

Gold Standard for the Global Goals
Key Project Information & Project Design Document (PDD)



Version 1.1 – August 2017

KEY PROJECT INFORMATION

Title of Project:	Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4
Brief description of Project:	Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 includes the construction of an off-shore wind power farm in Thanh Hai commune, Thanh Phu district, Ben Tre province, Viet Nam with total capacity of 110 MW and estimated electricity generated volume of 356.95 GWh. The project involves the installation of wind turbines at capacity of 4.25 - 4.5 MW each in four phases. The purpose of the project activity is to generate power using renewable energy and export to the national grid by utilizing wind energy.
Expected Implementation Date: Expected duration of Project:	Phase 1 – Thanh Hai 1 (30 MW): 01/01/2021 Phase 2 – Thanh Hai 2 (30 MW): 01/01/2022 Phase 3 – Thanh Hai 3 (30 MW): 01/01/2023 Phase 4 – Thanh Hai 4 (20 MW): 01/01/2024 20 years
Project Developer:	Tan Hoan Cau Ben Tre Joint Stock Company
Project Representative:	Swiss Carbon Value Ltd.
Project Participants and any communities involved:	Tan Hoan Cau Ben Tre Joint Stock Company (the Project Owner) Swiss Carbon Value Ltd. (the GS-VER buyer) Energy and Environment Consultancy Joint Stock Company (the GS-VER consultant)
Version of PDD: Date of Version:	1.1 14/09/2020
Host Country / Location:	Viet Nam/ Thanh Hai commune, Thanh Phu district, Ben Tre province
Certification Pathway (Project Certification/Impact Statements & Products	Impact Statements & Products
Activity Requirements applied: (mark GS4GG if none relevant)	GS4GG
Methodologies applied:	Applied Methodology: ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0
Product Requirements applied:	GS-VER
Regular/Retroactive:	Retroactive
SDG Impacts:	1 – SDG 7 Affordable Clean Energy 2 – SDG 8 Decent Work and Economic Growth 3 – SDG 13 Climate Action
Estimated amount of SDG Impact Certified	1 – SDG 7 – 110 MW of clean energy 2 – SDG 8 - 100% of the employees have access to training, healthcare, insurances and better income 3 – SDG 13 – 319,920 tCO ₂ e/ year.

SECTION A. Description of project

A.1. Purpose and general description of project

Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 includes the construction of an off-shore wind power farm in Thanh Hai commune, Thanh Phu district, Ben Tre province, Viet Nam with total capacity of 110 MW and gross annual electricity output of 356.95 GWh. The project involves the installation of wind turbines at capacity of 4.25-4.5 MW each in four phases.

Phase 1: The installed capacity of 30 MW and estimated annual electricity output of 96.85 GWh;

Phase 2: The installed capacity of 30 MW and estimated annual electricity output of 96.85 GWh;

Phase 3: The installed capacity of 30 MW and estimated annual electricity output of 97.75 GWh;

Phase 4: The installed capacity of 20 MW and estimated annual electricity output of 65.50 GWh.

The purpose of the project activity is to generate power using renewable energy source and export to the national grid by utilizing wind energy. The net electricity generated (with an estimated annual volume of 356.95 GWh) will be supplied to the national grid via a newly constructed transmission line from the plant to a transformer station.

Prior to the implementation of the project activity, electricity in Vietnam is generated mainly from fossil fuel sources and is solely distributed to consumers via the unique national electricity grid.

The baseline scenario of the project activity is the same as the scenario existing prior to the start of implementation of the project activity.

The project will reduce the emission of greenhouse gases by replacing electricity generated from fossil fuel fired power plants with zero emissions electricity from a wind power plant. It is expected that the power plant when in full operation, will result in the reduction of 319,920 tCO₂ on average per year and 1,161,469 tCO₂ over the first crediting period.

A.2. Eligibility of the project under Gold Standard

The project activity meets the eligibility criteria as per section 3.1.1 of GS4GG Principles & Requirements, version 1.2 as described below.

- (a) Type of Project: The project activity includes construction and operation of wind power plants to generate renewable electricity to supply the national grid. Wind power project activity is an eligible project type according to section 2 of GS4GG Renewable energy activity requirements, version 1.2.
- (b) Location of Project: The project is located in Thanh Hai commune, Thanh Phu district, Ben Tre province, Viet Nam.
- (c) Project Area, Project Boundary and Scale: The project area is 2,800 hectares. According to the applied CDM methodology ACM0002, version 20.0, the spatial extent of the project boundary includes the Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 and all power plants connected physically to the national electricity grid which the proposed project is also connected. The detailed on the project boundary is presented in Section B.3 of this PDD. The installed capacity of the project activity is 110 MW so it is large scale project.
- (d) Host Country Requirements: The project's contribution to the sustainable development of the local area as well as the host country are as follows:

General contributions towards national sustainable development:

- In recent years, Vietnam has suffered a critical electricity shortage as a consequence of rapidly increasing demand and insufficient supply, thereby imposing negative impacts on economic growth as well as on daily lives of people. This project activity will be a contribution towards balancing the supply and demand gap. By exporting electricity directly to the national grid, it will help to reduce electricity losses across the national grid and to lessen the risks of cascading national grid collapse due to overload.

Gold Standard[®]

- Reducing reliance on exhaustible fossil fuel based power sources and also reducing the import of fuels for the purpose of power generation.
- Modern and highly efficient turbines and generators are being used in the project and the power transmission will be at high voltage to ensure low losses. The project will accelerate the deployment of renewable energy technologies in Vietnam.

Contributions towards local sustainable development:

- Economic well-being

Once commissioning, this proposed project will increase the industrial share in the economic structure of Ben Tre province. This proposed project will have a significant contribution to the state budget via annual taxes (i.e. corporate income tax¹, resources tax², CER tax³).

By supplying a stable electricity output, this project will facilitate the industrialisation process of the province and support economic development of local villages through fostering tourism, trade and services inside the province.

After commissioning, this project will supply electricity to speed up the commissioning of other large infrastructure projects in the region.

- Social well-being

The project improves existing roads, which will facilitate the transportation and travel. Thus, the project creates convenience for the transfer and trade in the area, thereby improves minorities' living standard and contribute to fill the gap in development between different ethnic groups in Viet Nam.

By supplying a stable electricity output, this project will facilitate the industrialisation process of the province and support economic development of local villages through fostering tourism, trade and services inside the province. This project will contribute directly to improve the low-quality infrastructure systems of the mountainous commune.

The project will construct a new transmission line together with the wind power plant, which will reduce electricity losses and improve the quality of electricity supply in the region.

The communication system and clean water treatment serving for workers of the project during the both construction and operation phases will be shared with local people. Besides, the project activity could result in the employment of the local people for the construction and operation later. Therefore, this project activity will contribute directly to alleviate poverty in the region.

In conclusion the project activity will contribute positively towards sustainable development of Viet Nam.

- (e) Contact Details: The project participants include Tan Hoan Cau Ben Tre Joint Stock Company and Swiss Carbon Value Ltd. Contact details of all the Project Participants are presented in Appendix 1 of this GS PDD.
- (f) Legal Ownership and Other Rights: The project owner has full legal right to control and operate the project activity. They have got all the required permits which granted by the government like as Business Certificate, Investment Licence of the Project, Certificate of Land Use Rights, Electricity Generation Permit, Power Purchase Agreement.
- (g) Official Development Assistance (ODA) Declaration: No public funds or ODA is involved in this project activity, it has been confirmed by the project owner in the ODA declaration.

¹ Law on Corporate Income Tax No.14/2008/QH12 dated 03 June 2008

² Investment Law and Law on resources tax

³ Decision No.130/2007/QĐ-TTg dated 02 August 2007 of the Prime Minister on some mechanisms and financial policies for the projects invested in under the Clean Development Mechanism and Joint Circular No.58/2008/TTLT-BTC-BTN&MT dated 04 July 2008 of the Ministry of Natural Resources and Environment providing for the implementation of Decision No.130/2007/QĐ-TTg.

Gold Standard

(h) Renewable energy activity requirement: The project will construct a new 40 MVA transformer station and about 18 km of 110 kV transmission line together with the wind farm, which will reduce electricity losses and improve the electricity quality supplied in the region. The project complies with the renewable energy activity requirements as follows:

- The project is located in Viet Nam – a Lower Middle-Income country⁴.
- The penetration level – the ratio of installed capacity of the wind power (350 MW⁵) to the total grid installed capacity (48,573 MW⁶) is 0.72%, which is less than 5%.

A.3. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

The project owner – Tan Hoan Cau Ben Tre Joint Stock Company has the legal ownership of the products that generated under Gold Standard Certification and has legal rights concerning changes in use of resources required to service the project for land use, construction, selling electricity license and so on, which is documented in Investment License, Power Purchase Agreement.

A.4. Location of project

A.4.1. Host Country

Viet Nam

A.4.2. Region/State/Province etc.

Ben Tre province

A.4.3. City/Town/Community etc.

