physical stakeholder consultation will be conducted after the design review but before the 1st verification. As per the GS preliminary review report, Gold Standard did not mention any requirement for an expert stakeholder opinion (with a specific emphasis on gender and environment expertise) to support the gender safeguards assessment process.

[10] ILO 2010

[11] *2018 Human Development Report (HDR)*, United Nations Development Program

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1 Summary of stakeholder mitigation measures

>>

Since the project is CDM registered project, the project conducted stakeholder consultation meeting during the registration of CDM which is explained below:

A stakeholder consultation meeting was held on 15/09/2011 at Sima Thani Hotel to enable local stakeholders to comment on the project. Invitation letters were sent directly to the sub-district administrative organization who directly invited the relevant stakeholders to the consultation meeting. A wide range of stakeholders were invited from Dan khun Thot district, Huay Bong sub-district and Thepharak district, Nong Wang sub-district. Stakeholders who were directly invited include: representatives from relevant government offices, teachers from the local school and villager leaders. Public invitation notifications were also posted at Huaybong sub-district and Nong Wang sub-district administration offices. In accordance with local customs, the village leaders were engaged to ensure that all local landowners were aware of the consultation meeting. During the meeting there were a total of 125 participants from all sectors listed above.

During the consultation local stakeholders were given an opportunity to ask questions and give comment on the project. Relevant stakeholder comments & response provided by PP are summarised as follows:

Comments raised by stakeholders	Response provided by PP
Can we watch during installation of the turbine?	Communities can watch the turbine installation at a safety distance after requesting permission.
Please construct the road #3165 as soon as possible.	The project will start the road (#3165) construction within a few weeks.
How much experience of wind farms does the company has?	The company CEO and staff have appropriate experience in developing wind farms.

Regarding long term impact, what will happen after the project lifetime is finished?	It will depend on future government policy and ALRO policy as to whether the contracts can be renewed. Regards noise impact, Gerrad Hassan and SECOT were hired as international and local consultant to assist with the calculation of the impact and we will follow their recommendations to minimize the impact. We are confident that the impact will be minor.
The project should start community development plan at the same time of the project implementation and should not wait until the project is operating and receiving income.	At the moment we are drafting a corporate social responsibility (CSR) plan.
Teacher and students in the project area should be provided with more knowledge about wind energy than others.	We are happy to receive suggestions regarding knowledge transfer to the local schools and community about wind energy.
Will there be impact from vibration of the turbines, will there be any impact on cassava plantation? Can we still do agriculture (on ALRO land) and plant trees in the reforestation projects (on reserved forest land)?	The project does not object to tree plantation. The project installs turbines on ALRO land, not in the reserved forest. At the moment there are many cases of forest encroachment from farming which is unrelated to the wind project.
Apart from noise impact will there be impact on ecology, especially pollination?	Apart from noise impact there is no significant impact on ecology. This is according to IEE which we will submit to community leaders.
Some of the electricity posts block the entrance of some house.	The electricity posts belong to Provincial Electricity Authority (PEA).
Can you please confirm how much money the community will receive from the community development fund?	We expect that the community fund will be 200,000 Baht/MW for the first year.

(We) would like company to confirm that there is no impact to villagers.	To confirm how the impacts will be mitigated we will provide a copy of the IEE to community leaders.

The project developer provided answers to each question/comment during the meeting as per the details above. Stakeholders were also re-informed about the company's public relation co-ordinator, who they can speak to regarding further questions or complaints.

Stakeholder feedback round

The project is applying for retroactive registration under Gold Standard. As per GS4GG requirement a stakeholder a physical stakeholder feedback meeting and an online stakeholder feedback round shall be conducted for retroactive projects.
Due to the COVID pandemic, the physical stakeholder feedback round could not be conducted. Hence, a deviation from para 6.1.4 of Stakeholder-Consultation-Requirements, v1.2 is applied.

Para 6.1.4 of Stakeholder-Consultation-Requirements, v1.2:
"For retroactive projects, project implementation is started without conducting the first round of stakeholder consultation following the Requirements. In such cases, the physical meeting shall be integrated with the stakeholder feedback round, if this has not taken place as part of previous stakeholder consultations."

The physical LSC feedback meeting will be conducted in the month of Septermber 2022. Approval for the deviation has been obtained from Gold Standard and the same is submitted to VVB.

