



Gold Standard[®]
for the Global Goals

TEMPLATE

TRANSITION REQUEST FORM - PROJECT

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VERSION **1.0**

RELATED SUPPORT

- **TEMPLATE GUIDE Key Project Information & Project Design Document v.1.2**

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Summary:

The projects transitioning from **CDM or other Standards to Gold Standard for Global Goals (GS4GG)** shall submit the transition request form and PDD (this document). The **Transition Request Form** is also to be completed for projects that are already registered with GS4GG for CER labelling and seek to move to GSVER stream to issue Gold Standard VERs..

This document contains the following Sections

Section - Transition Request Form

[TRF.1 ELIGIBILITY CHECK FOR TRANSITION](#)

[TRF.2 TRANSITION PROJECT INFORMATION](#)

[TRF.3 TRANSITION CHECKLIST](#)

Key Project Information

Section - Project design document

0 – Description of project

0 - Application of approved Gold Standard Methodology (ies) and/or demonstration of SDG Contributions

0 – Duration and crediting period

0 – Summary of Safeguarding Principles and Gender Sensitive Assessment

0 – Outcome of Stakeholder Consultations

Appendix 1 – Safeguarding Principles Assessment (mandatory)

0 - Contact information of Project participants (mandatory)

0 - LUF Additional Information (project specific)

0 - Summary of Approved Design Changes (project specific)

The following table summarises how different sections of this document shall be filled to facilitate request for transition from other standard to GS4GG.

Section	Required for	How to complete the section
Transition Request Form		
TRF.1 Eligibility check for transition	All projects	Answer the assessment questions and provide supporting information as needed
TRF.2 Transition project information	All projects	Provide project information pertaining to the standard the project is transitioning from (e.g., CDM)
TFR.3 Transition checklist	All projects	Answer the assessment questions and provide supporting in the section in the PDD section as needed
Project Design Document		
Key project information	All projects	Include project details pertaining to GS4GG
		Provide information as needed. Any section/subsections
Section A to E	All projects	<ul style="list-style-type: none"> - that requires information/justification or additional information as per transition checklist, AND - that involves update/revision to the information provided for registration with other standards. In such cases, the project shall copy and paste the information from registered PDD (other standard) and mark the additional information in track changes.

SECTION – TRANSITION REQUEST FORM

TRF.1 ELIGIBILITY CHECK FOR TRANSITION

To be completed for all projects seeking transition to GS4GG from other standards.

Requirement	To be completed by project developer
<p>The project must have a crediting period start date with CDM/other standard on or after 01 January 2016</p>	<p>Is the project crediting period start date after 01 January 2016? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (go to questions below)</p>
<p>The project that has a crediting period start date with CDM/other standard before 01 January 2016 shall demonstrate the risk of discontinuation without carbon revenue.</p>	<p>As per the registered CDM PDD, the estimated IRR of this project activity is 7.32% which is below than the selected benchmark of 11.26 %. So, PP has considered carbon revenue to improve the project profitability and registered the project under CDM. It shall be noted that the actual PLF reduced by 23.3% compared the values considered in the registered PDD. With the consideration of actual PLF, the IRR further comes down to 3.71% against the benchmark of 11.26%. Hence it is clear that the project is not financially attractive even in the actual case.</p> <p>The project is registered with UNFCCC on 29th October 12. But after the year 2012, the CER price have crashed into 0.1 - 0.2 USD/CER. Also the demand for CER has come down drastically. Even in the year 2019, the CER price ranged from 0.15 – 0.24 USD¹ and the CERs retired is only about 60% of the issued CERs. Since the verification involved high cost including CER issuance fee (ie, 0.2 USD/CER), verification cost and consultancy cost, PP will incur additional loss as the revenue from the CER may not even cover the costs involved. As PP has already incurred high cost in registration, PP does not wish to incur additional cost in verification in the uncertain market condition. Hence, PP has not gone for verification since the registration of the project activity. It shall also be noted that once the power plant is commissioned, the project cannot stop the operation as PP has already incurred huge the capital cost with the help of bank loan which needs to be repaid. Hence, only option PP has is to run the project but with lower returns until PP get the better carbon revenue. However, with the concern about low profitability over the years and the fact that carbon market prices are improving due to the Paris Agreement coming in to effect, PP has now taken the various steps to obtain carbon revenue as it is crucial for them. The complete chronology of the project till date is given below:</p>

¹ World bank report: State and Trends of Carbon Pricing 2020 (page 59)
<https://openknowledge.worldbank.org/bitstream/handle/10986/33809/9781464815867.pdf?sequence=4&isAllowed=y>

Activity	Timeline
CDM prior consideration communication to UNFCCC & DNA	March 2010
Signing of ERPA with EDFT (Until Dec 2017)	18/11/2010
Date of purchase order (start date)	15/08/2011
CDM registration Date	20/10/2012
Communication with EDFT to verify & purchase the CERs	In 2012 & 2013
Appointment of Kosher for CDM RCP, GS registration and purchase of CERs & VERs	15/10/2019
First submission to GS	22/01/2020
CDM RCP approval	January 2021
GS Design certification (GS7746)	29/04/2021
Submission of request for issuance under GS for the period	18/08/2022

PP is considering all the possible option to get the carbon revenue. From above justification, it is clear that the carbon revenue is vital to improve the project financials and PP has taken steps to obtain the same.

The project that has a crediting period start date with CDM/other standard **before 01 January 2016** shall demonstrate how the project has been operational in the absence of carbon revenue, if carbon credits have not been issued to the project in recent years.

As mentioned above, it shall also be noted that once the power plant is commissioned, the project cannot stop the operation as PP has already incurred huge the capital cost with the help of bank loan which needs to be repaid. Hence, only option PP has is to run the project but with lower returns until PP get the better carbon revenue.

As the CER prices have not improved since registration of the project under CDM and the VER prices were also very low which will not generate any considerable return, PP has not gone for verification and was waiting for the prices to improve. As the CER prices still continues to be very low, but the VER prices are improving, PP has taken following steps generate revenue from voluntary carbon market:

- Verification under CDM till 30th November 2019 -Already Issued
- Verification under Gold Standard from 1st December 2019 onwards

List of supporting documents

Revised IRR Calculation sheet
Actual PLF calculation sheet

TRF.2 TRANSITION PROJECT INFORMATION

Project developer shall provide project information (in grey rows), pertaining to the standard, the project is transitioning from (e.g., CDM) in the table below.	
Name of the original standard	<input checked="" type="checkbox"/> CDM <input checked="" type="checkbox"/> Other (<u>Gold Standard as GS-CER project</u>)
Project status with original standard	<i>The current status of project with CDM/other standard at the time of submission of this form.</i> <input checked="" type="checkbox"/> Active (registration status is valid) <input type="checkbox"/> Withdrawn (deregistered) <input type="checkbox"/> Provisional (awaiting guidance from the CMP at CMP 16, CDM PoA only)
CDM/ other standard reference ID	<i>Reference number/ID allocated to the project by CDM/other standard.</i> CDM 7474 GS 7746
Project reference weblink	<i>The weblink of the project page of CDM/other standard.</i> https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view?cp=1 https://registry.goldstandard.org/projects/details/2591
Title of Project	<i>The title of the project used for registration with CDM/other standard.</i> West Huaybong 3 wind farm project West Huaybong 3 wind farm project
New title of Project (if applicable)	<i>The title of the project if it has been changed for registering with Gold Standard.</i> NA
Activity Scale	<i>Project scale registered with CDM/other standard.</i> Large Scale
Methodology used	<i>Methodology title and the version number applied for registration with CDM /other standard.</i> ACM0002 ver. 20 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources
Amount of reductions	<i>Average annual emission reductions (tCO₂eq/year).</i> CDM: 132,339 GS: 139,035
Registration date	<i>The project registration date with CDM/other standard.</i> CDM: 29/10/2012 (renewal date 07/01/2021) GS: 29/04/2021
Type of crediting period	<input checked="" type="checkbox"/> renewable crediting period <input type="checkbox"/> fixed crediting period
Crediting period	<i>The project registered crediting period start date and end date with CDM/other standard.</i> CDM: Start date of 1 st crediting period: 01/12/2012 End date of 1 st crediting period: 30/11/2019 Start date of 2 nd crediting period: 01/12/2019 End date of 2 nd crediting period: 30/11/2026 GS:

	Start date of 1 st Crediting period: 01/12/2019 End date of 1 st Crediting period: 30/11/2024	
Total Monitoring Periods issued	The total period that has already been issued by CDM/other standard. CDM: Start date: 01/12/2012 End date: 30/04/2019 GS: NA	
Latest monitoring period	The latest monitoring period that has already been issued or submitted for issuance to CDM/other standard. CDM: Start date: 01/05/2019 End date: 30/11/2019 GS: NA	
	Issuance Status Date of Issuance, if issued.	<input type="checkbox"/> Issued <input checked="" type="checkbox"/> Awaiting issuance dd/mm/yyyy
Declaration	Click on the tick box to confirm.	
	<p>The Project Developer/Representative hereby acknowledges that project developer;</p> <p><input type="checkbox"/> Option 1 - has included information in this document that has not been validated/verified as part of CDM PDD OR</p> <p><input checked="" type="checkbox"/> Option 2 - has copied all validated information as it appears in the original and then used tracked changes to highlight any information that not been validated/or has changed - <i>Note if option 2 is selected the project developer shall fill all sections in the PDD template of this document.</i></p> <p>The Project Developer/Representative hereby acknowledges that project developer;</p> <p><input checked="" type="checkbox"/> is aware that for a given vintage, a registered Gold Standard project can request the issuance of the emission reductions under only one standard/certification scheme. (applicable to all projects).</p> <p><input checked="" type="checkbox"/> is aware that all projects that transition to GS4GG shall demonstrate Ongoing Financial Need at the time of renewal of their crediting period following applicable GS4GG requirements. (applicable to all projects).</p> <p><input checked="" type="checkbox"/> confirms that the project developer/representative will make a declaration, in writing, in the monitoring report submitted to Gold Standard that (applicable to CDM PoA/CPAs)</p> <ul style="list-style-type: none"> - project will/has not issue both a CER/other compliance units under Paris Agreement and a GSVER for the same vintage. 	

	<ul style="list-style-type: none"> - project developer agrees to comply with all future UNFCCC COP/CMP decisions² including adjustment of GWP values
Project Developer/ authorised signatory	<p><i>Name and designation of the project developer/authorised signatory</i> Taychatum Narapanich, Manager</p>

TRF.3 TRANSITION CHECKLIST

Project developer shall answer all assessment questions listed below and provide additional information/justification in the PDD section, where required. Please note that the checklist is based on the [GHG Emissions Reductions and Sequestration Product Requirements](#).

The checklist also provides relevant requirements applicable to project transitioning to GS4GG for easy referencing. The PD shall refer to relevant GS4GG documents, as applicable, for further details. It is recommended that PD refers to Guidelines in the table below for more information on the requirements and flexibilities provided. This document (in word) shall be submitted to SustainCERT along with other required documents **for preliminary review** as listed below –

- [Cover Letter](#)
- [Terms and Conditions](#)
- [Official Development Assistance declaration](#)
- [Stakeholder Consultation Report](#)
- Project Design Document (PDD) final version (CDM/other standard)
- Validation report submitted to CDM/other standard
- Last Monitoring and Verification report submitted to CDM/other standard

² CDM clarification available on this topic as on date can be referred to [here](#).

1 Transition pathway	
1.1 Option 1: Is project seeking registration with GS4GG to issue GSCERs while maintaining the CDM registration? (Ref: GHG Product Requirements)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1.2 Option 2: Is project seeking registration with GS4GG to issue GSVERs only and/or conversion of issued CERs to GSVERs ? (Ref: Annex B, GHG Product Requirements) <i>Note – for conversion of issued CERs to GSVERs, the project must be registered with GS4GG.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1.3 Option 3: Is project seeking registration with GS4GG to issue GSVERs only and/or conversion of emission reduction to GSVERs issued by standard other than CDM ? (Ref: Annex B, GHG Product Requirements)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Requirement:</p> <p>All projects submitting request for transition on or after 1/1/2021 must demonstrate compliance with requirements stated in Annex B, GHG Product Requirements.</p> <p>The project following option 1 above;</p> <ul style="list-style-type: none"> - may seek registration under GS4GG based on provisional CDM EB decision - may seek issuance of GSVERs in exchange of provisional CERs based on CDM EB decision but must transfer issued CERs to the Gold Standard Swiss CDM Registry Account. If there are any implications for issued volume or project eligibility due to CMP decision regarding GWP, additionality or any other decision, the PD must address these issues, as applicable in consultation with SustainCERT/GS. - A/R projects are not eligible for option 1. <p>The project transitioning to GS4GG following option 2 above,</p> <ul style="list-style-type: none"> - may convert issued CERs to GSVERs - are not required to deregister from CDM but shall not claim emission reductions under both GS4GG and CDM for the same vintage - Eligible LUF project is required to deregister from CDM to issue GSVERs. <p>The project transitioning to GS4GG following option 3 above,</p> <ul style="list-style-type: none"> - may convert issued emission reductions unit to GSVERs - may issue GSVERs - shall deregister project from other standard before registration with GS4GG <p>Guidelines:</p> <p>Project already undergoing design certification for CER labelling can continue with their existing process. SustainCERT shall be notified of the intention to switch to GSVER stream, at the earliest possible opportunity.</p> <p>Project already certified for CER labelling can switch to GSVER stream by completing this form and notifying SustainCERT. Such project may leave the PDD section blank as this information has been captured in GS4GG PDD version submitted earlier.</p>	
2 Transition approval procedure	
2.1 Option 1 - Is the project undergoing a preliminary review by sustainCERT , validation by VVB and design review by SustainCERT ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2.2 Option 2 - Is the project undergoing a combined preliminary review ,	<input type="checkbox"/> Yes

validation, and design review by SustainCERT ? (restrictions apply, see 5.3 below)	<input type="checkbox"/> No
2.3 Option 3- Is the project undergoing preliminary review by SustainCERT , combined validation & verification by VVB , followed by combined design and performance review by SustainCERT?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Requirement:

The project certification under GS4GG involves following key steps. Refer to Section 5. Project cycle Principles and Requirements for details.

Preliminary review - Preliminary Review is conducted once at the time of first submission to Gold Standard. It involves desk review of the Key Project Information and Draft Project Design Document by SustainCERT.

Design certification (validation + design review) - Design certification involves validation by VVB and design review by SustainCERT. With successful design certification the Project will obtain 'Certified design' status that is equivalent to registration under CDM and other standard.

Performance certification (verification + performance review) - Performance certification involves verification by VVB and performance review by SustainCERT. The positive conclusion of the Performance Review period shall result in Gold Standard 'Certified Project status' and Project can issue GSVERs. The project may opt for combined Design Certification, conducting both the first Verification and Performance Review under GS4GG at the same time.

To minimise disruption and keep the transition review time and costs minimum, the projects are provided with flexibilities as summarised in the table below;

Certification outcome	Certification stage	Option 1	Option 2*	Option 3
Listing	Preliminary review	Normal certification pathway	Combined Preliminary review + Validation + Design review	Combined validation + verification followed by combined design + performance review
Certified Design = Registration	Validation	SustainCERT	SustainCERT	SustainCERT
	Design review	VVB	VVB	VVB
Certified project = Issuance	Verification	SustainCERT	SustainCERT	SustainCERT
	Performance review	VVB	VVB	VVB
Comments		Project shall go through preliminary review by SustainCERT (4 weeks) Design review (minimum 4 weeks) is conducted after Validation by VVB and is concluded when all CARs/CLs are successfully closed.	Project may combine preliminary review with validation and design review. All these steps can be combined and completed by SustainCERT. VVB shall complete the verification.	Project shall go through preliminary review by SustainCERT (4 weeks) Project Developers may combine Design Certification with first Verification and Performance Review. VVB may combine site visits and VVB submits positive Validation and Verification Reports at the same time.

	Performance review (minimum 3 weeks) is conducted after Verification by VVB and is concluded when all CARs/CLs are successfully closed.	Performance review (minimum 3 weeks) is conducted after verification by VVB and is concluded when all CARs/CLs are successfully closed.	Concurrent Design Review and Performance Review (minimum 6 weeks) is conducted after submission of validation and verification reports by VVB and is concluded when all CARs/CLs are successfully closed.
<p><i>For option 1, a validation site visit by VVB is not required as long as the VVB conducted a site visit as part of validation/verification in last three years (from time of first submission for preliminary review) and new/updated information can be audited based on desk review and/or using remote audit approaches.</i></p> <p><i>For Option 2, SustainCERT conducts project design elements desk based audit and approve project transition, without VVB’s opinion. Note that this option will involve additional review fee levied by SustainCERT. The project developer shall confirm the applicable fee and timelines with SustainCERT (help@sustain-cert.com) before submitting the request for transition.</i></p> <p><i>If transition project is applying a new/latest version of the methodology which requires full audit but VVB, option 2 cannot be applied.</i></p>			

3| Project Eligibility

3.1 Is the project eligible project type under Gold Standard for the Global Goals?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Requirement: The transitioning project shall be one of the eligible project types for issuance of Gold Standard VERs (Ref: [GHG Product Requirements](#)).