Thanh Hai Commune, Thanh Phu District

A.4.4. Physical/Geographical location

The wind power plant is located in Thanh Hai Commune, Thanh Phu District, Ben Tre province of Viet Nam.

The geo-coordinates of the project's site are as follow:

- Northern latitude: 9°54'19"
- Eastern longitude: 106°40'48"

The location of the project's site including wind turbines and the administrative office is shown in Figure 1 below:

⁴ <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519>

⁵ Report on supplemental planning of wind power projects - No. 1931/BCT-DL issued by Ministry of Industry and Trade on 19/03/2020

⁶ EVN Annual Report 2018 – available at: <https://www.evn.com.vn/d6/news/EVN-Annual-Report-2018-2-50-24114.aspx>

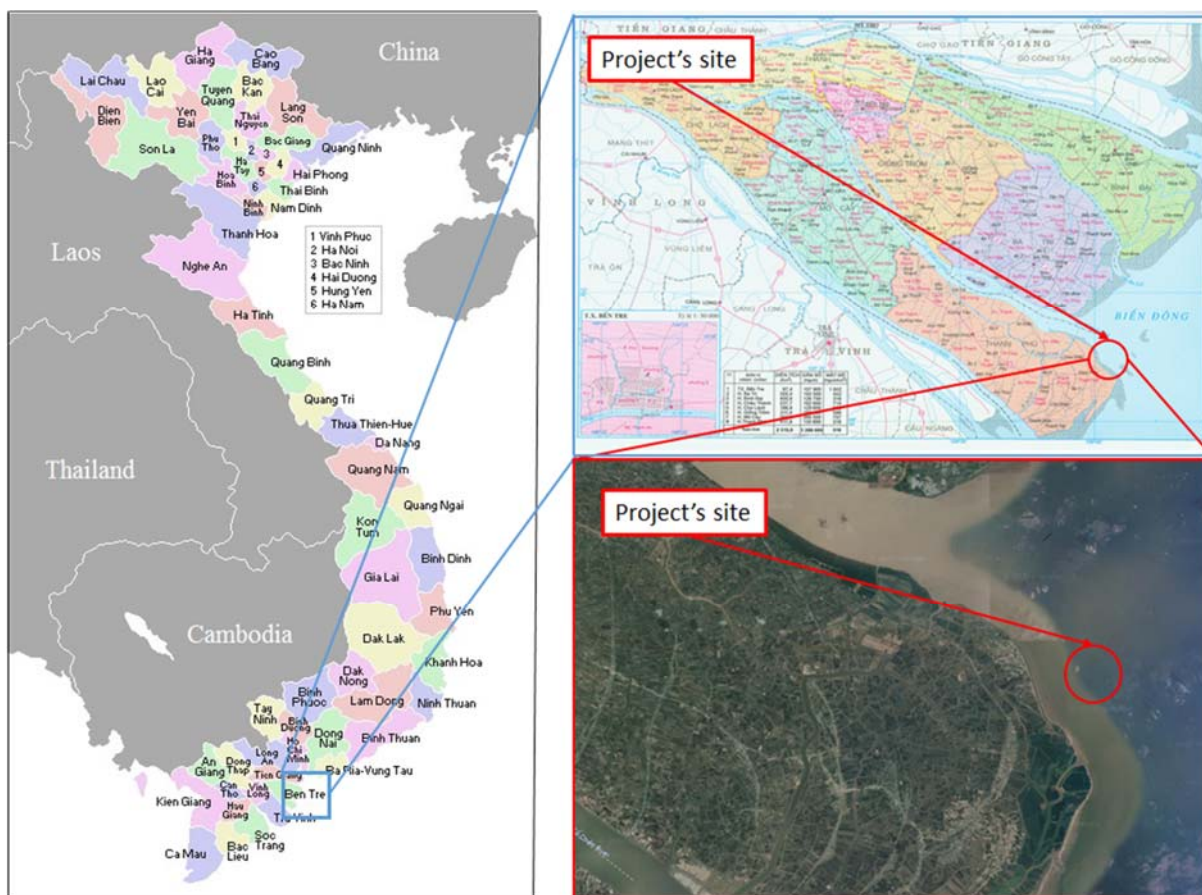


Figure 1: Project's location

A.5. Technologies and/or measures

The project involves the construction of a 110 MW grid-connected wind power plant with wind turbines and generators to convert kinetic power of the wind to electrical energy, which will be supplied to the national grid at the connection point through the transmission line. At the connection point, the electricity meter systems will be installed. They are digital and bi-directional type to measure the export and import of electricity of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4.

The main technical parameters of the project are shown in Table below.

Table 1: Main technical parameters of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4

Main parameter	Unit	Value
1. Turbine⁷		
• Type		SG 4.5-145
• Number of installed turbines		
+ Phase 1	set	7
+ Phase 2		7

⁷ Main technical parameters of equipment are extracted from the Feasibility Study Report.

+ Phase 3		7
+ Phase 4		5
• Rated capacity	kW/ set	4,250 – 4,500
2. Generator		
• Type		Three-phase asynchronous
• Voltage	V	690
• Frequency	Hz	50
3. Main transformer		
• Type		Three phases, outdoor
• Voltage	kV	22/110
• Capacity	MVA	4 × 40
4. Plant load factor	%	37.0
5. Technical lifetime of the plant⁸	Year	20

A.6. Scale of the project

Large project

A.7. Funding sources of project

The proposed project is not using any ODA funding as mentioned in ODA Declaration

A.8. Assessment that project complies with 'gender sensitive' requirements

According to the Gender equality requirements guidelines version 1.1, the gender sensitive requirements include three steps: basic context, apply gold standards safeguarding principles, and conduct stakeholder consultation, which are illustrated in the following table.

Table 2: Gender sensitive assessment

No.	Questions	Responding
Step 1: <i>Basic context</i>	1. Question 1: Does the project reflect the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender policy? 2. Question 2: Does the project align with existing country	Answer 1: Yes, it does. The project owner has prepared the project activity to ensure the contribution to generate livelihood benefits and enable women and men to equitably contribute to the local development through the project implementation. Answer 2: Yes, it does. The project activity totally complies with the Gender Equality Law approved by the National Assembly in 2006 and the

⁸ Tool10 – Tool to determine the remaining lifetime of equipment, EB50, Annex 15

Gold Standard

	policies, strategies and best practices?	Government's Decree No. 48/2009/ND-CP providing measures to assure gender equality.
Step 2: <i>Apply gold standard safeguarding principles</i>	3. Does the project address the questions raised in the Gold Standard Safeguarding Principles & Requirements document?	Yes, it does. The Project Owner has its own internal regulations including their commitments to implement the gender equality. All the GS mandatory requirements of the gender equality and women's right are met properly.
Step 3: <i>Conduct stakeholder consultation</i>	4. Does the project apply the Gold Standard Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines?	Due to COVID-19 outbreak and the temporary social-distancing situation in Viet Nam, physical meeting for Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 has been postponed and will be conducted before the project is submitted for Gold Standard design review.

SECTION B. Application of selected approved Gold Standard methodology

B.1. Reference of approved methodology

Applied methodology:

- Version 20.0 of ACM0002: "Grid-connected electricity generation from renewable sources" (<https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQCoPIWPGWDN8ED5PG>)

Related tools:

- Version 07.0 of the Tool07: "Tool to calculate the emission factor for an electricity system" (<https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>)
- Version 07.0.0 of the Tool01: "Tool for the demonstration and assessment of additionality" (<https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>)

B.2. Applicability of methodology

This proposed project is a grid-connected renewable power generation that is then eligible to apply Version 20.0 of ACM0002. More details of the comparison of the project's characteristics and the applicability criteria as specified in, Version 20.0 of ACM0002 is given in Table below.

Table 3: Comparison of project's characteristics and eligibility criteria of ACM0002

No.	Applicability conditions in Version 20.0 of ACM0002	Characteristics of the project activity	Applicability criterion met?
1	This methodology is applicable to grid-connected renewable energy power generation project activities that: a) Install a Greenfield power plant; b) Involve a capacity addition to (an) existing plant(s); c) Involve a retrofit of (an) existing operating plant(s)/unit(s); d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or	The project activity consists of the installation of a new grid connected renewable power plants at a site where no renewable power plant was operated prior to the implementation of the project activity (green field plant)	Yes

No.	Applicability conditions in Version 20.0 of ACM0002	Characteristics of the project activity	Applicability criterion met?
	e) Involve a replacement of (an) existing plant(s)/unit(s).		
2	The methodology is applicable under the following conditions: (a) The project activity may include renewable energy power plant/unit of one of the following types: 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;	The project activity is the installation of new wind power plant	Yes
	(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The project activity is the installation of a new wind power plant	Not applicable
3	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 reservoir, with no change in the volume of any of the reservoir or	The project activity is the installation of new wind power plant	Not applicable
	b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2 or	The project activity is the installation of new wind power plant	Not applicable
	c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2	The project activity is the installation of new wind power plant	Not applicable
	d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2 , all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the	The project activity is the installation of new wind power plant	Not applicable

No.	Applicability conditions in Version 20.0 of ACM0002	Characteristics of the project activity	Applicability criterion met?
	integrated project, as per equation (8), is greater than 4 W/m^2; (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/m^2 shall be: - Lower than or equal to 15 MW; and - Less than 10 percent of the installed capacity of integrated hydro power project.		
4	In the case of integrated hydro power projects, project proponent shall: - Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or - Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity	This project activity is not an integrated hydropower plant	Not applicable
5	This methodology is not applicable to: - Project activities that involve switching from fossil fuels to renewable energy at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site - Biomass fired power plants/ units	It is a renewable energy project with no fuel-switch involved	Yes Not applicable

No.	Applicability conditions in Version 20.0 of ACM0002	Characteristics of the project activity	Applicability criterion met?
6	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project activity is the installation of new wind power plant	Not applicable

B.3. Project boundary

According to Version 20.0 of ACM0002, the spatial extent of the project boundary includes the Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 power plants connected physically to the national electricity grid to which the proposed project is also connected.