Online Stakeholder feedback round:

An online stakeholder feedback round has been conducted for 60 days from 6th July 2020 to 5th September 2020. An email with online link of all project documents (PDD, Non-technical summary & Stakeholder consultation report) were sent to all relevant stakeholders. The email was sent to the following stakeholders:

No	Organisation (if relevant)	Name of the person

1	Gold Standard	-
2	Global Offset Research	Mr. Siddharth Yadav
3	Lean Management Systems Promotion Society	Mr. Raave Jain
4	HIVOS	Mr. Harry Clemens
5	Redemption Research for Health and Educational Development Society	Mr. Kennady Pulipati
6	Climate Works Australia	Mr. Dani Robertson
7	myclimate	Mr. Thomas Finsterwald
8	CAAP	Dr.Korhan Saglam
9	NCMA India	Mr. Bholendra Singh
10	Dhammanart Foundation	Mr. indhukarns@hotmail.com
11	Thailand DNA (TGO)	-

The link for the project documents that were shared with stakeholders are as below:

CDM registry link:
https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view?cp=1
GS Registry link : https://registry.goldstandard.org/projects/details/2591
NTS: https://drive.google.com/file/d/1A1ky7D7ln869N1jduLicwk6Z46eCX9sa/view?usp=sharing
GS4GG PDD: https://impact.sustain-cert.com/public_projects/2262

However, no comments received from any stakeholder during the period.

E.2 Final continuous input / grievance mechanism

METHOD	INCLUDE ALL DETAILS OF CHOSEN METHOD (S) SO THAT THEY MAY BE UNDERSTOOD AND, WHERE RELEVANT, USED BY READERS.

Continuous Input / Grievance Expression Process Book (mandatory)	Grievance register is kept at site office. This will be most appropriate as the address provided is accessible to all the stakeholders and the grievances received be reviewed monthly and grievances (if any) will be addressed accordingly
GS Contact (mandatory)	help@goldstandard.org
Internet/email access	Grievances shall also be sent to Head office: Mr. Phattarapol - phattarapol@windenergyholding.com

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into SECTION D above. Please refer to the instructions in the Guide to Completing this Form.

SOCIAL SAFEGUARDING PRINCIPLES		
Reference requirement	Question	Response
P.1 |HUMAN RIGHTS		
P.1.1.1 |	Does the project developer, its representatives and the Project disrespect internationally proclaimed human rights?	☐ YES ☒ NO
P.1.1.1 |	Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?	☐ YES ☒ NO
P.1.1.2 |	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
P.1.1.3 |	Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights?	☐ YES ☒ NO
P.1.1.3 |	Does this project undermine national or regional measures for the realisation of the right to development?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
Please add text here…		
Would the project potentially involve or lead to:		
P.1.1.1 |	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.2 |	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.3 |	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
P.1.1.3 |	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	☐ YES ☐ POTENTIALLY

		☒ NO

Briefly describe below how the project incorporates a human rights-based approach.
For example, by describing how the project design:

- is informed by human rights analysis, including from UN human rights mechanisms (human rights treaty bodies, universal periodic review, special procedures)
- includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher)
- enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle)
- provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.

During construction and operation of the project the project proponent respected all the human rights. The project is not in any kind of conflict with the livelihood of local people. Project proponent had conducted stakeholder's consultation and sought their opinion.

The project will not employ any personnel based on gender, race, religion, sexual orientation or any other basis. As the Constitution of the host country prohibits discrimination on the basis of a person's race, sex, religion, place of birth, or social status. Thailand, as the host country of the project, is a party to Universal Declaration of Human Rights[12]

P.2 |Gender Equality and Women's Empowerment

P.2.1.1 |	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
P.2.1.2 |	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	☐ YES ☒ NO
P.2.1.2 |	Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate?	☐ YES ☒ NO
P.2.1.2 |	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	☐ YES ☒ NO
P.2.1.2 |	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	☐ YES ☒ NO

[12] http://www.thaiembassy.org/unmissionnewyork/en/relation/80917-Human-Rights.html

