



**Gold Standard**<sup>®</sup>  
for the Global Goals

**TEMPLATE**

# KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)

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VERSION **v.1.5**

RELATED SUPPORT

[- TEMPLATE GUIDE Key Project Information & Project Design Document](#)

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This document contains the following Sections

SECTION A. DESCRIPTION OF PROJECT

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

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ASSESSMENT

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Appendix 2 - Contact information of project developer(s) (mandatory)

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## KEY PROJECT INFORMATION

GS ID of Project	GS7553
Title of Project	42 MWp Bundled Solar Photovoltaic Power project in Indonesia
Time of First Submission Date	03/12/2019
Date of Design Certification	22/12/2020
Version number of the PDD	5
Completion date of version	17/01/2025
Project Developer	PT Infrastruktur Terbarukan Adhiguna PT Infrastruktur Terbarukan Buana PT Infrastruktur Terbarukan Cemerlang PT Infrastruktur Terbarukan Lestari
Project Representative	Kosher Climate India Private Limited
Project Participants and any communities involved	PT Infrastruktur Terbarukan Adhiguna PT Infrastruktur Terbarukan Buana PT Infrastruktur Terbarukan Cemerlang PT Infrastruktur Terbarukan Lestari
Host Country (ies)	Indonesia
Activity Requirements applied	<input type="checkbox"/> <a href="#">Community Service Activity</a> <input checked="" type="checkbox"/> <a href="#">Renewable Energy</a> <input type="checkbox"/> <a href="#">Land-Use and Forests Activity Requirements/Risks &amp; Capacities</a> <input type="checkbox"/> N/A
Scale of the project activity	<input type="checkbox"/> Micro scale <input type="checkbox"/> Small Scale <input checked="" type="checkbox"/> Large Scale
Other Requirements applied	NA
Methodology (ies) applied and version number	ACM0002 "Grid-connected electricity generation from renewable sources" (Version 21)
Product Requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A
Project Cycle:	<input type="checkbox"/> Regular <input checked="" type="checkbox"/> Retroactive

**Table 1 – Estimated Sustainable Development Contributions**

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
13 Climate Action (mandatory)	Amount of GHGs emissions avoided	57,565	GS VER
7 Affordable and Clean Energy	Total electricity produced: Renewable	62,907	MWh
8 Decent Work and Economic Growth	Total Number of Jobs	70	Number

## SECTION A. DESCRIPTION OF PROJECT

### A.1 Purpose and general description of project

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The project is a bundled project which involves installation of 4 solar project in Indonesia. The details of the four projects are given below:

No	Developer	Capacity	Location	Commissioning date	Grid Connected
1	PT Infrastruktur Terbarukan Adhiguna (ITA)	7 MWp/ 5.4 MWac	Cemporonan sub-village, Pringgabaya Utara village, Pringgabaya district, Lombok Timur regency, Nusa Tenggara Barat province, Indonesia	22-Jul-19	Lombok (in West Nusa Tenggara)
2	PT Infrastruktur Terbarukan Buana (ITB)	7 MWp/ 5.4MWac	Geres Baret sub-village, Geres village, Labuhan Haji district, Lombok Timur regency, Nusa Tenggara Barat province, Indonesia	2-July-19	
3	PT Infrastruktur Terbarukan Cemerlang (ITC)	7 MWp/ 5.4 MWac	Sengkol 1 sub-village, Sengkol village, Pujut district, Lombok Tengah regency, Nusa Tenggara Barat province, Indonesia	2-July-19	
4	PT Infrastruktur Terbarukan Lestari (ITL)	21 MW/ 15.3 MWac	Wineru Village, Likupang Timur District, Minahasa Utara Regency,	05-Sep-2019	Sulutgo (in north Sulawesi and Gorontalo)

			Sulawesi Utara Province, Indonesia		
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The purpose of the project activity is to generate electrical power through operation of solar power plants with the cumulative capacity of 42 MWp/32.6 MWac.

ITA, ITB & ITC projects are commissioned on 2<sup>nd</sup> July 2019 and ITL project was commissioned on 5<sup>th</sup> September 2019.

The purpose of the project activity is to generate electrical power using solar energy through operation of Solar power plants.