Guidelines: Typical eligible project types are Renewable Energy Supply, End-Use Energy Efficiency Improvement, Waste Handling & Disposal, Land Use and Forests.

- Afforestation/Reforestation project registered with CDM/other standard may transition to GS4GG for issuance of GSVERs only but are not eligible for labelling of issued emission reduction units.
- RE projects shall refer to [Renewable Energy Activity Requirements](#) for eligibility check.
- RE projects for example - · Hydropower · biomass resources · landfill gas and biogas from agro-processing, wastewater and other residues · Waste Heat/Gas recovery · Fossil co-generation · Waste incineration and gasification · Waste handling and disposal are required to demonstrate compliance with the specific eligibility requirements. Refer to Annex – A of [Renewable Energy Activity Requirements](#) for further details.
- Community Services Activities projects for example - Hydropower · biomass resources · landfill gas and biogas from agro-processing, wastewater and other residues · Waste Heat/Gas recovery · Fossil co-generation · Waste incineration and gasification · Waste handling and disposal · Relighting · End-use fossil switching are required to demonstrate compliance with the specific eligibility requirements. Refer to Annex – A of [Community Services Activity Requirements](#) for further details.

4| Compliance with relevant Activity Requirements

4.1 Does the project conform to the relevant Activity Requirements (CSA/RE /LUF)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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<p>4.2 Does any specific eligibility criteria/requirement stipulated in Annex A of CSA/ requirements apply to the project? (see section 2.0 for LUF)</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>4.3 Does specific eligibility criteria/requirement stipulated in Annex A of CSA/RE requirements that apply to the project, lead to any change in the registered PDD? If Yes, please provide a full explanation in section A.1.1. below.</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Requirement: (Ref: Section 4.1.1 of GHG Product Requirements) Projects shall conform to the relevant Activity Requirements and Gold Standard Approved Methodologies, including eligible CDM Methodologies.</p> <p>RE rule update / RE PoA rule update: Grid connected Renewable Energy projects seeking to transition from another carbon crediting scheme to GS4GG or labelling of emission reductions under GS4GG are exempted from eligibility requirements listed in para 2.1.3 of the RE Activity Requirements. This exemption is only allowed to projects that started the first crediting period with the original carbon crediting scheme from 01/01/2016 or later but before 24/01/2020. (Ref: Section 2.1.1 and 2.1.2 of RU 2020 AR –RE V1.2)</p> <p>Specific Renewable Energy Activity requirements (refer to Annex A): Hydropower, biomass resources, landfill gas and biogas from agro-processing, wastewater and other residues, Waste Heat/Gas recovery, Fossil co-generation, Waste incineration and gasification, Waste handling and disposal.</p> <p>Specific Community Service Activity requirements (refer to Annex A): Hydropower, biomass resources, landfill gas and biogas from agro-processing, wastewater and other residues, Waste Heat/Gas recovery, Fossil co-generation, Waste incineration and gasification, Waste handling and disposal, Relighting, End-use fossil switching.</p>	
<p>5 Applicability of the methodology/tool version</p>	
<p>5.1 Does the project apply an eligible GS methodology? Refer to list of the eligible methodologies here.</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>5.2 Does the project apply the version of the methodology and applicable tools applied for CDM/other standard registration or renewal?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>5.3 Does the project apply the latest version of the methodology and applicable tools available at the time of first submission of this form? If Yes, please provide a full explanation in section B below. And note that the project cannot opt for option 2 mentioned transition approval procedure.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Requirement: (Ref: Annex B of GHG Product Requirements)</p> <p>Transition project shall</p> <ol style="list-style-type: none"> conform to the relevant Activity Requirements and Gold Standard Approved Methodologies, including eligible CDM Methodologies. also meet the additional GS4GG methodology eligibility requirements, where applicable. Refer to CDM Methodologies for Gold Standard Eligibility Requirements. <p>Transition project shall apply the version of GS approved CDM methodology or methodology tool for transition to GS4GG as follows;</p> <ol style="list-style-type: none"> version applied at the time of registration/renewal of crediting period with other standard, OR version available at the time of first submission (preliminary review) this form. 	

6 Demonstration of additionality	
6.1 Are you aware that the transitioning project will be required to demonstrate Ongoing Financial Need as per the relevant GS rules and requirements available at the time of renewal of crediting period? (Refer to para 4.1.51 – 4.1.53 of Principles & Requirements .)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Requirement:</p> <ul style="list-style-type: none"> - The CDM and JI project are not required to carry out additional assessment for demonstration of additionality over and above what has been done for registration/determination with the CDM unless the project falls into a category that is deemed non-additional in an applicable Gold Standard Activity Requirement. In such cases the relevant Activity Requirement shall take precedence. Ref: Annex B GHG Product Requirements. - Transition projects registered with standards other than CDM are required to undergo additionality revalidation to re-establish the validity of the underlying assumptions applied in the demonstration of additionality at the time of registration with the other standard. - The projects seeking combined transition and renewal of crediting period with GS4GG are not required to demonstrate OFN at the time of transition but must demonstrate OFN at the time of Crediting Period renewal after transitioning to GS4GG. 	
7 Sustainable Development Assessment	
7.1 Does the project positively contribute towards minimum three Sustainable Development Goals (SDGs) - SDG13 (mandatory) + two other SDGs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
7.2 Have you identified the monitoring parameters linked with selected SDGs and corresponding SDG targets? For example – the monitoring parameter <u>Amount of GHGs emissions avoided or sequestered</u> is linked with SDG 13. Climate action, SDG target 13.2 Integrate climate change measures into national policies, strategies and planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Fill section B.6. Sustainable Development Goals (SDG) outcomes and B.7 Monitoring plan, below for SDGs monitoring parameters not covered in registered PDD with other standards.</p> <p>Fill Table 1 – Estimated Sustainable Development Contributions below.</p> <p>Requirement: The transitioning project shall demonstrate a clear, direct contribution to sustainable development, defined as making demonstrable, positive impacts on at least three Sustainable Development Goals (SDGs), one of which must be SDG 13 (Ref: Section 4.(c) of Principles and Requirements)</p> <p>Refer to Annex B, GHG Product Requirements for further guidelines for transition projects.</p> <p>Guidelines: Selected SDG impacts must not result from a one-off from design/construction/distribution/ start-up or decommissioning of the project.</p> <p>You may refer to /use the SDG impact Tool (under consultation currently) to identify the relevant monitoring indicator, SDGs and corresponding SDG targets and design monitoring plan for identified indicators.</p>	

8 Start date and duration of the crediting period	
8.1 Has the crediting period of the transitioning project registered with other carbon standard/certification scheme changed and/or extended?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8.2 Is the total duration of the crediting period (i.e. including period that had been issued under the host standard) less than/equal to the maximum crediting period allowed under relevant GS4GG activity requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>Complete the section C.2.2 Total length of crediting period below.</p> <p>Requirement:</p> <ul style="list-style-type: none"> - The crediting period of the transitioning project/PoA/CPA registered with other standards or certification schemes cannot be changed/extended. - Maximum crediting period allowed under GS4GG are as CSA – 15 Yrs, RE – 15 Yrs, LUF 30 – 50 Yrs, AGR – 10 Yrs, if not defined in activity requirement or applicable methodology – 10 Yrs. - The start date of the GS crediting period shall be same as the start date of the CDM crediting period. (Annex B, GHG Product Requirements) - For a transitioning project, PoA/CPA, the total duration of the crediting period, including the period that has been claimed under the host standard, shall not exceed the maximum crediting period allowed under relevant GS4GG activity requirements. <p>If a given project transitioning to GS4GG, was registered under Standard X with -</p> <ul style="list-style-type: none"> • fixed crediting period (10 years): The total crediting period (Standard X + GS4GG) must remain 10 years. The project can only claim remaining years of its 10-year crediting period after transitioning to GS4GG. • renewable crediting period (7*3 year): The total crediting period (Standard X + GS4GG) must be equal to that allowed under relevant GS4GG activity requirements. The project can only claim remaining years of the maximum allowed crediting period after transitioning to GS4GG. For example; the maximum crediting period allowed for renewable energy project is 15 years. A renewable energy project that has already claimed 5 years under Standard X can only claim remaining 10 years of the total 15 years of its allowed crediting period after transitioning to GS4GG - For a transitioning project, the start date of the Gold Standard Crediting Period starts with crediting period start date with other standard or maximum two years before the date of first submission (submission for preliminary review), whichever occurs later. (Ref: Annex B, GHG Product Requirements) 	
9 Safeguarding Principles Assessment	
9.1 Does the project conform to the Gold Standard Safeguarding Principles and Requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9.2 Is there any risk and/or likely adverse outcomes of the project?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9.3 If answer is yes for Q Error! Reference source not found.Error! Reference source not found. , can the project achieve requirements with regards to the relevant principle through design, management or risk mitigation?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
9.4 If answer is yes for Q Error! Reference source not found.Error! Reference source not found. , have the Mitigation Measures added to the	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Monitoring Plan (if required)?		
Complete the Annex 1 and section D. Summary of Safeguarding Principles below.		
<p>Requirement: The transitioning project shall conform to the Gold Standard Safeguarding Principles and Requirements. (Ref: Section 4.1.19 of GS4GG Principles and Requirements)</p> <p>Guidelines: The detailed Safeguarding Principles and Requirements checklist is available in Annex 1 of this document.</p>		
10 Stakeholder Consultation Requirements		
10.1 	<p>Has the project conducted a Stakeholder Consultation in accordance with the requirements of Gold Standard Stakeholder Consultation & Engagement Requirements?</p> <p>The answer to Q 10.1 is "No", if any of the questions below is answered as "No". The project should take the question(s) into account and address the gap when conducting supplementary stakeholder consultation to comply with GS4GG requirements.</p> <p>Please answer the below question with regards to the stakeholder consultation conducted to comply with CDM/other standard requirements?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10.2 	Did you conduct the stakeholder consultation before the project start date?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10.3 	Did you discuss identified direct positive and negative impacts of the projects with stakeholders?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.4 	Does the invited stakeholder covers all stakeholder groups (a to g) listed in paragraph 3.1.1. of STAKEHOLDER CONSULTATION AND ENGAGEMENT REQUIREMENTS ?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.5 	Did the invitation methods solicit input from women and marginalised groups?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.6 	Were the stakeholders invited at least 30 days before the stakeholder meeting?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.7 	Did a local language version of the non-technical summary with information required as per paragraph 5.1.1. of STAKEHOLDER CONSULTATION AND ENGAGEMENT REQUIREMENTS , shared with stakeholders?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.8 	Was a physical meeting conducted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.9 	Was a gender lens applied to assessing comments? (for example, if only men provided comments on household device project, was this taken into consideration when assessing the relevance of the comment?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.10 	Were any serious, reasonable and proportional concerns raised and taken into account and satisfactorily addressed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.11 	Were any points that warrant 'Mitigation measures' marked as such and monitoring plan has been designed and included in the PDD?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