P.2.1.3 |	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	☐ YES ☒ NO
P.2.1.4 |	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
NA		
Would the project potentially involve or lead to:		
P.2.1.1 |	adverse impacts on gender equality and/or the situation of women and girls?	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.1 |	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.2 |	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	☐ YES ☐ POTENTIALLY ☒ NO
P.2.1.2 |	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	☐ YES ☐ POTENTIALLY ☒ NO
Briefly describe below how the project is addressing any identified risk to gender equality and women's empowerment.		
NA		
P.3 |Community Health AND Safety		
P.3.1.1 |	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	☐ YES ☒ NO
P.3.1.2 |	Does the project involve any potential risks to the workers' safety and health?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
NA		
Would the project potentially involve or lead to:		

P.3.1.1 |	construction and/or infrastructure development (e.g., roads, buildings, dams)?	☐ YES ☒ NO
P.3.1.2 |	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 |	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 |	risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	☐ YES ☐ POTENTIALLY ☒ NO
P.3.1.2 |	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)?	☐ YES ☒ POTENTIALLY ☐ NO
P.3.1.2 |	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g., food, surface water purification, natural buffers from flooding)?	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk related to community health and safety.

The following management measures shall be followed:

- Provision of proper temporary storage for hazardous waste

- Waste segregation

- Waste disposal by an appointed/accredited waste disposer company

P.4 |Cultural Heritage, Indigenous People, Displacement and Resettlement

P.4.1 |SITES OF CULTURAL AND HISTORICAL HERITAGE

P.4.1.1 |	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project potentially involve or lead to:

P.4.1.1 |	activities adjacent to or within a cultural heritage site?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.1 |	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	☐ YES ☐ POTENTIALLY ☒ NO

P.4.1.1 |	alterations to landscapes and natural features with cultural significance?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.1 |	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.2 |	utilisation of tangible and/or intangible forms (e.g., practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.1.2 |	If answer to question above is "YES" or "POTENTIALLY" - are the communities made aware of their right under the law, scope and nature of proposed development and its potential consequences?	☐ YES ☐ NO ☒ NA
P.4.1.3 |	If answer to question above is "YES" - does the project provide equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions?	☐ YES ☐ NO ☒ NA
P.4.1.4 |	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.1.4 |	If answer to question above is "YES", has project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.4.2 |Forced Eviction and Displacement

P.4.2.1 |	Does the project involve any risks related to involuntary relocation of people?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.2.1 |	risk of forced evictions or involuntary relocation of people?	☐ YES ☐ POTENTIALLY ☒ NO

P.4.2.2 |	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.2.2 |	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.2.2 |	If answer to question above is "YES" or "POTENTIALLY", - has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community? - has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design?	☐ YES ☐ NO ☒ NA
P.4.2.3 |	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.2.3 |	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.4.3 \|Land tenure and other rights

P.4.3.1 |	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.3.1 |	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.3.1 |	uncertainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	☐ YES ☐ POTENTIALLY ☒ NO
P.4.3.2 |	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	☐ YES ☒ NO ☐ NA

P.4.3.2 |	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	☐ YES ☐ NO ☒ NA
P.4.3.3 |	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary?	☐ YES ☒ NO ☐ NA
P.4.3.4 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.3.4 |	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA
P.4.3.5 |	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.4.4 \|Indigenous peoples

P.4.4.1 |	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.4.1 |	affect areas where indigenous peoples are present (including project area of influence)	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.1 |	affect areas, land and territory claimed by indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.1 |	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.7 |	If answer to above questions is ''YES'' or "POTENTIALLY", - Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people?	☐ YES ☐ NO ☒ NA

	- Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation? - Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines?	
P.4.4.3 |	risk of forcibly removing indigenous people from their lands and territories?	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.4 |	utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above	☐ YES ☐ POTENTIALLY ☒ NO
P.4.4.5 | P.4.4.6 |	If answer to question above is "YES" or "POTENTIALLY" - Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property? - Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ? - Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive? - Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions, and housing?	☐ YES ☐ NO ☒ NA
P.4.4.8 |	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	☐ YES ☐ NO ☒ NA
P.4.4.8 |	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	☐ YES ☐ NO ☒ NA

P.4.4.9 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
P.4.4.9 |	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.5 |Corruption

P.5.1.1 |	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	☐ YES ☒ NO
P.5.1.1 |	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