**How the proposed activity reduces GHG emissions**

The electricity generated by the ITA, ITB & ITC projects export to the Lombok Power Grid and the electricity generated from the ITL project exports power to Sulutgo grid. The project activity will therefore displace an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. Since solar power is Greenhouse Gas (GHG) emissions free, the power generated will prevent the anthropogenic gas emissions generated by from 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 South Sulawesi.

**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 in the respective grids 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” version 7. Hence, pre-project scenario and baseline scenario are the same.

**Estimated emission reduction:**

The project activity leads to an emission reduction of **287,827 tCO<sub>2</sub>** for the chosen crediting period of 5 years with the annual average emission reduction of **57,565 tCO<sub>2</sub>e**.

**Double counting:**

The project is not registered with any other compliance or voluntary market-based mechanism. It shall be noted that among the four projects, project ITL was also registered under International REC (I-REC) mechanism (Device ID: LIKUSP01<sup>1</sup>) but it is expired effective from 18<sup>th</sup> May 2024. Hence, it is not relevant to the 2<sup>nd</sup> crediting period.

Also, the project does not and will not result in double counting with national climate policies or programs. In the future, if the project is registered under the national carbon mechanism (SRN), the GS VERs equivalent to the carbon credits committed to the NDC will be voluntarily canceled by the project developer at the time of issuance.

**Project Contribution to Sustainable development:**

Some of the sustainable development from the project are as following:

- a) Social well-being
- b) Economic well-being
- c) Environmental well-being
- d) Technological well-being

These project activity contributions towards the sustainable development are as follows;

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<sup>1</sup> <https://evident.app/IREC/device-register/LIKUSP01>

Economic well-being:

- The project activity would help in alleviation of poverty in the area as it creates employment opportunities to the local people.
- The project activity would bring in additional investment to the region which would have not been possible in the absence of project activity. The development of project activity would contribute significantly towards infrastructure development of the region which ultimately leads to rural area development.
- The project activity evacuating power to the nearest regional grid would lead to improvement of electricity availability as the electricity is fed into a deficit grid.

Social well-being:

- The project activity would improve the local infrastructure development.
- Power generated from this project activity can be used for small scale industries, thus would generate employment opportunities.

Environmental well-being:

- Solar is one of the cleanest form of renewable energy and power generation does not involve any fossil fuels.
- The project activity by replacing electricity generated from fossil fuels would result in reduction of both GHG emissions and air borne pollutants, such as oxides of nitrogen, oxides of sulphur, carbon monoxide and particulates.
- Produces electricity without any GHG emissions.

Technological well-being:

- The project would use the environmental safe and sound technologies in solar Power sector.
- It will improve the power quality and the improvement of transmission and distribution congestion.

The successful implementation and operation of the project would serve as demonstration for harnessing solar potential and encourage setting up of similar projects in future.

A.1.1. Eligibility of the project under Gold Standard

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

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

Eligibility Criteria	Eligible?	Justification of eligibility
a) Types of Project: Eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are identified in the Eligibility Principles and Requirements section.	Yes	The project involves physical action/implementation on the ground.  The project type is a grid-connected renewable energy located in Indonesia.
b) Location of Project: Projects may be located in any part of the world.	Yes	The project activity is located in Indonesia. The project is not located in any HCV areas.
c) Project Area, Project Boundary and Scale: The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual	Yes	The project boundary is defined as per the applied methodology ACM0002, version 21.0. The project is not submitted in any other voluntary or compliance standards.

<p>certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).</p>		
<p>d) Host Country Requirements: Projects shall be in compliance with applicable Host Country’s legal, environmental, ecological and social regulations.</p>	<p>Yes</p>	<p>The project activity has obtained all the required approvals for the commissioning of the project from the Government of Indonesia.</p>
<p>e) As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organisation (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to</p>	<p>Yes</p>	<p>Refer Appendix 2 for the contact details.</p>

<p>operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.</p>		
<p>f) Legal Ownership: Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.</p>	<p>Yes</p>	<p>Please refer to section A.1.2 for the legal ownership details.</p>
<p>g) Other Rights: As well as legal title and ownership, the</p>	<p>Yes</p>	<p>Solar power generation project doesn't require any continuous</p>