10.12 Is the mandatory Continuous Input / Grievance Expression Process Book's location clearly stated (and therefore usable)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10.13 Does PDD include a summary report of the comments received from local stakeholders?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Complete the section E. Summary of Local Stakeholder Consultation below.

Requirement: Ref: Section 4.1.25 of [GS Principles and Requirements](#).

Guidelines: Project that conducted a stakeholder consultation meeting to comply with CDM/other standard requirements, should conduct, at minimum,

- one round of consultation for identified gaps i.e., gaps due to differences in stakeholder consultation requirements of GS4GG and CDM/other standard. For instance, if original consultations only involve one physical meeting, CME/PD should conduct a stakeholder feedback round covering all the identified gaps. The additional stakeholder consultations may involve a physical meeting or stakeholder feedback round, as necessary.

If COVID interim measures are applicable (currently till 30/06/2021), the physical meeting and stakeholder feedback round may be postponed, and a draft SCR shall be mandatorily submitted to cover the consultation activities carried out till date.

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	6
Completion date of version	01/02/2023
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	<input type="checkbox"/> <input type="checkbox"/> Community Services Activities <input checked="" type="checkbox"/> <input type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> <input type="checkbox"/> N/A
Scale of the project activity	<input type="checkbox"/> <input type="checkbox"/> Micro scale <input type="checkbox"/> <input type="checkbox"/> Small Scale <input checked="" type="checkbox"/> <input type="checkbox"/> Large Scale
Other Requirements applied	NA
Methodology (ies) applied and version number	ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources, Version 20
Product Requirements applied	<input checked="" type="checkbox"/> <input type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> <input type="checkbox"/> N/A
Project Cycle:	<input type="checkbox"/> <input type="checkbox"/> Regular <input checked="" type="checkbox"/> <input type="checkbox"/> Retroactive

Table 2 – Estimated Sustainable Development Contributions

Sustainable Development Goals Targeted	SDG Impact (defined in B.6.)	Estimated Annual Average	Units or Products
13 Climate Action (mandatory)	GHG Emission Reduction	132,339	GS-VER
3 Good Health and Well Being	Community development activities undertaken	1	Number
7 Affordable and Clean Energy	Quantity of net electricity supplied to the grid	232,500	MWh
8 Decent Work and Economic Growth	Jobs created	40	Number
	Trainings conducted	2	Trainings

SECTION A. DESCRIPTION OF PROJECT

A.1 Purpose and general description of project

>>

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

We blink: <https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view>

Now PP is applying same for Gold Standard registration.

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

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: 7474³). As per the CDM registered PDD, the estimation of GHG reductions by this project is limited to carbon dioxide (CO₂) only. Thus the project activity leads to an emission reduction of **661,695 tCO₂e** for the chosen crediting period with the annual average emission reduction of **132,339 tCO₂e**.

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

³ <https://cdm.unfccc.int/Projects/DB/RWTUV1348727249.16/view>

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

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

GS eligibility		Justification
<p>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.</p>	<p>OK</p>	<p>The project is a wind power generation activity which is automatically eligible under the project type category (b) of Renewable energy activity requirement⁴:</p> <p><i>“(b) Project shall comprise of renewable energy generation units, such as photovoltaic, tidal/wave, wind, hydro, geothermal, waste to energy and renewable biomass:</i></p> <ul style="list-style-type: none"> • <i>Supplying energy to a national or a regional grid; or</i>

⁴ <https://globalgoals.goldstandard.org/wp-content/uploads/2017/06/200-GS4GG-Renewable-Energy-Activity-Requirements-v1.1.pdf>

		<ul style="list-style-type: none"> • <i>Supplying energy to an identified consumer facility via national/regional grid through a contractual agreement such as wheeling"</i> <p>The CDM approved methodology ACM0002, Version 20, is applied to the project activity.</p>
<p>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.</p>	<p>NA</p>	<p>The project type is approved and published on the GS website.</p>
<p>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.</p>	<p>OK</p>	<p>The project activity is implementation wind power plant in Thailand. The project avoids CO₂ 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.</p> <p>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</p>

		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	<i>Non-Applicable</i>
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	<i>Non-Applicable</i>

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

>>

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:

1. Commissioning Certificate

A.2 Location of project

>>

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

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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
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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 CO₂ 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 tCO₂e 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 associated with the project activity.

A.4 Scale of the project

>>

The project is seeking emission reduction certification from 103.5 MW Wind Power Project. Since the project capacity is more than 15 MW, the project falls under "large scale" category as per the section 3.3.2 of Renewable energy activity requirement, v1.3

A.5 Funding sources of project

>>

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)

>>

Title: Grid-connected electricity generation from renewable sources

References: Approved Large Scale Consolidated Methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 20)⁵

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 7⁶.

⁵ <https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

⁶ http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf/history_view

B.2. Applicability of methodology (ies)

>>

Large scale methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” version 20 is applicable to project activities that include retrofitting, rehabilitation (or refurbishment), replacement or capacity addition of an existing power plant or construction and operation of a Greenfield power plant.

The proposed project activity is a large scale grid-connected renewable power generation project that installs a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (i.e. a Greenfield plant) and it meets each of the applicability conditions of the methodology as follows:

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 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)	The proposed project activity is a Green field, Thailand national grid connected renewable power plant. Therefore, it confirms to the said criteria
The methodology is applicable under the following conditions: 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 a new grid connected renewable wind power project. Thus, it meets the first applicability condition
In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects	The proposed project activity is the installation of new wind power

<p>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 or retrofit or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity</p>	<p>plants/units. Therefore, the said criteria is not applicable</p>
<p>In case of hydro power plants, one of the following conditions shall apply:</p> <ul style="list-style-type: none"> (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 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, all of the following conditions shall apply. <ul style="list-style-type: none"> (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; 	<p>The proposed project activity is the installation of a new wind power plant/units. Therefore, the said criteria is not applicable</p>

<p>(iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m² shall be:</p> <p>(a) Lower than or equal to 15 MW; and</p> <p>(b) Less than 10% of the total installed capacity of integrated hydro power project</p>	
<p>In the case of integrated hydro power projects, project proponent shall:</p> <p>(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or</p> <p>(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability 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.</p>	<p>The proposed project activity is the installation of wind power plant/units. Therefore, the said criteria is not applicable</p>
<p>The methodology is not applicable to:</p> <p>(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of</p>	<p>The proposed project activity is the installation of wind power</p>

<p>the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;</p> <p>(b) Biomass fired power plants;</p>	<p>plant/units. Therefore, the said criteria is not applicable</p>
<p>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”.</p>	<p>The proposed project activity is the installation of wind power plant/unit. Therefore, the said criteria is not applicable</p>
<p>In addition, the above applicability conditions of the methodology, the Tool to calculate emission factor of electricity system (version 7) referred in the methodology has been justified here under:</p>	
<p>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).</p>	<p>This condition is applicable. OM, BM and CM are estimated using the tool for calculating baseline emissions.</p>
<p>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 least 10 per cent of the total electricity generation by grid power plants in the</p>	<p>Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly.</p>

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

B.3. Project boundary

As per the applied baseline and monitoring methodology ACM0002, 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.