The flow diagram of the project boundary is shown in Figure below.

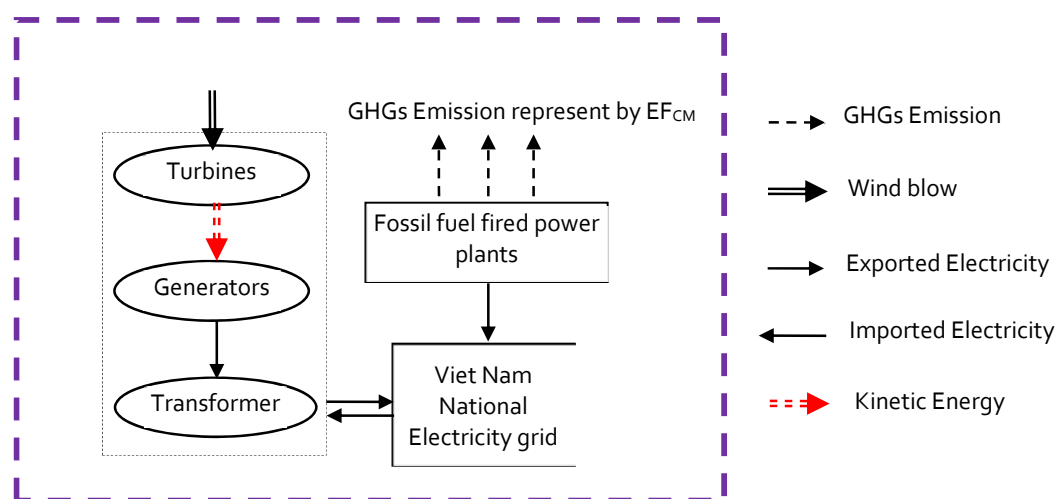


Figure 2: Project boundary

The GHGs and emission sources included in the project boundary are shown in the table 4.

Table 4: Sources and gases included in or excluded from the project boundary

Source		GHGs	Included?	Justification/Explanation
Baseline scenario	CO ₂ emission from electricity generation in fossil fuel fired power plants that is displaced due to the project activity	CO ₂	Yes	Main emission source
		CH ₄	No	Minor emission source
		N ₂ O	No	Minor emission source
Project scenario	Proposed project	CO ₂	No	According to ACM0002, the project emission of wind energy project activity is zero.
		CH ₄	No	
		N ₂ O	No	

B.4. Establishment and description of baseline scenario

According to version 20.0 of ACM0002, for the project activity including the installation of a Greenfield grid-connected renewable power plant, the baseline scenario is the following:

"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 calculations described in the "Tool to calculate the emission factor for an electricity system".

The Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 involves the installation and operation of a Greenfield wind power plant to generate and supply electricity to the national grid. The Viet Nam national electricity grid is operated and monopolized by the EVN and is the unique transmission and distribution line, to which all power plants in Viet Nam are physically connected to and the proposed project activity is not outside that system. Therefore, the baseline scenario of the project is to provide an equal amount of electricity provided by the national grid where the proposed project is also connected.

The combined margin emission factor of the national grid ($EF_{grid,CM,y}$) is calculated according to Tool 07 - "Tool to calculate the emission factor for an electricity system", version 07.0, will be used to calculate baseline emissions from the project activity. Data to calculate $EF_{grid,CM,y}$ for specific wind power projects is published by Department of Climate Change - Ministry of Natural Resources and Environment, Official Letter No. 263/BDKH dated 12 March 2020 on "Viet Nam grid emission factor 2018" at [http://dcc.gov.vn/van-ban-phap-luat/1059/Nghien-cuu,-xay-dung-he-so-phat-thai-\(EF\)-cua-luoi-dien-Viet-Nam-\(K%C3%A8m-CV-263/BDKH\).html](http://dcc.gov.vn/van-ban-phap-luat/1059/Nghien-cuu,-xay-dung-he-so-phat-thai-(EF)-cua-luoi-dien-Viet-Nam-(K%C3%A8m-CV-263/BDKH).html). For further details on $EF_{grid,CM,y}$ see Section B.6.4.

B.5. Demonstration of additionality

According to version 20.0 of ACM0002, the latest version of the "Tool for the demonstration and assessment of additionality" – version 07.0.0 shall be used to demonstrate the additionality of the proposed project activity. The demonstration of additionality includes the following steps:

Step 0: Demonstration whether the proposed project activity is the first-of its-kind

This step is not applied to the project activity since it is not first-of-its-kind, hence the additionality of the project will be demonstrated in next steps below.

Step 1: Identification of alternatives to the project activity consistent with current laws and regulations

Sub-step 1a: Define alternatives to the project activity:

Paragraph 8 of version 07.0.0 of the additionality tool states: "Project activities that apply this tool in context of approved consolidated methodology ACM0002, only need to identify that there is at least one credible and feasible alternative that would be more attractive than the proposed project activity."

We will therefore consider the two scenarios in the following analysis:

Alternative 1: The proposed project undertaken without the GS.

Alternative 2: Continuation of the current situation. In this case, the proposed project will not be constructed and the power will be solely supplied from the Vietnam national grid.

Sub-step 1b: Consistency with mandatory laws and regulations:

The alternative 2 “the continuation of the current situation” does not face with any barrier from the current law and regulation in Viet Nam because it is the “do-nothing” alternative. The project owner of a proposed project has no obligation to build or invest in the power plant to supply electricity for the local area. Hence this alternative is consistent with mandatory laws and regulations

The alternative 1 is consistent with mandatory laws and regulations of Viet Nam as it was issued the Investment Certificate by People’s Committee of Ben Tre Province.

Both the alternatives enlisted above are found to comply with the mandatory laws and regulations taking into account the enforcement of the legislations in the region or country and EB decisions on national and/or sectoral policies and regulations. Since wind projects are categorised as white category, no any consent to operate required from pollution control board. However alternative 2 has been selected as the appropriate baseline alternative for this project activity in line with the methodology.

Step 2: Investment analysis

Determine whether the proposed project activity is not:

- (a) The most economically or financially attractive; or
- (b) Economically or financially feasible, without the revenue from the sale of emission reductions

To conduct the investment analysis, the following sub-steps are applied:

Sub-step 2a: Determine appropriate analysis method

Tool07 – “Tool for the demonstration and assessment of additionality”, Version 7.0.0 provides three methods of investment analysis: simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III).

The proposed project activity generates financial and economic benefits from sale of the generated electricity other than GS-VER revenues, so the simple cost analysis (Option I) is not applicable. Out of the two remaining options, Option II is also not applicable as there are no other credible and realistic baseline scenario alternatives other than electricity supply from the grid. Thus, the benchmark analysis (Option III) is chosen to prove additionality.

Sub-step 2b (Option III): Apply benchmark analysis

The investment analysis using Benchmark analysis approach (Option III) has been chosen. In the following, Project IRR is used to demonstrate the additionality of the project.

As indicated in paragraph 15, Tool27 – “Investment analysis”, Version 10.0, “Local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR”, the project participant applies the local commercial lending rates as a benchmark for this project IRR. This benchmark is derived from the average long-term lending rates available from the beginning of calculated year up to the date of decision making. All data is sourced from weekly reports published by the State Bank of Vietnam on its official website (<https://www.sbv.gov.vn/>).

The benchmark is 11% at the date of making the investment decision on 20 February 2019.