<p>Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further project implementation in affected areas.</p>		<p>natural material to operate except the solar energy which is renewable source. Therefore, no further consent to utilize the resources are required.</p>
<p>h) Official Development Assistance (ODA) Declaration: All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee’s ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction &amp; Sequestration Product Requirements and submit the declaration at the time of Design Certification.</p>	<p>Yes</p>	<p>The project had private funding and funding from bank. The PP hereby confirms that there is no public funding from Annex 1 countries and no diversion of Official Development Assistance (ODA) involved in the project activity. Please refer to section A.5 for the details related to funding of the project activity.</p>

GS eligibility	Eligible?	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><b>Yes</b></p>	<p>The project is a solar power generation activity which is automatically eligible under the project type category (b) of Renewable energy activity requirement<sup>2</sup>:</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"> <li>• <i>Supplying energy to a national or a regional grid; or</i></li> <li>• <i>Supplying energy to an identified consumer facility via national/regional grid through a contractual agreement such as wheeling”</i></li> </ul> <p>The CDM approved methodology ACM0002, Version 21, 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</p>	<p><b>NA</b></p>	<p>The project type is approved and published on the GS website.</p>

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

<p>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>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><b>Yes</b></p>	<p>The project activity is implementation solar power plant in Indonesia.</p> <p>The project avoids CO<sub>2</sub> 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 achieve the Global Goals through robust standards and verified impacts”.</p>
<p>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</p>	<p><b>NA</b></p>	<p><i>Non-Applicable</i></p>

<p>Certification. Where required, Gold Standard shall engage expert peer reviewers to establish these Requirements, at the Project Developer's expense.</p>		
<p>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.</p>	<p><b>NA</b></p>	<p><i>Non-Applicable</i></p>

The assessment of eligibility as per Renewable Activity Requirements v1.4 are provided below:

<p><b>Eligibility Criteria</b></p>	<p><b>Eligible?</b></p>	<p><b>Justification of eligibility</b></p>
<p>2.1.1 All Renewable Energy Projects for which Gold Standard certification is being sought shall fulfil the requirements as set out in this document and those referenced or associated documents</p>	<p>Yes</p>	<p>Yes, the project is a solar projects and it fulfil the requirements set in this documents. Please refer the assessment below</p>
<p>2.1.2 In order to be eligible for Gold standard certification, all Renewable Energy Projects, shall meet the following Eligibility Criteria:                      a. Projects shall generate and deliver energy services (e.g., mechanical work/electricity/heat) from non-fossil fuel and renewable energy sources.                      b. Projects shall comprise of renewable energy generation units, such as solar photovoltaic, tidal/wave, wind, hydro,</p>	<p>Yes</p>	<p>The project meet the eligibility criteria as described blow                       a. The project will deliver energy service (ie, electricity) from solar</p>

<p>geothermal, waste to energy and renewable biomass, that are:</p> <ul style="list-style-type: none"> <li>• Supplying energy to a national or a regional grid; OR</li> <li>• Supplying energy to an identified consumer facility via national/regional grid through a contractual agreement such as wheeling.</li> </ul> <p>c. Any Project supplying electricity to a mini-grid shall refer to Community Services Activity Requirements.</p> <p>d. Projects generating on-site energy for captive consumption at an industrial facility shall refer to the requirements in this document.</p>		<p>energy which is renewable energy source</p> <p>b. The project comprise of solar photovoltaic units and the electricity delivered to regional grid.</p> <p>C, Not applicable as the project does not supply electricity to mini grid.</p> <p>d. not applicable as the project does not used for captive consumption.</p>
<p>2.1.3 New Gold Standard Verified Emission Reductions (GS VER) or Gold Standard labels for Certified Emission Reductions (GS CER), Renewable Energy projects connected to national or a regional electricity grid must be located in either a;</p> <p>a. Least Developed Country (LDC), Small Island Developing State (SIDS) or a Land Locked Developing Country (LLDC) or</p> <p>b. Low Income and Low Middle-income country where the penetration level of the proposed Renewable Energy Technology type is less than 5% of the total grid installed capacity, at the time of the first submission to preliminary review</p> <p>Renewable Energy projects connected to national or a regional electricity grid are ineligible for GS VERs/CERs, if located in:</p> <ul style="list-style-type: none"> <li>- an Upper Middle-Income Country or High-Income Country or</li> <li>- SIDS and LLDC, defined as a High- Income Country</li> </ul>	<p>NA</p>	<p>Not applicable for RCP.</p>
<p>2.1.4 Grid Connected off-shore wind projects and waste to energy projects that involve utilization of landfill gas/biogas to electricity generation with or without thermal energy production are exempted from eligibility requirement outlined in paragraph 2.1.3  above.</p>	<p>NA</p>	<p>Not applicable</p>
<p>2.1.5 The eligibility requirement outlined in paragraph 2.1.3  above is effective from 24 Jan 2020. This</p>	<p>NA</p>	<p>The project is submitted for preliminary review</p>