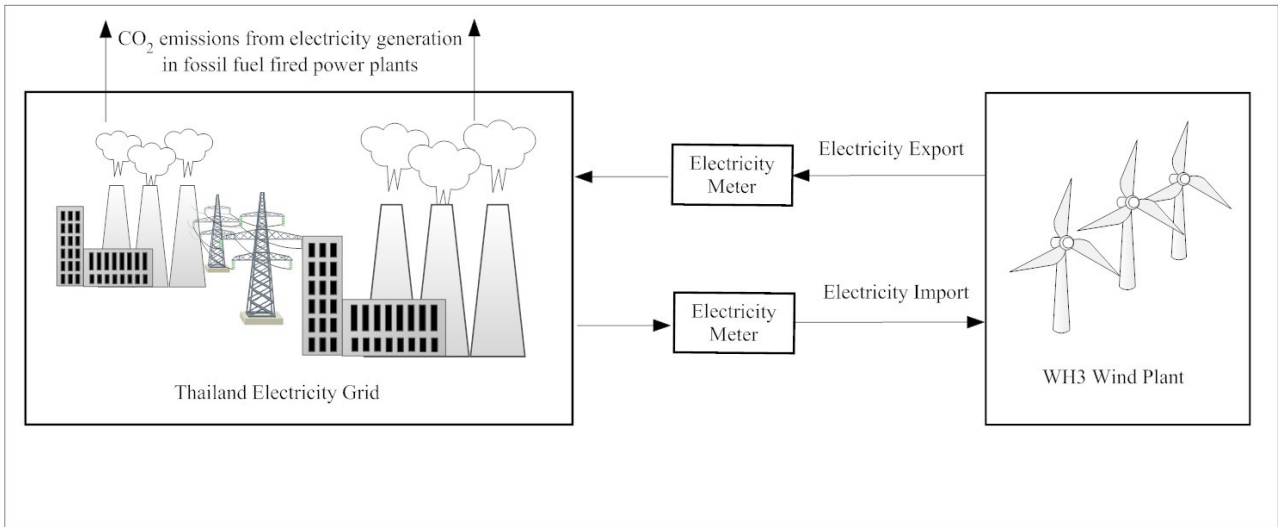
The project boundary for the purpose of calculating project and baseline emissions consists of the physical wind farm site and the Thailand electrical grid. The only relevant emission source is the CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the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

Source	GHGs	Included?	Justification/Explanation
Baseline scenario Emission from grid connected fossil fuel power plants	CO ₂	Yes	Main emission source.
	CH ₄	No	Minor emission source.

Project scenario

NA

N ₂ O	No	Minor emission source.
CO ₂	No	The project is a wind power project. Project emissions are not applicable according to ACM0002.
CH ₄	No	
N ₂ O	No	



Project boundary & emission source

B.4. Establishment and description of baseline scenario

>>

The baseline scenario is specified in ACM0002 section II. For project activities which involve the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following:

If the project activity is the installation of a Greenfield power plant, the baseline scenario is 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",

The combined margin for the Thailand grid is published by the Thailand Greenhouse Gas Management Organization which is the DNA of Thailand.

ACM0002 also specifies a step-wise approach for identifying the baseline for project activities which involve the retrofit or replacement of existing grid-connected renewable power plant/unit(s) at the project site. The project activity is a new renewable power plant; therefore the step-wise approach is not applicable.

The “Tool for the demonstration and assessment of additionality” requires the consideration of EB guidance on national/local/sectoral policies in the calculation of financial indicators utilized for the assessment of additionality. EB22, Annex 3, specifies that national policies or regulations that give comparative advantage to less emissions-intensive technologies (E- policies) may be excluded if the national policy or regulation was implemented after 11 November 2001. Wind power projects are eligible to receive an adder tariff in accordance with the National Energy Policy Council (NEPC) policy for „adder payments“ which was approved by the NEPC in the third resolution of its 106th meeting (3/2006) on 4 September 2006. The Thailand adder tariff is specifically for renewable energy projects which are less carbon intensive than conventional sources of electricity and the tariff can be fully attributed to policy changes at the national level. As such, the adder tariff can be excluded.

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 publically available.

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 ₂ emission 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

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

			Greenhouse Gas Management Organisation (Public Organisation)
EF _{grid, BM, y}	0.5609 tCO ₂ /MWh	Build margin CO ₂ emission 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)

The baseline case is in compliance with all applicable legal and regulatory requirements references.

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 a CDM registered project. Hence the prior consideration is not applicable.

B.5.2 Ongoing Financial Need

Not Applicable

B.6. Sustainable Development Goals (SDG) outcomes

>>

Relevant Target/Indicator for each of the three SDGs

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)
13 Climate Action (mandatory)	13.2: Integrate climate change measures into national policies, strategies and planning	Amount of GHG Emission reduction

3 Good health and Well being	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.	Number of community development activities undertaken
7 Affordable and Clean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	Quantity of net electricity supplied to the grid
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	1) Number of Jobs generated due to project activity 2) Number of trainings provided to employees

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

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SDG 3– Ensure healthy lives and promote well-being for all at all ages

The project region is one of the least developed regions. As a part of CSR activities the project proponent undertakes many community development activities such as conducting health camps, providing various infrastructures to schools and villages etc. that will improve health and well being of the local people. As and when a community development activity is undertaken the same is recorded.

Monitoring parameter	Number of community development activities
Baseline estimation approach	Since the community development activities are undertaken with the help of project revenue, there won't be any community development activity undertaken by the project proponent in the baseline scenario
Project Estimation approach	As and when a community development activity is undertaken, the same will be recorded.
Net estimation approach	Net benefit = Project estimate – Baseline estimate

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	Quantity of net electricity supplied to the grid
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 through 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

The wind energy technology is relatively new technology in Thailand. The project is one of the first project wind project in Thailand. 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	Number of jobs created Number of training conducted
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 and no training would have been conducted.
Project Estimation approach	The number jobs created will be recorded in the employment records. As and when a training is conducted to O&M staff, the same will be recorded into the training records.

Net estimation approach	Net benefit = Project estimate – Baseline estimate
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For the SDG 13, the emission reduction calculations were carried out as per the applied CDM methodology ACM0002, v20.

activities including hydro, wind, geothermal, solar, wave and tidal power. Some project activities such as hydro and geothermal projects may involve project emissions that should be accounted for 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)

$PE_{FF,y}$ is required to be calculated for geothermal and solar thermal projects which also use fossil fuel for electricity generation. The project activity is not a geothermal or solar thermal project therefore this emissions source is not relevant.

$PE_{GP,y}$ is required to be calculated for geothermal project activities where fugitive emissions of carbon dioxide and methane occur due to release of non-condensable gases from produced steam. The project activity is not a geothermal or solar thermal project therefore this emissions source is not relevant.

$PE_{HP,y}$ is required to be calculated for hydro power projects that result in new reservoirs and projects that result in increase of existing reservoirs. The project activity is not a hydro project therefore this emissions source is not relevant.

As such, there are no project emissions for the wind power project and $PE_y = 0$.

Baseline Emissions

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

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

Where:

BE_y = Baseline emissions in year y (tCO₂/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 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" (tCO₂/MWh)

In accordance with the *Tool to calculate the emission factor for an electricity system, version 2.2.1 (EB63 Annex 19)* the emissions factor $EF_{grid,CM,y}$ can be calculated using either an *ex ante* option at the validation stage or *ex post* for the year in which the project activity displaces electricity. The *ex ante* option is chosen and the combined margin published by the DNA of Thailand for years 2007, 2008, 2009 will be used to calculate emission reductions throughout the first crediting period. A description of the data used to calculate the combined margin is provided in Annex 3 and the step-wise approach used by the DNA of Thailand to calculate the emissions factor of the electricity system is described as follows:

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) emissions 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 country⁸ 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 tCO₂/MWh is applied.

STEP 2: Choose whether to include off-grid power plants in the project electricity system (optional)

The inclusion of off-grid power plants is an optional step. For the purpose of the Thailand grid, Option I is applied and only grid power plants are included in the calculation.