Sub-step 2c: Calculation and comparison of financial indicators

The key assumptions used to calculate the Project IRR of the proposed project are presented in Table 5:

Table 5. Key assumptions for investment analysis of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4

No	Parameter	Unit	Value	Source
1	Gross capacity	MW	110	Feasibility Study Report (FSR) of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4
2	Annual electricity generation	GWh	356.95	FSR
3	Total investment cost	billion VND	6,045	FSR
4	Total annual O&M cost	billion VND	90.686	FSR
5	Preparation and construction period	year	5	FSR
6	Period of financial assessment	year	20	Technical lifetime of turbines according to the Tool to determine the remaining lifetime of equipment ⁹
7	Electricity price	VND/kWh	2,255.27	According to Article 1, Item 7 of Prime Minister's Decision No.39/2018/QĐ-TTg dated 10 September 2018 on amendment and adding some articles of Prime Minister's Decision No.37/2011/QĐ-TTg on 29 June on promotion mechanism on wind power projects in Vietnam
		Cent/kWh	9.8	
8	Residual/ fair value	billion VND	0	According to Paragraph 6 of Tool27 - "Investment Analysis", Version 10.0, "Both project internal rate of return (IRR) and equity IRR calculations should reflect the period of expected operation of the underlying project activity (technical lifetime) and <i>if a shorter period than the technical lifetime</i> is chosen, the investment analysis shall be conducted for at least 10 years and <i>include the fair value of the project activity assets at the end of the assessment period</i>". Since the technical lifetime of 20 years has been applied as the financial analysis period, full value of assets has been completely depreciated thus no residual value remains at the end of the assessment period.
9	Pre-tax project IRR	%	7.99	

⁹ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-10-v1.pdf>

Gold Standard

The above table shows that Project IRR of the project was lower than the benchmark at the time of decision making which is defined as the date of issuing the decision to invest the project by the Management Board on 20/02/2019.

Sub-step 2d: Sensitivity Analysis

A sensitivity analysis of the project activity has been conducted to test the robustness of the above calculations. Although the O&M cost accounted less than 20% of total investment cost that could be disregarded in the sensitivity analysis as regulated under the guidance in Tool27 – “Investment analysis” – Version 10.0, paragraph 27, which states that “variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenue should be subjected to reasonable variation”, this parameter is still considered in the analysis below. The following parameters are used in the sensitivity analysis of the project activity:

- Annual amount of electricity exported to the national grid
- Total investment cost
- Electricity price
- O & M cost

Table below shows the impact of variations in key factors on the Project IRR considering a $\pm 10\%$ variation in the parameters.

Table 6. Sensitivity analysis for Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 wind power plant

No	Parameter	Variation	Project IRR	Likelihoods to happen
1	Annual amount of electricity exported to the national grid	+10%	9.17	Lower than the benchmark of 11%
		-10%	6.72	Lower than the benchmark of 11%
2	Total investment cost	+10%	6.98	Lower than the benchmark of 11%
		-10%	9.16	Lower than the benchmark of 11%
3	Electricity price	+10%	9.17	Lower than the benchmark of 11%
		-10%	6.72	Lower than the benchmark of 11%
4	O & M cost	+10%	7.85	Lower than the benchmark of 11%
		-10%	8.13	Lower than the benchmark of 11%

The result of the project sensitivity analysis is shown in Figure below:

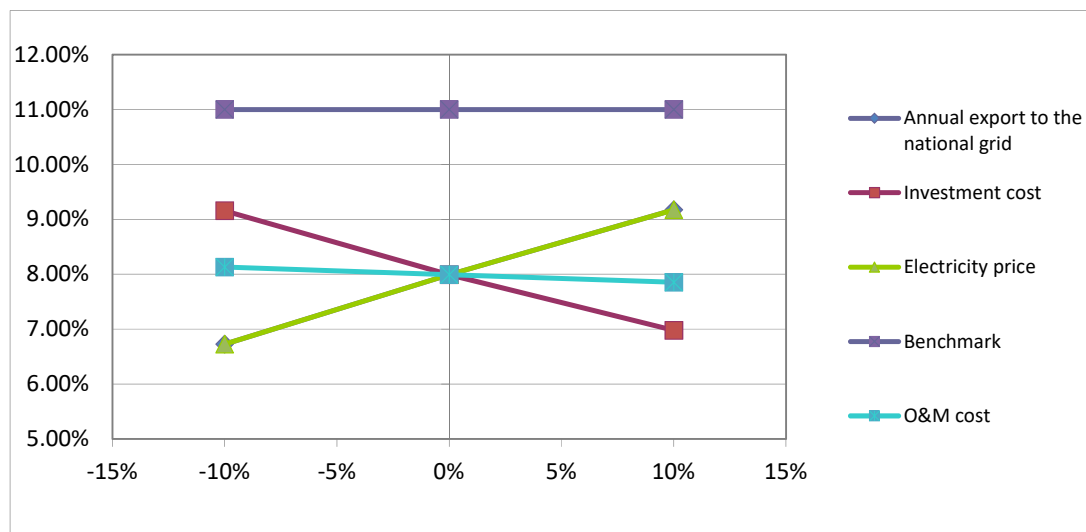


Figure 3: Sensitivity analysis

The sensitivity analysis shows that there is unlikely to be happened any case in which the variation of a parameter can make the project IRR without GS-VERs revenues reach the benchmark.

In conclusion, the proposed GS project activity is unlikely to be financially attractive.

Step 3: Barrier analysis

Barrier analysis has not been applied.

Step 4: Common practice analysis

Stepwise approach for common practice analysis has been carried out as per Methodological Tool24 - "Common Practice", Version 03.1.

Step (1): Calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.

The proposed project activity has the installed capacity of 110 MW. So applicable output range as +/-50% of the capacity of the proposed project activity is 55 MW and 165 MW.

Step (2): Identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions:

- The projects are located in the applicable geographical area;
- The projects apply the same measure as the proposed project activity;
- The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;
- The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;
- The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;
- The projects started commercial operation before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of proposed project activity whichever is earlier for the proposed project activity.

Identification of the similar projects (CDM and non-CDM) is carried out as per sub-steps of Step (2) as follows:

Gold Standard

- a) The proposed project is located in Viet Nam so the entire host country (Viet Nam) was chosen as the applicable geographical area.
- b) The proposed project activity is a greenfield wind power plant. Therefore, all the wind power plants (the same measure as the proposed project activity) are candidates for similar projects.
- c) The energy source used by the proposed project activity is wind. Hence, only wind power plants are candidates for similar projects.
- d) The proposed project activity produces electricity from wind energy. Therefore, all the wind power plants are candidates for similar projects
- e) The capacity range of the similar projects is within the applicable capacity range from 55 MW to 165 MW.
- f) Since CDM Tools/Guidelines are followed for common practice analysis, the start date need to be considered as per CDM guidelines for common practice analysis. The start date of the project under the Methodological tool for common practice is the date on which the project participants commit to making expenditures for the construction or modification of the main equipment or facility (e.g. a wind turbine), or for the provision or modification of a service (e.g. distribution of energy-efficient light bulbs, change of transport management system). Where a contract is signed for such expenditures (e.g. for procurement of a wind turbine), it is the date on which the contract is signed. In other cases, it is the date on which such expenditures are incurred. If the project activity involves more than one of such contracts or incurred expenditures, it is the first of the respective dates. Activities incurring minor pre-project expenses (e.g. feasibility studies, preliminary surveys) are not considered in the determination of the start date.

The equipment supply contract Turbin Supply Agreement was signed on 22/07/2019 between Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 and Siemens Gamesa Renewable Energy is the first main contract for expenditures of the proposed project activity and it is considered as the start date of the project activity for common practice analysis. The wind power projects, which have started commercial operation before 22/07/2019 have been considered for analysis.

In the applicable geographical area, there are several Projects that are grid-connected and have started commercial operation before the start date of the project¹⁰. Details of these projects are as follows:

No	Name	Capacity (MW)	Type	Elec. output (GWh)	Load factor	Construction starting year	Commissioning year	Investor during the investment and construction period
0	The proposed project	110	Off-shore	356.95	37	2019	2021	Tan Hoan Cau Ben Tre Jsc
1	Bac Lieu	99.2	Off-shore	335.20	38.57	2010	2012	Cong Ly Construction - Trading - Tourism Co., Ltd.

¹⁰ <https://devi-renewable.com/>

Gold Standard

Step (3): Within the projects identified in Step 2, identify those that are neither registered CDM project activity, project activity submitted for registration, nor project activity undergoing validation. Note their number N_{all} .

In these projects above, Bac Lieu wind power project has been registered as a CDM project¹¹. So, $N_{all} = 0$.

Step (4): Within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number N_{diff} .

Because $N_{all} = 0$ then $N_{diff} = 0$.

Step (5): Calculate factor $F=1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.

Calculate factor: $F = 1 - N_{diff}/N_{all} = 1 - 0/0 = 0$

$$N_{all} - N_{diff} = 0$$

As per methodological tool "Common practice" - Version 03.1, the proposed project activity is a "common practice" within a sector in the applicable geographical area if the factor F is greater than 0.2 and $N_{all} - N_{diff}$ is greater than 3.

These above conditions are not fulfilled, $F = 0$ is smaller than 0.2 and $N_{all} - N_{diff} = 0$ is smaller than 3. Therefore, the project activity is not a "common practice" within a sector in the applicable geographical area, according to the guideline.