ECONOMIC SAFEGUARDING PRINCIPLES

P.6 |Economic Impacts

P.6.1 |Labour Rights and Working Conditions

P.6.1.1 |	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	☐ YES ☒ NO
P.6.1.1 |	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	☐ YES ☒ NO
P.6.1.2 |	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	☐ YES ☒ NO
P.6.1.3 |	Does the project violate national laws, if available regarding non-discrimination in employment?	☐ YES ☒ NO
P.6.1.4 | P.6.1.5 |	Does the project allow child labor?	☐ YES ☒ NO
P.6.1.7 | P.6.1.8 |	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	☐ YES ☒ NO
P.6.1.9 |	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse,	☐ YES ☒ NO

	bullying, or exploitation, including gender-based violence (GBV)?	
P.6.1.10 |	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
NA		
Would the project potentially involve or lead to: (NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)		
P.6.1.1 |	use of forced labour?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 |	working conditions that do not meet national labour laws and international commitments?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 |	working conditions that may deny freedom of association and collective bargaining?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 |	absence of documented working agreements with all individual workers *if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.*	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 |	use of migrant workers? *if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.*	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.1 |	having no arrangements for basic services[13] for workers? *the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner*	☐ YES ☐ POTENTIALLY ☒ NO

[13] Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

	consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association	
P.6.1.2 |	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.2 |	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.2 |	harassment, intimidation, and/or exploitation, especially in regard to women?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.3 |	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.4 |	use of child labour? (including third-party engaged workers)	☐ YES ☐ POTENTIALLY ☒ NO
P.6.1.4 |	inadequate and verifiable mechanisms for age verification?	☐ YES ☒ NO
P.6.1.7 |	no processes and measures in place for the safety and health of project workers?	☐ YES ☒ NO
P.6.1.7 |	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	☐ YES ☒ NO
P.6.1.7 |	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	☐ YES ☒ NO
P.6.1.8 |	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	☐ YES ☒ NO
P.6.1.9 |	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	☐ YES ☒ NO
P.6.1.10 |	No grievance mechanism available for workers to voice workplace concerns.	☐ YES ☒ NO
P.6.1.11 |	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	☐ YES ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.6.2 |Negative Economic Consequences

P.6.2.1 |	Is there a risk of project failure during implementation or after project certification due to a lack of financial resources?	☐ YES ☒ NO
P.6.2.2 |	Does the project have potential negative impacts or pose a risk to the local economy?	☐ YES ☒ NO
P.6.2.2 |	Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.6.2.2 |	economic impacts (negative/detrimental) to the local economy?	☐ YES ☐ POTENTIALLY ☒ NO
P.6.2.2 |	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.7 |Climate and Energy

P.7.1 |GHG Emissions

P.7.1.1 |	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.7.1.1 |	increase greenhouse gas emissions over the Baseline Scenario?	☐ YES ☐ POTENTIALLY

		☒ NO
If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
NA		
P.7.2 |Energy supply		
P.7.2.1 |	Does the project pose a risk to the availability and reliability of energy supply to other users?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
NA		
Would the project involve or lead to:		
P.7.2.1 |	negative impact on the availability and reliability of energy supply to other users?	☐ YES ☐ POTENTIALLY ☒ NO
If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
NA		
P.8 |Water		
P.8.1 |Impact on Natural Water Patterns/Flows		
P.8.1.1 |	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	☐ YES ☒ NO
P.8.1.1 |	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	☐ YES ☒ NO
P.8.1.1 |	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	☐ YES ☒ NO
P.8.1.1 |	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
NA		

Would the project involve or lead to:		
P.8.1.1 |	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.1 |	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.1 |	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	☐ YES ☐ POTENTIALLY ☒ NO
P.8.1.2 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
NA		
P.8.2 |Erosion and/or Water Body Instability		
P.8.2.1 |	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
NA		
Would the project involve or lead to:		
P.8.2.2 | - *P.8.2.5 |*	negatively impact on the catchment area? *If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.*	☐ YES ☐ POTENTIALLY ☒ NO
P.8.2.6 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
NA

P.9 |Environment, ecology and land use

P.9.1 |Landscape Modification and Soil

P.9.1.1 | - P.9.1.3 |	Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the project? *If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.*	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
<u>Construction phase:</u> *-Fast-growing and earth-bounding plants such as vetiver grass should be planted in the construction area of the project's road in order to prevent the collapse of soil layers* *-Stone structure examination and soil test will be conducted in the project's construction area or wind turbine installation area in order to prevent the collapse of soil layers efficiently* *-Avoid the construction during the rain in order to prevent the soil washed down in the project area* *<u>Operational phase:</u>* *-Fast-growing and earth-bounding plants should be planted in the area of the project's road in order to prevent the collapse of soil layers*
Would the project involve or lead to:

P.9.1.4 |	production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.1.4 |	if answer to above question "yes" or "potentially", does project adopt appropriate and culturally sensitive sustainable resource management practices?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
NA

P.9.2 |Vulnerability to Natural Disaster

P.9.2.1 |	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

P.9.2.2 |	any potential risks that require emergency preparedness and response planning?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.2.2 |	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.3 \|Biosafety and Genetic Resources

P.9.3.1 |	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.3.1 |	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	☐ YES ☐ POTENTIALLY ☒ NO
P.9.3.1 |	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?	☐ YES ☐ NO ☒ NA
P.9.3.2 |	If answer to above question is "yes" has any risks identified in the risk assessment?	☐ YES ☐ NO ☒ NA
P.9.3.3 |	Forestry (for example Afforestation/Reforestation) involving GMO planting?	☐ YES ☐ NO ☒ NA

	Note - Forestry projects (for example Afforestation/ Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.	

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.4 |Release of pollutants

P.9.4.1 |	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

P.9.4.1 |	any potential risk of pollutant release that cannot be avoided?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.4.3 |	If answer to above question is "Yes" or "potentially", has the project identified all potential pollution sources that may degrade the quality of soil, air, surface, and groundwater in the project area?	☐ YES ☐ NO ☒ NA
P.9.4.2 |	If answer to above question is "Yes" or "potentially", do the pollution prevention and control technologies and practices applied during the project life cycle align with national regulations or international best practices?	☐ YES ☐ NO ☒ NA
P.9.4.3 |	If answer to above question is "Yes", is there a monitoring plan to ensure that mitigation measures are implemented, and resources are protected?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.5 |Hazardous and Non-hazardous Waste

P.9.5.1 |	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	☐ YES ☒ NO
P.9.5.3 |	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO

P.9.5.5 |	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.5.1 |	the generation and management of waste materials?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.5.1 |	treatment, destruction, or disposal of waste material?	☐ YES ☐ NO ☒ NA
P.9.5.1 |	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	☐ YES ☐ NO ☒ NA
P.9.5.3 |	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☐ NO ☒ NA
P.9.5.3 |	If answer to above question is "yes", does project has measures in place to address health risks?	☐ YES ☐ NO ☒ NA
P.9.5.4 |	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.6 \|Pesticides & Fertilisers

P.9.6.1 |	Does the project involve the use of chemical pesticides?	☐ YES ☒ NO
P.9.6.5 |	Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous)	☐ YES ☒ NO
P.9.6.6 |	Does the project use fertilisers, and if so, are measures being taken to minimise their use and nutrient losses to the environment?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
NA

Would the project involve or lead to:		
P.9.6.1 |	chemical pesticides use for pest management?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.6.4 |	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	☐ YES ☐ NO ☒ NA
P.9.6.5 |	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.6.5 |	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
NA

P.9.7 |Harvesting of Forests

P.9.7.1 |	Does the project have a risk of unsustainable forest management, including timber harvesting?	☐ YES ☒ NO
P.9.7.1 |	Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken?	☐ YES ☒ NO
P.9.7.1 |	Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
NA

P.9.8 |Food Security

P.9.8.1 |	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	☐ YES ☒ NO

If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.8.1 |	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.9 | Animal Welfare

P.9.9.1 |	Does the project involve any risks to animal welfare? Animal welfare shall be ensured by providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity.	☐ YES ☒ NO
P.9.9.2 |	Does the project involve any potential risk of excessive or inadequate use of veterinary medicines?	☐ YES ☒ NO
P.9.9.4 |	Does the project involve the risk of administering synthetic growth promoters, including hormones?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.9.1 |	animal husbandry or harvesting of fish populations or other aquatic species?[14]	☐ YES ☐ NO ☒ NA
P.9.9.1 |	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.9.3 |	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	☐ YES ☐ NO