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

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods, which are described under Step 4:

- a) Simple OM; or
- b) Simple adjusted OM; or
- c) Dispatch data analysis OM; or
- d) 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 five years are in the range of 4.55% to 6.69% as shown in the below table.

Year	Total Electricity Production (GWh)	LC/MR Analysis			
		Hydro (GWh)	RE (GWh)	Total LC/MR (GWh)	% of LC/MR
2012	166,446	8,431	2,701	11,132	6.69
2013	164,826	5,412	3,427	8,839	5.36
2014	168,685	5,164	3,993	9,157	5.43
2015	169,040	3,724	4,230	7,954	4.71
2016	169,168	3,019	4,685	7,704	4.55

Source: EGAT(2017)

⁸ The study of emission factor for an electricity system in Thailand 2009, DNA of Thailand, page 2

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 PDD to the DOE for validation.

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

The simple OM emission factor for Option B is calculated as the generation-weighted average CO₂ emissions per unit net electricity generation (tCO₂/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 low cost/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 CO2 emission factor in year y (tCO2/MWh)

$FC_{i,y}$ = Amount of fossil fuel type i consumed in the project electricity system in year y (mass or volume unit)

$NCV_{i,y}$ = Net calorific value of fossil fuel type i in year y (GJ/mass or volume unit)

$EF_{CO2,i,y}$ = CO2 emission factor of fossil fuel type i in year y (tCO2y/GJ)

EG_y = Net electricity generated & delivered to the grid by all power units serving the system, not including LC/MR power plants/units in year y (MWh)

i = All fossil fuel types combusted in power sources in the project electricity system in year y

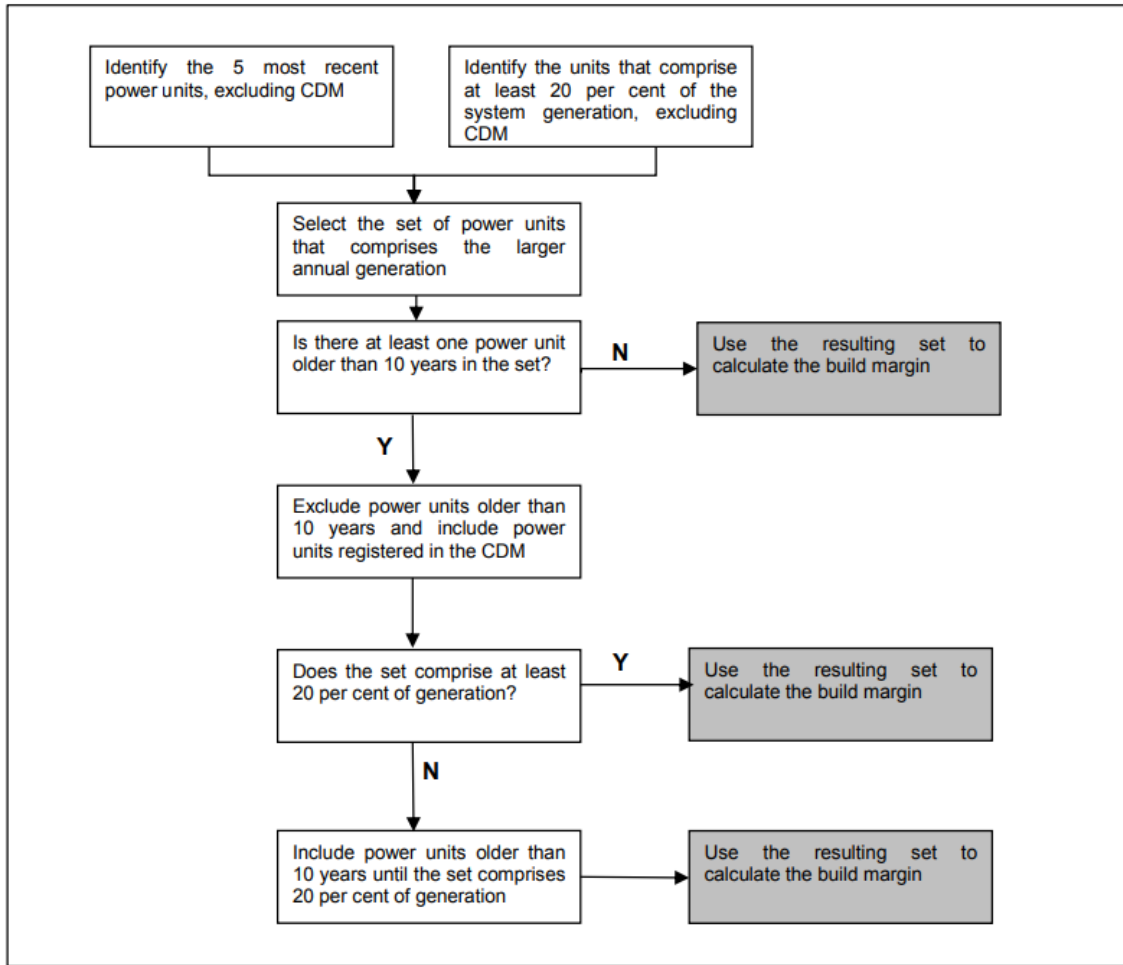
y = The three most recent years for which data is available at the time of submission of the CDM-PDD to the DOE for validation (ex ante option)

As per the Thailand emission factor database published on 28th September 2017 weighted average operating margin is as below:

EF_{OM,y} = 0.5719 tCO₂/MWh

STEP 5: Calculate the build margin (BM) emission factor

The build margin emission factor is calculated ex-ante for the first crediting period as per Option 1. 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 should be 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 is as below:

$$EF_{BM, y} = 0.5609 \text{ tCO}_2/\text{MWh}$$

STEP 6: Calculate the combined margin (CM) emissions factor The combined margin emissions factor is calculated as follows:

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

where:

$EF_{grid,BM,y}$ = Build margin CO₂ emissions factor in year *y* (tCO₂/MWh)

$EF_{grid,OM,y}$ = Operating margin CO₂ emissions factor in year *y* (tCO₂/MWh)

W_{OM} = Weighting of operating margin emissions factor (%)

w_{BM} = Weighting of build margin emissions factor (%)

For wind power project, the default values for weightings are: $w_{OM} = 0.75$ and $w_{BM} = 0.25$ for the first crediting period and subsequent crediting periods.

Full details of the calculation of the above Steps 1-6 are outlined in the excel sheet provided with this PDD. The resulting calculation of the combined margin is as follows:

Parameter	Value	Units
Operating Margin: $EF_{grid,OM,y}$	0.5719	tCO ₂ e/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	

The calculation of $EG_{PJ,y}$ is defined for: (a) greenfield plants, (b) retrofits and replacements, and (c) capacity additions. If 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:

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

Hence the annual baseline emission is calculated as below:

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

Leakage

No leakage emissions are considered. The potential sources 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

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 CO₂/yr)
- PE_y = Project emissions in year y (t CO₂e/yr)

B.6.2 Data and parameters fixed ex ante

SDG13

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 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	0.5692
Choice of data or Measurement methods and procedures	The combined margin CO ₂ 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, y} & 25% weightage of EF _{grid,BM, y}
Purpose of data	Baseline Emission calculation
Additional comment	The combined margin is calculated ex-ante and fixed for the entire crediting period

Data/parameter	EF _{grid, BM, y}
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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 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	0.5719
Choice of data or Measurement methods and procedures	<p>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".</p> <p>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'</p> <p>Weighted average $= \frac{\sum_{i=1 \text{ to } n} (\text{Net generation in operating margin in year } i * \text{Simple operating margin in year } i)}{\sum_{i=1 \text{ to } n} (\text{Net generation in operating margin of year } i)}$</p>
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

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SDG	Parameter	Baseline impact	Project impact	Net impact (baseline – project)
SDG 3	Number of community development activities undertaken	0	1	1

SDG 7	Quantity of net electricity supplied to the grid (MWh)	0	232,500	232,500
SDG 8	Number of Jobs created	0	40	40
	Number of training conducted	0	2	2
SDG 13	GHG Emission reduction (refer the detail calculation below)	0	132,339	132,339

13. GHG Emission Reduction

The methodology ACM0002 states that leakage emissions are not required to be considered, therefore the emission reductions are calculated as:

$$ER_y = BE_y - PE_y$$

$$ER_y = 132,339 - 0 = 132,339 \text{tCO}_2\text{e}$$

Parameter	Description of Value Applied	Value	Units
BE _y	Calculated as per ACM0002 and shown below	132,339	tCO ₂ e
PE _y	In accordance with equation (1) of ACM0002 the project emissions for wind power projects is zero	0	tCO ₂ e
ER _y	Calculated as BE _y - PE _y	132,339	tCO ₂ e