In conclusion, the proposed project is additional.

B.6. Sustainable Development Goals (SDG) outcomes

B.6.1. Relevant target for each of the three SDGs

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

Indicator 7.2.1 – Renewable energy share in the total final energy consumption

Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Indicator 8.5.1 – Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

SDG 13: Take urgent action to combat climate change and its impacts

Target 13.2: Integrate climate change measures into national policies, strategies and planning

B.6.2. Explanation of methodological choices/approaches for estimating the SDG outcome

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

This SDG outcome is measured in accordance with ACM 0002 "Grid-connected electricity generation from renewable sources" version 20.0 for the net electricity supplied to the national grid by the project, $EG_{facility,y}$ (MWh).

¹¹ <https://cdm.unfccc.int/Projects/DB/BVQI1347365592.64/view>

Gold Standard

Baseline:

Prior to the implementation of the project activity, electricity in Viet Nam is generated mainly from fossil fuel sources and is solely distributed to consumers via the unique national electricity grid.

Project's outcome:

This project annually supplements 356.95 GWh of clean and sustainable electricity to the national grid, thereby contributing to the Target 7.2:

By 2030, increase substantially the share of renewable energy in the global energy mix.

SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all

Baseline:

The project activity is located in Ben Tre province. The average monthly income per capita of Ben Tre province in 2018 is 3.408 million VND¹².

Project's outcome:

The project leads to employment opportunities for the local community, which would not have been possible in the baseline scenario. The project provides sustainable energy resources contributing to the economic development of the region.

The project contributes to the Target 8.5

- By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

SDG 13: Take urgent action to combat climate change and its impacts

For the climate combat action, this project directly reduces 319,920 tons of CO₂ equivalent/year, thereby the project contributes to the National SDG 13 - Target 13.2 – Integrate climate change measures into national policies, strategies and planning.

This SDG outcome is measured in accordance with ACM0002 "Grid-connected electricity generation from renewable sources" version 20.0 for the emission reductions generated by the project, ER_y (tCO₂e).

Baseline emissions (BE_y)

Baseline emissions include only CO₂ emissions from electricity generation from fossil fuel fired power plants that are displaced due to the project activity, calculated as follows:

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

Where:

BE _y	Baseline emissions in year y (tCO ₂ /yr).
EG _{PJ,y}	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
EF _{grid,CM,y}	Combined margin CO ₂ 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".

¹² General statistics office of Viet Nam

Calculation of EG_{PJ}

Because the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

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

Where:

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Therefore, the baseline emissions are calculated as follows:

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

Project emission (PE_y)

According to ACM0002, Version 20.0, the project emissions are calculated using the following equation:

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

Where:

PE_y Project emissions in year y (tCO₂e/yr)

$PE_{FF,y}$ Project emissions from fossil fuel consumption in year y (tCO₂/yr)

$PE_{GP,y}$ Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO₂e/yr)

$PE_{HP,y}$ Project emissions from water reservoirs of hydro power plants in year y (tCO₂e/yr)

The proposed project is a wind power plant that neither uses fossil fuel nor operates geothermal power plants or having water reservoirs (i.e. $PE_{FF,y} = 0$; $PE_{GP,y} = 0$; $PE_{HP,y} = 0$); therefore, the project emission is zero:

$$PE_y = 0$$

Leakage (L_y)

According to ACM0002, Version 20.0, no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emissions sources are neglected.

Emission reductions (ER_y)

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y Emission reductions in year y (t CO₂e/yr).

BE_y Baseline emissions in year y (t CO₂e/yr)

PE_y Project emissions in year y (t CO₂e/yr).

B.6.3. Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

Relevant SDG Indicator	SDG 13
Data/parameter	$EF_{grid,OM,y}$
Unit	tCO ₂ /MWh
Description	Operating margin CO ₂ emission factor for grid connected power generation in year y
Source of data	Data published by DNA Viet Nam (Ref. http://dcc.gov.vn/van-ban-phap-luat/1059/Nghien-cuu,-xay-dung-he-so-phat-thai-(EF)-cua-luoi-dien-Viet-Nam-(K%C3%A8m-CV-263/BDKH).html)
Value(s) applied	0.8795
Choice of data or Measurement methods and procedures	The latest $EF_{grid,OM,y}$ for 2018 was calculated and published by Ministry of Natural Resources and Environment, Department of Climate Change (DNA of Viet Nam) on 12/03/2020 as per "Tool to calculate the emission factor for an electricity system" – Version 07.0
Purpose of data	For calculation of the combined margin CO ₂ emission factor ($EF_{grid,CM,y}$)
Additional comment	N/A

Relevant SDG Indicator	SDG 13
Data/parameter	$EF_{grid,BM,y}$
Unit	tCO ₂ /MWh
Description	Build margin CO ₂ emission factor for grid connected power generation in year y
Source of data	Data published by DNA Viet Nam (Ref. http://dcc.gov.vn/van-ban-phap-luat/1059/Nghien-cuu,-xay-dung-he-so-phat-thai-(EF)-cua-luoi-dien-Viet-Nam-(K%C3%A8m-CV-263/BDKH).html)
Value(s) applied	0.9465
Choice of data or Measurement methods and procedures	The latest $EF_{grid,BM,y}$ for 2018 was calculated and published by Ministry of Natural Resources and Environment, Department of Climate Change (DNA of Viet Nam) on 12/03/2020 as per "Tool to calculate the emission factor for an electricity system" – Version 07.0
Purpose of data	For calculation of the combined margin CO ₂ emission factor ($EF_{grid,CM,y}$)
Additional comment	N/A

Relevant SDG Indicator	SDG 13
Data/parameter	$EF_{grid,CM,y}$
Unit	tCO ₂ /MWh
Description	Combined margin CO ₂ emission factor for grid connected power generation in year y

Source of data	Data published by DNA Viet Nam (Ref. http://dcc.gov.vn/van-ban-phap-luat/1059/Nghien-cuu,-xay-dung-he-so-phat-thai-(EF)-cua-luoi-dien-Viet-Nam-(K%C3%A8m-CV-263/BDKH).html)
Value(s) applied	0.89625
Choice of data or Measurement methods and procedures	The $EF_{grid,CM,y}$ is calculated using Operating margin CO ₂ emission factor - $EF_{grid,OM,y}$ and Build margin CO ₂ emission factor - $EF_{grid,BM,y}$ which were published by DNA of Viet Nam and weightings w_{OM} , w_{BM} of 0.75 and 0.25 for wind power plant project as per “Tool to calculate the emission factor for an electricity system” – Version 07.0
Purpose of data	For calculation of CO ₂ emission reductions
Additional comment	$EF_{grid,CM,y} = EF_{grid,OM,y} * 0.75 + EF_{grid,BM,y} * 0.25$

B.6.4. Ex ante estimation of outcomes linked to each of the three SDGs

Project emissions (PE_y)

The emissions of this wind power project $PE_y = 0$

Baseline emissions (BE_y)

Baseline emissions include only CO₂ emissions from electricity generation by fossil fuel fired power plants that are displaced due to the project activity. It is calculated as follows:

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

Where:

- BE_y Baseline emissions in year y (t CO₂e/yr).
- $EG_{PJ,y}$ Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr), and equal to 356,954 MWh/yr
- $EF_{grid,CM,y} = 0.89625$ tCO₂/MWh

Calculation of the emission factor (EF) of the national electricity grid

For this crediting period, the emission factor is calculated using:

- Latest national data: The published data by the host country DNA of Viet Nam, Department of Climate Change, Ministry of Natural Resources and Environment of Viet Nam on 12/03/2020; and
- The Version 07.0 of “Tool to calculate the emission factor for an electricity system” valid from 31/08/2018 onward.

The Emission Factor of Viet Nam Electricity System for year 2018 was calculated and published by DNA of Viet Nam, Department of Climate Change, Ministry of Natural Resources and Environment of Viet Nam on 12/03/2020 using Version 07.0 of “Tool to calculate the emission factor for an electricity system”, including:

The operating margin emission factor: $EF_{grid,OM,y} = 0.8795$ tCO₂/MWh

And build margin emission factor: $EF_{grid,BM,y} = 0.9465$ tCO₂/MWh

The combined emission factor is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

Where:

- w_{OM} : Weighting of OM emission factor (%)
- w_{BM} : Weighting of BM emission factor (%)

Gold Standard

However, the DNA report applied the weighting factors of both OM and BM emission are 0.5, which is not applicable for wind power generation project activities.

According to the Version 07.0 of "Tool to calculate the emission factor for an electricity system", the following default values are used in wind power generation project activities for the first crediting period and for subsequent crediting periods:

$$w_{OM} = 0.75 \text{ and } w_{BM} = 0.25$$

So in the renewal crediting period, the CM emissions factor is derived as follows:

$$EF_{\text{grid,CM,y}} = 0.75 \times 0.8795 + 0.25 \times 0.9465 = 0.89625 \text{ tCO}_2/\text{MWh}$$

Therefore:

$$BE_y = 356,954 \times 0.89625 = 319,920 \text{ tCO}_2\text{e/yr (rounded-down)}$$

Leakage (LE_y)

As it is stated in ACM0002 version 20.0, no leakage emission is considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emission sources are neglected.