[14] 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

		☒ NA
P.9.9.5 |	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	☐ YES ☐ NO ☒ NA
P.9.9.6 |	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	☐ YES ☐ NO ☒ NA
P.9.9.7 |	inappropriate spacing per animal and stocking rates per land unit?	☐ YES ☐ NO ☒ NA
P.9.9.8 |	inadequate measures to address the specific needs of aquatic animals?	☐ YES ☐ NO ☒ NA
P.9.9.9 | P.9.9.10 |	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries? If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.10 |High Conservation Value Areas and Critical Habitats

P.9.10.1 |	Does the project have the risk of negatively impacting HCV areas and/or critical habitats?	☐ YES ☒ NO
P.9.10.2 |	Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.10.1 |	identified habitats as HCV areas and or Critical habitats?	☐ YES ☐ POTENTIALLY ☒ NO

P.9.10.1 |	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	☐ YES ☐ NO ☒ NA
P.9.10.1 |	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	☐ YES ☐ NO ☒ N/A
P.9.10.2 |	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.10.2 |	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	☐ YES ☐ No ☒ NA
P.9.10.3 |	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	☐ YES ☐ No ☒ NA
P.9.10.4 |	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	☐ YES ☐ No ☒ NA
P.9.10.5 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.11 \|Endangered Species

P.9.11.1 |	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.11.2 |	distortion of habitats of endangered species?	☐ YES

		☐ POTENTIALLY ☒ NA
P.9.11.2 |	If answer to the above question is "yes", does the project plan to protect and enhance them?	☐ YES ☐ POTENTIALLY ☐ NO ☒ N/A
P.9.11.2 |	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

P.9.12 \|Invasive Alien species

P.9.12.1 |	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.12.1 |	risk of introducing any alien species with a high risk of invasive behaviour regardless of whether such introductions are permitted under the existing regulatory framework?	☐ YES ☐ POTENTIALLY ☒ NO
P.9.12.1 |	risk of potential accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbour alien species.	☐ YES ☐ POTENTIALLY ☒ NO
P.9.12.2 |	risk of spreading alien species into areas in which they have not already been established?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

APPENDIX 2 - CONTACT INFORMATION OF PROJECT DEVELOPER(S)

Organization name	Kosher Climate India Private Limited
Registration number with relevant authority	
Street/P.O. Box	27th Main, HSR Layout
Building	#109, 2nd FLoor
City	Bangalore
State/Region	Karnataka
Postcode	560102
Country	India
Telephone	080-25720814
E-mail	
Website	vamsi@kosherclimate.com
Contact person	www.kosherclimate.com
Title	Managing Director
Salutation	Mr
Last name	M
Middle name	
First name	Vamsi Krishna
Department	
Mobile	
Direct tel.	
Personal e-mail	

APPENDIX 3 - LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:	
Risk of change to the Project activities during Project Certification Period:	
Land-use history and current status of Project Area:	
Socio-Economic history:	
Forest management applied (past and future)	
Forest characteristics (including main tree species planted)	
Main social impacts (risks and benefits)	
Main environmental impacts (risks and benefits)	
Financial structure	
Infrastructure (roads/houses etc):	
Water bodies:	
Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:	
Where indigenous people and local communities are situated:	
Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance:	

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

>> **NA**

A4.2. Describe the impacts of design change on the following

a. Additionality

>>

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

>>

c. Compliance with the monitoring plan of the applied methodology

>>

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

>>

e. Scale of the project activity

>>

f. Stakeholder consultation

>>

g. Sustainable development criteria

>>

h. Safeguarding assessment

>>

i. Compliance with applicable legislation

>>

j. <u>Only for LUF Projects</u>: Transparent summary of all approved changes in Project Area, Eligible Area and accompanying changes in ex-ante emissions removals.

DATE OF APPROVED DESIGN CHANGE (MM/DD/YYYY)	PROJECT AREA (HA)		ELIGIBLE AREA (HA)		EX-ANTE ESTIMATE (TCO2E)	
	INCREASE OR DECREASE ?	VALUE (HA)	INCREASE OR DECREASE?	VALUE (HA)	INCREASE OR DECREASE ?	PERCENTAGE (%)

Revision History

Version	Date	Remarks
1.5	29 June 2023	Editorial changes to match V2.1 of the Safeguarding Principles Requirements
1.4	21 June 2023	Editorial changes to match V2.0 of the Safeguarding Principles Requirements
1.3	14 April 2023	Integrated the design change memo as annex of the document. Editorial changes
1.2	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1.0	10 July 2017	Initial adoption