Baseline Emissions

The total baseline emissions from existing grid connected power plants are calculated as:

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

$$BE_y = 232,500 \times 0.5692 = 132,339 \text{ tCO}_2\text{e}$$

Parameter	Description of Value Applied	Value	Units
EG _{facility,y}	Wind Farm Energy Yield Analysis Report	232,500	MWh
EF _{grid,CM,y}	Published by the Thailand Greenhouse Gas Management Organisation (TGO), the DNA of Thailand.	0.5692	tCO ₂ /MWh
BE _y	Calculated as EG _{facility,y} x EF _{grid,CM,y}	132,339	tCO ₂ e

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

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SDG 13: GHG Emission Reduction (tCO₂e)

Year	Baseline estimate	Project estimate	Net benefit
01/12/2019 - 30/11/2020	132,339	0	132,339
01/12/2020 - 30/11/2021	132,339	0	132,339
01/12/2021 - 30/11/2022	132,339	0	132,339
01/12/2022 - 30/11/2023	132,339	0	132,339
01/12/2023 - 30/11/2024	132,339	0	132,339
Total	661,695	0	661,695
Total number of crediting years	5		
Annual average over the crediting period	132,339	0	132,339

SDG 3: Number of community development activities

Year	Baseline estimate	Project estimate	Net benefit
01/12/2019 - 30/11/2020	0	1	1
01/12/2020 - 30/11/2021	0	1	1
01/12/2021 - 30/11/2022	0	1	1
01/12/2022 - 30/11/2023	0	1	1
01/12/2023 - 30/11/2024	0	1	1
Total	0	5	5
Total number of crediting years	5		
Annual average over the crediting period	0	1	1

SDG 7: Quantity of net electricity supplied to the grid (MWh)

Year	Baseline estimate	Project estimate	Net benefit
01/12/2019 - 30/11/2020	0	232,500	232,500
01/12/2020 - 30/11/2021	0	232,500	232,500

01/12/2021 - 30/11/2022	0	232,500	232,500
01/12/2022 - 30/11/2023	0	232,500	232,500
01/12/2023 - 30/11/2024	0	232,500	232,500
Total	0	1,162,500	1,162,500
Total number of crediting years	5		
Annual average over the crediting period	0	232,500	232,500

SDG 8: Number of Jobs created & Number of Training conducted

Year	Baseline estimate	Project estimate	Net benefit
01/12/2019 - 30/11/2020	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2
01/12/2020 - 30/11/2021	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2
01/12/2021 - 30/11/2022	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2
01/12/2022 - 30/11/2023	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2
01/12/2023 - 30/11/2024	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2
Total	0	Jobs - 40 Training - 14	Jobs - 40 Training - 14
Total number of crediting years	5		
Annual average over the crediting period	0	Jobs - 40 Training - 2	Jobs - 40 Training - 2

B.7. Monitoring plan

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SDG 13:

Data / Parameter	Emission Reduction
Unit	tCO ₂ e
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, v20 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 3:

Data / Parameter	Livelihood of the poor
Unit	Health Camps, Knowledge and information dissemination regarding natural disasters
Description	-
Source of data	Community Development Activity records and photographic evidence
Value(s) applied	PP conducted survey during construction phase of the project in the villages near project locations to check the requirement of facilities by the villages. From the survey, PP has identified several scope of developmental activities such as health camps, furniture, sports kits and toilet requirements in government schools, drinking water requirements etc. At least 1 community development activity will be undertaken
Measurement methods and procedures	The PP will survey in the nearby villages and implement the community development activities for scope identified during the monitoring period. As and when a community development activity is undertaken, the same will be recorded.
Monitoring frequency	Yearly Once
QA/QC procedures	The records of the development activities such as photographs, appreciation letter, memos etc will be maintained by the PP.

Purpose of data	To monitor the contribution to SDG 3 (Ensure healthy lives and promote well-being for all at all ages)
Additional comment	-

SDG 7

Data / Parameter	$EG_{\text{facility},y}$																		
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	<p>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 the month with the highest electricity consumption recorded during the monitoring period.</p> <p>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:</p> <table border="1"> <thead> <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> </thead> <tbody> <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> </tbody> </table>	Details	Export meter		Import meter	Main	Backup	Serial No	96499384	96499385	22069212	Make	Landis & Gyr	Landis & Gyr	Elster	Accuracy class	0.2s	0.2s	0.5s
Details	Export meter		Import meter																
	Main	Backup																	
Serial No	96499384	96499385	22069212																
Make	Landis & Gyr	Landis & Gyr	Elster																
Accuracy class	0.2s	0.2s	0.5s																
Monitoring frequency	Measurement: Continuous																		

	Recording: Monthly
QA/QC procedures	<p>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%.</p> <p>For the import electricity meter, the error specified by the meter manufacturer will not exceed +/- 0.5%.</p> <p>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.</p>
Purpose of data	Calculation of baseline emissions and To monitor the contribution to SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all)
Additional comment	-

SDG 8:

Data / Parameter	<ul style="list-style-type: none"> • Number of jobs created • Number of Training conducted
Unit	-
Description	Total employment generated due to the implementation of project activity and number of training conducted
Source of data	Plant employment records & Training records
Value(s) applied	Jobs: 40 Training conducted: 2
Measurement methods and procedures	Employment records
Monitoring frequency	Yearly Once
QA/QC procedures	The number of persons employed would be mentioned in the plant register.
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	-
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Safeguarding Principle 8.2:

Data / Parameter	Soil Erosion mitigation measures
Unit	-
Description	<p>Construction phase:</p> <ul style="list-style-type: none"> 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 <p>Operational phase:</p> <ul style="list-style-type: none"> 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	Project O&M HSE logbook, or interview with maintenance staff.
Value(s) applied	-
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	<p>The following management measures shall be followed:</p> <ul style="list-style-type: none"> Provision of proper temporary storage for hazardous waste

	<ul style="list-style-type: none"> • 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	-
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 community development activities undertaken
- Number of jobs created
- Number of Training conducted
- Soil Erosion mitigation measures
- Hazardous waste management

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:

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

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 $\pm 0.2\%$. In case of meter failure, replacement export meters may be installed and the error specified by the meter manufacturer will not exceed $\pm 0.2\%$. 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 supplier 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

01/12/2019

C.2.2 Total length of crediting period

>>

5 years

(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
<p>Principle 8.2</p>	<p>Construction phase:</p> <ul style="list-style-type: none"> 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 <p>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</p>
<p>Principle 9.5</p>	<p>The following management measures shall be followed:</p> <ul style="list-style-type: none"> Provision of proper temporary storage for hazardous waste Waste segregation <p>Waste disposal by an appointed/accredited waste disposer company</p>

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

<p>Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy.</p>	<p>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.</p>
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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)⁹. 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)¹⁰. Moreover, the Human Development Index (HDI) is for females

⁹ ILO 2010

¹⁰ 2018 Human Development Report (HDR), United Nations Development Program

	<p>(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.</p> <ul style="list-style-type: none"> • 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. <p>Hence, the project aligned with existing country policies, strategies and best practices.</p>
<p>Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?</p>	<p>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.</p>
<p>Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?</p>	<p>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</p>

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.

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.

<p>Regarding long term impact, what will happen after the project lifetime is finished?</p>	<p>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.</p>
<p>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.</p>	<p>At the moment we are drafting a corporate social responsibility (CSR) plan.</p>
<p>Teacher and students in the project area should be provided with more knowledge about wind energy than others.</p>	<p>We are happy to receive suggestions regarding knowledge transfer to the local schools and community about wind energy.</p>
<p>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)?</p>	<p>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.</p>
<p>Apart from noise impact will there be impact on ecology, especially pollination?</p>	<p>Apart from noise impact there is no significant impact on ecology. This is according to IEE which we will submit to community leaders.</p>
<p>Some of the electricity posts block the entrance of some house.</p>	<p>The electricity posts belong to Provincial Electricity Authority (PEA).</p>
<p>Can you please confirm how much money the community will receive from the community development fund?</p>	<p>We expect that the community fund will be 200,000 Baht/MW for the first year.</p>

(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 September 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

Other

Grievances shall also be sent to Head office:
Mr. Arvind Agarwal - arvind@windenergyholding.com

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

>> Fill this section

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.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potenti ally/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights			
<ol style="list-style-type: none"> 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 The Project shall not discriminate with regards to participation and inclusion 	No	<ol style="list-style-type: none"> 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 	Not required

		project, is a party to Universal Declaration of Human Rights ¹¹	
Principle 2. Gender Equality			
<ol style="list-style-type: none"> 1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s) 	No	<ol style="list-style-type: none"> 1. Project does not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. The PP's HR policy is framed in line with this. Participation in the project is 100% voluntary. The project proponent has a grievance cell which would look into complaints regarding any forms of violence against women - address the multiple risks of gender-based violence, including sexual exploitation or human trafficking. 2. The Project has equal opportunity for women and men to contribute both in volunteer and working positions. 1. The project proponent has a stipulated HR policy that takes into account participation by both men and women. Further, the CSR projects designed are implemented for equal participation of both men and women 	Not required