Emission Reductions (ER_y)

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y = 319,920 \text{ tCO}_2/\text{yr}$$

B.6.5. Summary of ex ante estimates of each SDG outcome

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

Table 7: Net electricity supplied to national grid

Year	Baseline estimate	Project estimate (MWh)	Net benefit (MWh)
2021	0	96,853	96,853
2022	0	193,706	193,706
2023	0	291,454	291,454
2024	0	356,954	356,954
2025	0	356,954	356,954
Total	0	1,295,921	1,295,921
Total number of crediting years	5		
Annual average over the crediting period	0	259,184	259,184

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

The project leads to employment opportunities which would not have been possible in the baseline scenario. The project is expected to provide permanent employment to local people.

Gold Standard

A wind project in general does not expose workers to unsafe or unhealthy work environments in terms of toxins or chemicals. In addition, the project follows national safety rules under (Host Country) Law that covers work safety. The staffs will participate the operation training before completion of the wind power plant. After the course, the staffs passed the examination will get the certificate. Then internal trainings on plant operation will be conducted for plant staffs. The project proponent also creates good labor conditions for the plant staffs. Every year, all the employees are checked-up at the medical center for free using their health insurance via insurance card.

SDG 13 - Take urgent action to combat climate change and its impacts

Table 8: Expected emission reduction in the 1st crediting period

Year	Baseline estimate (tCO ₂ e)	Project estimate (tCO ₂ e)	Net benefit (tCO ₂ e)
2021	86,805	0	86,805
2022	173,609	0	173,609
2023	261,215	0	261,215
2024	319,920	0	319,920
2025	319,920	0	319,920
Total	1,161,469	0	1,161,469
Total number of crediting years	5		
Annual average over the crediting period	232,294	0	232,294

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

Relevant SDG Indicator	SDG 7 Indicator 7.2.1: Renewable energy share in the total final energy consumption
Data/parameter:	EG _{facility,y} - Access to affordable and clean energy services
Unit	MWh/year
Description	Net electricity supplied to the national grid by the proposed project
Source of data	Direct measurement at the connection point by power meters
Value(s) applied	356,954

Measurement methods and procedures	Calculating by subtracting $EG_{y,import}$ from $EG_{y,export}$. Two-way power meters will be installed at the grid-connected point to measure the amount of electricity supplied and consumed by the proposed project by the reverse direction. The readings of electricity meter will be continuously measured and monthly recorded. The recorded data will be confirmed by the joint balance sheet which will be signed by the representatives of EVN and the project owner. Electronic data will be archived within the crediting period and 2 years after the end of the crediting period.
Monitoring frequency:	Continuous measurement and monthly recording
QA/QC procedures:	The uncertainty level of this data is low. The measurement/monitoring equipment should be complied with national standard and technology. These equipment and systems should be calibrated and checked every 2 year.
Purpose of data:	Contribution of clean and sustainable energy from the Project to the national grid and to the increase of the share of the renewable energy in the global energy mix.
Additional comments:	N/A

Relevant SDG Indicator	SDG 13: Climate Action
Data/parameter:	ER_y - Annual emission reduction
Unit	tCO ₂ e/year
Description	The project will generate renewable power, which will displace part of the electricity otherwise supplied by fossil fuel fired power plants, thus GHG emission reductions are achieved via this project
Source of data	Electricity generated by Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 and calculated combined margin (CM) emission factor will be used as reference in calculation of the emission reduction.
Value(s) applied	319,920 tCO ₂ e
Measurement methods and procedures	According to ACM0002 version 20.0
Monitoring frequency	Once per monitoring period
QA/QC procedures:	Cross-checking with electricity data
Purpose of data:	Direct emission reductions of the Project over the Baseline
Additional comments:	N/A

Relevant SDG Indicator	SDG 8 Indicator 8.5.1 – Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
Data/parameter:	- Quality of employment - Quantitative employment and income generation - Equal pay for work of equal value for both men and women
Unit	- Number of employees (for data on quantitative employment) - Income in USD and VND (for data on income generation) - List of employees, functions and respective income (for data on equal pay for work of equal value for both men and women)

Description	The employees of the project are trained on technical aspects relating to the operation of the wind power plant and provided with labour contracts, medical insurance and regular health-check as well as social insurance and unemployment insurance. The employees of the project are paid higher than the average monthly income per capita of the province. Men and women are paid equally for work of equal value.
Measured/calculated/default	N/A
Source of data	Training records, labour contracts, salary records
Value(s) applied	100% of the employees will be trained on technical aspects relating to the operation of the wind power plant, 100% of the employees will be provided with labour contracts, social and medical insurance.
Measurement methods and procedures	Checking documents
Monitoring frequency:	Once per monitoring period
QA/QC procedures:	Cross-checking by interviews
Purpose of data:	Contribution of the project to provide 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
Additional comments:	N/A

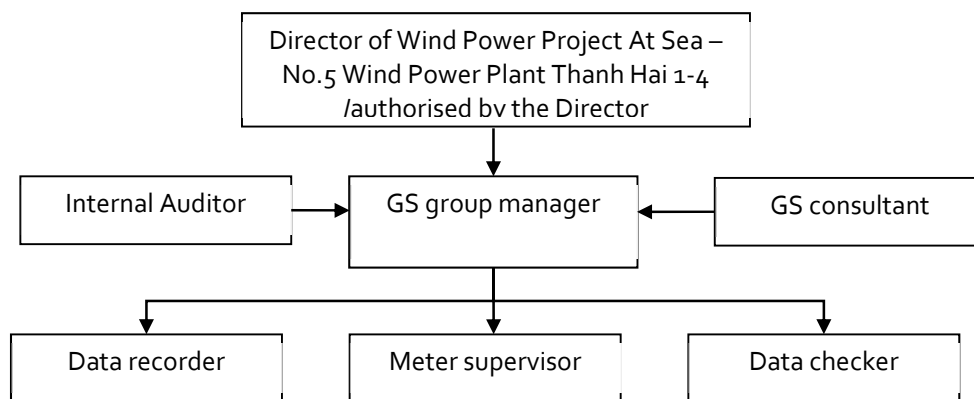
B.7.2. Sampling plan

Not applicable

B.7.3. Other elements of monitoring plan

The purpose of the monitoring plan is to define the organizational structure of the monitoring team, monitoring practices, QA and QC procedures and archiving procedures. The monitoring plan will ensure that the emission reductions from the project activity are reported accurately and transparently.

The structure of the monitoring group is as follows:



Structure of the monitoring group

The responsibilities of each person involved are elaborated as follows:

Group members and their responsibilities

Person	Responsibility
Director of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 /authorised by the Director	Check and sign the monitoring report annually
GS group manager	Managing the whole GS business of Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4, guiding and supervising data recorder after being trained by GS consultant.
GS consultant	Providing GS group manager training and technical support about GS monitoring plan.
Internal auditor	Checking the monitoring procedure at least once in a year
Data recorder	Collecting and recording data every month.
Meter supervisor	Checking power meter periodically according to relevant regulation.
Data checker	Double checking the collected data measured by power meter.

Details of metering system, meter readings and calibration are given below:

The metering system will be installed at the transformer station (as the connected point). The metering system includes the main system and two back-up systems. They are digital meters bi-directly with allowed errors at least 0.2 and 0.5 for main and back-up meters respectively. The meter type used is an electronic 3 phases Elster A1700. Details on the technical equipment can be found in the hard copy document “Technical explanation for metering system” will be developed by the project proponent and will be approved by EVN.

The meters will be calibrated and verified pursuant to national standard. According to the Decision No. 2739/QĐ-TĐC on “promulgating metrological technical standard of Viet Nam” issued by Directorate for Standards, Metrology and Quality under Ministry of Science and Technology of the Socialist Republic of Viet Nam on 23/12/2019, Article 2, the metrology standard – DLVN 39:2019 takes effect from 01/01/2020. Paragraph 8.3, DLVN 39:2019 – “Power meters – Verification/calibration procedure”, the calibration and verification for 3 phase meters need to be conducted every three years by the third party once during project operation. After every calibration, the third party will seal the meters so that no illegal interference is possible.

The steps of monitoring the electricity supplied to the grid and the electricity imported from grid and consumed by the proposed project are as follows:

- 1) The electricity supplied by the project to the grid and electricity imported from the grid are measured automatically by the bi-directional meter systems (main and backup power meters). The data is measured continuously;
- 2) Persons in charge of data record and meter supervisor from Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 together with staff from EVN shall read and collect data from main power meters on the first day of every month, the result (monthly electricity protocol) will be signed by both parties and kept respectively;
- 3) The data from the backup power meters will be cross checked with the data from main power meter. The data from back-up system will be used in case of failing of the main meter;
- 4) The project owner provides electricity sales invoice to EVN, and keeps the copy of invoices;

- 5) The power owner provides the electricity protocols and copy of invoices and other related documents to the verifier of VVB.

SECTION C. Duration and crediting period

C.1. Duration of project

C.1.1. Start date of project

22/07/2019

C.1.2. Expected operational lifetime of project

20 years¹³

C.2. Crediting period of project

C.2.1. Start date of crediting period

01/01/2021 (1st crediting period)

C.2.2. Total length of crediting period

5 years, 0 months.

SECTION D. Safeguarding principles assessment

D.1. Analysis of social, economic and environmental impacts

Safeguarding principles	Mandatory requirements / Assessment questions	Assessment of relevance to the project (Yes/ potentially/ no)	Justification	Mitigation measure (if required)
3.1 Human rights	The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights	No	Viet Nam ratified "International Convention on the Elimination of all Form of Racial Discrimination" on 09/06/1981; "International Covenant on Civil and Political Rights" and "International Covenant on Economic, Social and Cultural Rights" on 24/09/1982; "Convention on the Elimination of all Forms of Discrimination against Women" on 27/11/1981. Therefore, the	N/A

¹³ Tool10 – Tool to determine the remaining lifetime of equipment, EB50, Annex 15

			project developer and the project do respect nationally and internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind	
	The Project shall not discriminate with regards to participation and inclusion	No	Viet Nam ratified "International Convention on the Elimination of all Form of Racial Discrimination" on 09/06/1981; "Convention on the Elimination of all Forms of Discrimination against Women" on 27/11/1981. Therefore, the project will not discriminate with regards to participation and inclusion.	N/A
3.2 Gender Equality and Women's Rights	Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits?	No	The project does not reduce or put at risk women's access to or control of resources, entitlements and benefits because the project developer comply with the Labor Code (Chapter X – Separate provision for female employees). Ref. Viet Nam Labor Code	N/A
	Is there a possibility that the Project can adversely affect men and women in marginalized or vulnerable communities (e.g., potential increased burden on women or social isolation of men)?	No	The project does not adversely affect men and women in marginalized or vulnerable communities because it creates stable jobs and incomes for local men and women otherwise traditionally agricultural cultivation in terms of recruiting employee as per the policy statement by PD. And furthermore, PD complies with the Labor Code. Ref. Policy Statement and Labor Code.	N/A
	Is there a possibility that the Project might not take	No	The project takes into account gender roles and	N/A

	into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)?		the abilities of women and men to participate in the decisions/design of the project's activities. Before the project came into operation, stakeholders' consultation is conducted to collect comments from the local people, including both men and women, on the designs of the project's activities. Ref. List of participants and Minutes of participants to Stakeholders' meeting	
	Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)?	No	Qualified local residents, both men and women, are recruited to work for the project. The project provides electricity to the national grid and then re-distributed to households, including minority groups. As above mentioned, there are no landless peoples that are resulted from the project activity. Ref. interviewing with project developers; and checking the employee list later on.	N/A
	Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore, its design does not contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities.	N/A
	Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation	No	The project developer complies with the Labor Code, Chapter X – Separate provision on female employees Ref: Labor Code	N/A

	or access to opportunities and benefits?			
	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Thus it has no potential to limit women's ability to use, develop and protect natural resources. Moreover, the project developer shall fully respect law regulations.	N/A
	Is there a likelihood that the proposed Project would expose women and girls to further risks or hazards?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Thus there is no likelihood that the proposed Project would expose women and girls to further risks or hazards.	N/A
	Sexual harassment and/or any forms of violence against women – address the multiple risks of gender-based violence, including sexual exploitation or human trafficking	No	The project activity is to supply clean energy from the wind power plant to the national grid. Thus it does not involve any forms of violence against women.	N/A
	Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls	No	The project developer complies with regulations of Viet Nam law. It does not involve any form of slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.	N/A
	Restriction of women's rights or access to resources (natural or economic)	No	The project activity is to generate electricity from renewable resources. Its implementation follows the regulations of Viet Nam law and under management of People Committee. Thus, it does not involve in the restriction of women's rights or access to resources (natural or economic).	N/A
	Recognise women's ownership rights regardless	No	The project does not have any scope which needs to	N/A

	of marital status – adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources.		recognize the women's ownership rights. The project replaces part of the electricity supplied by fossil fuel fired power plants with wind power plant.	
	Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities	No	The project involves construction of one wind power plant. Trained labours are used, local people are engaged for the same. No discrimination either in gender or any other forms is followed to engage local people.	N/A
	Introduce conditions that ensure the participation of women or men in project activities and benefits based on pregnancy, maternity/paternity leave, or marital status	No	The project owner follows regulations of Labour Code of Viet Nam. Thus they always ensures the participation of women and men in project activities and benefits based on pregnancy, maternity/paternity leave or marital status.	N/A
	Ensure that these conditions do not limit the access of women or men, as the case may be, to project participation and benefits	No	The project developer does not limit the access of women or men, as the case may be, to project participation and benefits as the project developer complies with Labour Code of Viet Nam.	N/A
	The project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks	No	The project does not have any scope to apply gender strategy as such. Although the project positively contributes towards the national mission for empowerment of women through improvement of health and attaining vision for empowerment of women under Law on Gender Equality 2006	N/A
3-3 Community health, safety	The project shall avoid community exposure to increased health risks and shall not adversely affect	No	The project leads to safe working condition and improvement in health as it will replace coal as fuel with	N/A

Gold Standard

and working conditions	the health of the workers and the community		wind which is clean and safe. Further, periodic maintenance by implementing agency ensure prevention of any unsafe working condition.	
3.4 Cultural Heritage, Indigenous Peoples, Displacement and Resettlement	Does the project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)?	No	The project site is located in mostly unused land along the sea without any cultural or historical heritage.	N/A
	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	Most of land area occupied by the project activity is unused land along the sea, no agricultural and cultivated land. There is only a very small area of agricultural land occupied by this project activity. Therefore, the project does not require or cause the physical or economic relocation of local people.	N/A
	Does the Project require any change to land tenure arrangements and/or other rights?	No	Most of land area occupied by the project activity is unused land along the sea, no agricultural and cultivated land. There is only a very small area of agricultural land occupied by this project activity. The compensation expenditure was validated and approved by the Provincial People's Committee.	N/A
	For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership?	No	The implementation of the project only poses impacts on the land reclaimed for construction of the project. Project Owner is authorized legally to use the land.	N/A
	Are indigenous peoples present in or within the area of influence of the Project and/ or is the Project located on land/	No	Most of land area occupied by the project activity is unused land along the sea, no agricultural and cultivated land. There is only a very small area of	N/A

	territory claimed by indigenous people?		agricultural land occupied by this project activity.	
3.5 Corruption	The project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt project	No	There is no corruption provision in the project activity	N/A
3.6 Economic impacts	The project developer shall ensure that there is no forced labour and that all employment is in compliance with national labour and occupational health and safety laws, with obligations under international law, and consistency with the principles and standards embodied in the International Labour Organization fundamental conventions. Where these are contradictory and a breach of one or other cannot be avoided, then guidance shall be sought from Gold Standard	No	The project does not require labour force for implementation of the project. Trained technicians are involved in construction and operation and maintenance of plants. Therefore, no forced labour is involved in the project. No child labour is involved.	N/A
	The project developer shall consider economic impacts and demonstrate a consideration of potential risks to the local economy and how these have been taken into account in project design, implementation, operation and after the project. Particular focus shall be given to vulnerable and marginalized social groups in targeted communities and that benefits are socially-inclusive and sustainable	No	The main investment of the project activity is the initial construction cost of the wind power plant and it will be covered by the project developer. Once commissioning, the project will increase the industrial share in the economic structure of Ben Tre province and lever the performance of traditional trade villages as well as tourism industry and services inside the province. There are not expected any direct economic impact or potential risks to the local economy.	N/A
4.1.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The Project will reduce the emission of 319,920 tCO ₂ e/year compared to the Baseline Scenario as it	N/A

			replaces electricity generated from fossil fuel fired power plants with zero emissions electricity from the wind power plant. Ref. GS-PDD, pages 2	
4.1.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. It does not use energy from a local grid or power supply or fuel resource that provides for other local users. Ref. GS-PDD, pages 3	N/A
4.2.1 Impact on natural water patterns and flow	Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	The proposed project is located on the land along the sea, where no population and crop lands from turbines to the powerhouse. It is concluded that the Project will not affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s).	
4.2.2 Erosion and/or water body stability	Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	No	During the construction period, topsoil erosion may occur due to the excavation activities. However, proper mitigation measures will be applied including: • Embank taluses to prevent from soil erosion and landslides. • Minimize the vegetable clearance in the project site and surrounding areas. • Conduct reforestation in the temporarily occupied areas and strengthen the slopes to avoid landslide and erosions, after	N/A