¹¹ <http://www.thaiembassy.org/unmissionnewyork/en/relation/80917-Human-Rights.html>

		<p>3. The project is aligned to Thailand’s strategy for elimination of all discrimination. Thailand is also party to Convention 100 (Equal remuneration) since 1999 and 111 on Discrimination in employment/occupation since 2017 to prevent any form of discrimination¹²</p> <p>4. Not applicable</p>	
Principle 3. Community Health, Safety and Working Conditions			
<p>1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community</p>	No	<p>The project is in compliance with all relevant local and national laws¹³. The Project does not threaten human health or environment and does not adversely affect the health of the workers and the community.</p>	Not Required
Principle 4.1 Sites of Cultural and Historical Heritage			
<p>Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?</p>	No	<p>PP has conducted Initial environmental examination and as per the study, the project does not alter, damage or remove any cultural heritage.</p>	Not Required

¹² http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102843

¹³ Safety, Occupational Hygiene and Workplace Environment Act B.E. 2554 [2011]

Principle 4.2 Forced Eviction and Displacement			
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project does not involve and is not complicit in involuntary resettlement of peoples in any way. The Project Developer has also obtained all necessary clearances from nodal agencies and NOCs from all relevant authorities for establishing the project.	Not Required
Principle 4.3 Land Tenure and Other Rights			
Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	No	The project has all the legal, customary rights on the land and does not require any change to land tenure arrangements. The proponent has also obtained necessary clearances from relevant government agencies for establishing the plant.	Not required
>>			
Principle 5. Corruption			
1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	No	The proponent confirms that there is no corruption involved in the project activity. The host country has strict laws and robust arrangements to prevent such activities.	Not Required

		Thailand is a party to United Nation Convention against Corruption since 9 Dec 2003 ¹⁴ . PP also have Code of Business Conduct, the Anti-Bribery and Corruption Policy in place.	
Principle 6.1 Labour Rights			
<ol style="list-style-type: none"> 1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual workers shall be documented and implemented and include: 	No	<ol style="list-style-type: none"> 1. The proponent assures that there will be no bonded or forced labor during construction and operation of the project activity. Uniform policy will be implemented for all employees. The host country has robust laws in place prohibiting forced and compulsory labor. Thailand is a party to ILO convention 29 (since 1969) and 105 (since 1999) on elimination of forced and compulsory labour¹⁵. 2. The proponent confirms that all the fundamental rights of the employees will be respected. 	Not Required

¹⁴ https://treaties.un.org/pages/viewdetails.aspx?src=ind&mtdsg_no=xviii-14&chapter=18&lang=en#EndDec

¹⁵ http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102843

<p>a) Working hours (must not exceed 48 hours per week on a regular basis), AND</p> <p>b) Duties and tasks, AND</p> <p>c) Remuneration (must include provision for payment of overtime), AND</p> <p>d) Modalities on health insurance, AND</p> <p>e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND</p> <p>f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.</p> <p>4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion)</p> <p>5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents,</p>		<p>3. Working agreements with all individual workers are documented and implemented. The company HR policy includes all the requirements mentioned.</p> <p>4. Child labor is strictly prohibited in the country. The proponent assures that no child labor will be employed during construction and operation of the plant. The project proponent has a set mechanism to ensure the age of all the temporary/permanent employees during the life time of the project.</p> <p>Thailand is also a party to convention 13816 on Minimum Age since 2004 and Convention 182 on Worst Forms of Child Labour since 2001.</p> <p>5. The Project Developer has an active HSE team which ensures that all employees are</p>	
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¹⁶ http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102843

and emergency preparedness and response measures		given appropriate equipment and training. The same is properly documented and appropriate measures taken in case of emergencies. PP has incorporated 'Employee Training and Development Policy' under the HR policy.	
Principle 6.2 Negative Economic Consequences			
1. Does the project cause negative economic consequences during and after project implementation?	No	There are no negative economic impacts or potential risks to the local economy due to the project activity during and after project implementation	Not required
Principle 7.1 Emissions			
Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The project is a wind power project and does not lead to any greenhouse gas emissions in project scenario.	Not Required
Principle 7.2 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 is connected to the grid, as well as being a wind power project it will be a net provider of power to the local grid.	Not Required
Principle 8.1 Impact on Natural Water Patterns/Flows			
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,	No	The project being a wind power project will not have any such impacts.	Not Required

<p>lack of aquatic connectivity or water scarcity?</p>			
<p>Principle 8.2 Erosion and/or Water Body Instability</p>			
<p>Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?</p>	<p>Potentially</p>	<p>1. The construction and operation of wind power plant will disturb the soil which will lead to soil erosion. PP has conducted Initial Environmental Examination (IEE) and based on the study the project activity has developed activities for prevention of soil erosion by various landscaping measures.</p>	<p><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</p>

			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
Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products?	No	The project does not involve the use of land and soil for production of crops or other products.	Not Required
Principle 9.2 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 will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	Not Required
Principle 9.3 Genetic Resources			
Could the Project be negatively impacted by or involve genetically modified organisms or	No	The project does not have any impact by used of GMOs.	Not Required

<p>GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?</p>			
<p>Principle 9.4 Release of pollutants</p>			
<p>Could the Project potentially result in the release of pollutants to the environment?</p>	<p>No</p>	<p>The project being a wind power project does not lead to release of any pollutants.</p> <p>Prior to the implementation of the project activity, PP has conducted Initial Environmental Examination including shadow flickering and the noise assessment considering the distance to nearest residential area. No impact observed in the study.</p> <p>Also a study on the effect of the sound by simulating a noise contour has been conducted by PP. As per the study result, the increasing sound level is less than the ambient noise standard as per the Notification of the National Environment Board No. 15 (B.E. 2540), which specifies at 70 dB(A).</p>	<p>Not Required</p>
<p>Principle 9.5 Hazardous and Non-hazardous Waste</p>			

<p>Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?</p>	<p>Potentially</p>	<p>The project during operational phase uses various type of oil/lubricants, grease which are classified as hazardous. These waste are handled in line with hazardous waste management rules and are disposed off accordingly.</p>	<p>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>
<p>Principle 9.6 Pesticides & Fertilisers</p>			
<p>Will the Project involve the application of pesticides and/or fertilisers?</p>	<p>No</p>	<p>The project is a wind power project and hence not relevant to the application of pesticides and/or fertilizers.</p>	<p>Not Required</p>
<p>Principle 9.7 Harvesting of Forests</p>			
<p>Will the Project involve the harvesting of forests?</p>	<p>No</p>	<p>The project is a wind power project and hence not relevant to the harvesting of forests.</p>	<p>Not Required</p>
<p>Principle 9.8 Food</p>			

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 is a wind power project and hence not relevant to crop regime alteration or export or economic incentives.	Not Required
Principle 9.9 Animal husbandry			
Will the Project involve animal husbandry?	No	The Project is a wind power project and hence not relevant animal husbandry.	Not Required
Principle 9.10 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	PP has conducted Initial environmental examination and as per the study the Project does not affect or alter largely intact or HCV ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified. Refer IEE report	Not Required
Principle 9.11 Endangered Species			
Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? AND/OR	No	PP has conducted Initial environmental examination and as per the study there are no endangered species identified as potentially being present within the Project boundary. Also the Project does not impact other areas where endangered species may be present through transboundary affects.	Not Required

Does the Project potentially impact other areas where endangered species may be present through transboundary affects?			
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APPENDIX 2- CONTACT INFORMATION OF PROJECT PARTICIPANTS

>> Fill this section

Organization name	First Korat Wind Company Limited
Registration number with relevant authority	
Street/P.O. Box	All Seasons Place, 87/1, Wireless road, Lumpini, Patumwan
Building	25th Floor, Capital Tower
City	Bangkok
State/Region	Bangkok
Postcode	10330
Country	Thailand
Telephone	+66(0) 2106 8000
E-mail	napat@windenergyholding.com
Website	
Contact person	
Title	Mr.
Salutation	
Last name	Sasisakulporn
Middle name	
First name	Napat
Department	
Mobile	
Direct tel.	
Personal e-mail	napat@windenergyholding.com

APPENDIX 3- LUF ADDITIONAL INFORMATION

>> Not applicable

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-SUMMARY OF APPROVED DESIGN CHANGES

Please refer to [Design Change Requirements](#) for more information on procedures governing Design Changes.

Revision History

Version	Date	Remarks
1.0	10 July 2017	Initial adoption