			accomplishing the construction of main works - During the operational period, there are no excavation activities and the vegetation cover will be restored. Therefore, the soil erosion will be monitored and controlled.	
	Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	No	- During the construction period, topsoil erosion may occur due to the excavation activities. However, proper mitigation measures will be applied including: • Embanks taluses to prevent from soil erosion and landslides. • Minimize the vegetable clearance in the project site and surrounding areas. • Conduct reforestation in the temporarily occupied areas and strengthen the slopes to avoid landslide and erosions, after accomplishing the construction of main works. During the operational period, there are no excavation activities and the vegetation cover will be restored. Therefore, the soil erosion will be monitored and controlled.	N/A
4.3.1 Landscape modification and soil	Does the Project involve the use of land and soil for production of crops or other products?	No	The project activity is to generate electricity from wind. It does not involve the use of land and soil for production of crops or other products. Before the operation, the project site is located partly on	N/A

			agricultural land. All the households who cultivated on the land had been compensated satisfactorily.	
4.3.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore the Project is not susceptible to and does not lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	N/A
4.3.3 Genetic Resources	Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore, the Project is not negatively impacted by the use of GMOs.	N/A
4.3.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	No	Construction phase: The project is a wind power project, so the impact on air quality is only temporary during construction period and not significant. Besides, the Project owner has applied the following measures: - Spraying water along the construction roads and construction site to mitigate dust dispersion. - All means/vehicles for transport of construction materials must be covered in order to minimize dust dispersion. - Trees will be planted to create a dust barrier. - Don't use very old machines to transport materials and construct.	N/A

			All transport equipment/vehicles and machines must have operational certifications issued by the Directorate for standards and Quality to reduce noise and waste gas during their operation. Operation phase: The proposed project operates using wind energy and does not use fossil fuels. Therefore, there is no gas pollutants emitted into the atmosphere during the operation.	
4.3.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore, the Project does not involve the manufacture, trade, release, and/or use of hazardous and non-hazardous chemicals and/or materials.	N/A
4.3.6 Pesticides and fertilizers	Will the Project involve the application of pesticides and/or fertilisers?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore the Project does not involve the application of pesticides and/or fertilizers.	N/A
4.3.7 Harvesting of forests	Will the Project involve the harvesting of forests?	No	Most of land area occupied by the project activity is unused land along the sea, there is limited species settled prior to the project activity. Therefore, the project does not involve the harvesting of forests.	N/A
4.3.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore the Project does not modify the quantity or nutritional quality of food available such as through crop regime alteration or	N/A

			export or economic incentives.	
4.3.9 Animal Husbandry	Will the Project involve animal husbandry?	No	The Project's purpose is to supply clean energy from the wind power plant to the national grid. Therefore the Project does not involve animal husbandry.	N/A
4.3.10 High conservation value areas and critical habitats	Does the project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The project is not located in an area within a high conservation value area or within critical natural habitats.	N/A
4.3.11 Endangered species	Are there any endangered species identified as potentially being present within the project boundary (including those that may route through the area)?	No	The physical location of the project is described in Section A.4. above. There are no endangered species identified as potentially being present the project boundary.	N/A
	Does the project potentially impact other areas where endangered species may be present through transboundary affects?	No	The project activity is not expected either potentially impact other areas where endangered species may be present through transboundary affects.	N/A

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from stakeholders

>> (Describe how stakeholder consultation was conducted in accordance with GS4GG Stakeholder Procedure Requirements and Guidelines.)

Due to COVID-19 outbreak and the temporary social-distancing situation in Viet Nam, physical meeting for Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 has been postponed and will be conducted before the project is submitted for Gold Standard design review. This section therefore will be updated during the validation.

Continuous input /grievance mechanism

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	Justification
Continuous Input / Grievance Expression Process Book	Comment books will be made available on the project site, at PO head	Project site is the place where the local stakeholders can communicate directly (or anonymously via the comment book) with the

	office and at the Office of the communal People's Committee of Thanh Hai commune, so that local stakeholders can provide feedback on the project.	project's Management Board. The office of the communal People's Committee is a standing unit of the People's Committee to deal with comments from local community on all matters of the commune and is the contact point between local authority and the residents. The comment books will be securely placed in the chosen locations and daily checked by responsible persons. Since the physical meeting had not been organized due to Covid-19 situation, the PO will inform the stakeholders about the continuous input methods which includes details of contents, locations of comment books, phone's numbers and email addresses, etc. by sending an announcement to the affected communes and posted it on the project site and PO head office. When the physical meeting is organized, the PO will inform the stakeholders directly at the meeting.
Telephone access	The telephone numbers of the project's Management Board and of the GS consultancy company are made available for local stakeholders to provide feedback on the project.	The telephones are located at the office of the project's Management Board on the project site, at the office of the Project Owner and at the office of the GS consultancy company to allow more practical communication with local stakeholders. There is always a receptionist on the desk to answer the calls or have the messages recorded. All received calls shall be logged and recorded with the date, comments, action requested and project responses. Stakeholders are not required to give their personal details when they wish to make a comment. Since the physical meeting had not been organized due to Covid-19 situation, the PO will inform the stakeholders about the continuous input methods which includes details of contents, locations of comment books, phone's numbers and email addresses, etc. by sending an announcement to the affected communes and posted it on the project site and PO head office. When the physical meeting is organized, the PO will inform the stakeholders directly at the meeting.
Internet/email access	The email addresses of the PO and of the GS consultancy company are made available for local stakeholders to provide feedback on the project.	There is always an administrative staff to receive the emails. All received emails shall be logged and recorded with the date, comments, action requested and project responses. Since the physical meeting had not been organized due to Covid-19 situation, the PO will inform the stakeholders about the continuous input methods which includes details of contents,

		locations of comment books, phone's numbers and email addresses, etc. by sending an announcement to the affected communes and posted it on the project site and PO head office. When the physical meeting is organized, the PO will inform the stakeholders directly at the meeting.
Nominated Independent Mediator (optional)	Not applied	Not applied

E.2. Summary of comments received

>> *(Provide a summary of key comments received during the consultation process.)*

Due to COVID-19 outbreak and the temporary social-distancing situation in Viet Nam, physical meeting for Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 has been postponed and will be conducted before the project is submitted for Gold Standard design review. This section therefore will be updated during the validation.

E.3. Report on consideration of comments received

>> *(Describe how the comments have been addressed by providing a clarification to the stakeholder or by altering the design of the project or by proposing to monitor any anticipated negative impacts etc.)*

Due to COVID-19 outbreak and the temporary social-distancing situation in Viet Nam, physical meeting for Wind Power Project At Sea – No.5 Wind Power Plant Thanh Hai 1-4 has been postponed and will be conducted before the project is submitted for Gold Standard design review. This section therefore will be updated during the validation.

Appendix 1. Contact information of project participants

Organization name	Tan Hoan Cau Ben Tre Joint Stock Company
Registration number with relevant authority	1301060117
Street/P.O. Box	Nguyen Van Trung Street, Phu Khuong Ward
Building	
City	
State/Region	Ben Tre province
Postcode	86000
Country	Viet Nam
Telephone	
Fax	
E-mail	
Website	
Contact person	Mai Van Long
Title	General Director
Salutation	Mr.
Last name	Mai
Middle name	Van
First name	Long
Department	
Mobile	+84 989 006 894
Direct fax	
Direct tel.	
Personal e-mail	longtanhoancau@gmail.com

Organization name	Energy and Environment Consultancy Joint Stock Company
Registration number with relevant authority	0103013853
Street/P.O. Box	No.48, Le Van Luong street
Building	Diamond Flower Tower
City	Hanoi
State/Region	
Postcode	10000
Country	Viet Nam
Telephone	+84 24 6666 9754
Fax	+84 24 6666 9755

E-mail	eec@eec.vn
Website	https://eec.vn/en/
Contact person	Tran Minh Tuyen
Title	Director
Salutation	Mr.
Last name	Tran
Middle name	Minh
First name	Tuyen
Department	
Mobile	
Direct fax	
Direct tel.	
Personal e-mail	registration@eec.vn

Organization name	Swiss Carbon Value Ltd.
Registration number with relevant authority	CH-02030321521
Street/P.O. Box	Technoparkstrasse 1
Building	
City	Zurich
State/Region	
Postcode	8005
Country	Switzerland
Telephone	+41 43 501 35 50
Fax	+41 43 501 35 99
E-mail	registration@southpolecarbon.com
Website	
Contact person	Renat Heuberger
Title	Managing Partner
Salutation	Mr.
Last name	Heuberger
Middle name	
First name	Renat
Department	
Mobile	
Direct fax	
Direct tel.	
Personal e-mail	registration@southpolecarbon.com

Appendix 2. Summary of post registration design changes

Not applicable

Revision History

Version	Date	Remarks
1.1	24 August 2017	Updated to include section A.8 on 'gender sensitive' requirements
1	10 July 2017	Initial adoption