<p>requirement is applicable in case of projects and PoAs as follows;</p> <p>a. Projects submitted for preliminary review after 24 Jan 2020 shall demonstrate compliance with the requirements of paragraph 2.1.3  .</p> <p>b. PoAs registered before 24th Jan 2020:</p> <p>i. A registered PoA can include new VPAs/CPAs until the next renewal of the PoA following the approved inclusion criteria as per the registered PoA Design Document (i.e., previous RE eligibility rules). At the time of next PoA renewal, the inclusion criteria for new VPAs/CPAs must be updated in line with the paragraph 2.1.3  above.</p> <p>ii. Any new VPAs/CPAs included as per the previous rules can continue till the end of their respective maximum allowed crediting period.</p> <p>iii. Registered PoAs that have inclusion criteria as per previous eligibility rules cannot extend PoA boundary to include new countries or expand the scope to include new renewable technology types until next PoA renewal.</p> <p>iv. Registered PoAs that have inclusion criteria in line with paragraph 2.1.3  above can extend the PoA boundary to include new countries or expand the scope to include new renewable technology types.</p> <p>c. PoAs validated and/or listed before 24 Jan 2020</p> <p>i. Validated and /or listed PoAs submitting request for registration after 24 October 2020 shall define the VPAs/CPAs inclusion criteria in line with the new RE activity requirements, paragraph 2.1.3  above.</p> <p>d. New PoAs listed after 24 October 2020</p> <p>i. PoAs submitted for preliminary review after 24 October 2019, shall define the VPAs/CPAs inclusion criteria in line with the new RE activity requirements, paragraph 2.1.3  above.</p> <p>e. Projects/PoAs seeking transition to Gold Standard</p> <p>i. Projects/PoAs seeking transition from another carbon crediting scheme to GS4GG or labelling of emission reductions under GS4GG are exempted from eligibility requirements of paragraph 2.1.3  above if the projects/POAs started their first crediting period with the</p>		<p>before 24 Jan 2020, hence not applicable.</p>
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<p>original carbon crediting scheme from 01/01/2016 or later but before 24/01/2020.</p> <p>ii. PoAs seeking transition<sup>9</sup> from another carbon crediting scheme to GS4GG or labelling of emission reductions under GS4GG are exempted from eligibility requirements of paragraph 2.1.3  above. At the time of submission to Gold Standard, PoAs seeking transition shall update the inclusion criteria for new CPAs in line with the paragraph 2.1.3  above. CPAs that started their first crediting period with the original carbon crediting scheme from 01/01/2016 or later but before 24/01/2020 are exempted from the eligibility requirements of paragraph 2.1.3  above.</p>		
<p>2.1.6   Where exceptional circumstances exist, a project may seek an exception to paragraph 2.1.3   above. This include cases when a project serves impoverished beneficiaries at preferential electricity rates or the project is located in a conflict zone<sup>10</sup>, or penetration of proposed project technology type is not a common practice<sup>11</sup> in the relevant region of the host country. Exceptional circumstances will be judged on a case by case basis and are entirely at the discretion of Gold Standard. If exceptional circumstance exists;</p> <p>a. A request for exception approval should be submitted before submitting the project for preliminary review.</p> <p>b. The project developer shall submit a deviation request describing the exceptional circumstances that are relevant to the proposed activities, accompanied, at a minimum, with an Investment Analysis to demonstrate the financial additionality. The developer shall follow the latest version of CDM methodology tool “Methodological tool: Investment analysis” to demonstrate financial additionality as per the CDM Requirements. The review process may include independent expert analysis, paid for by the Project Developer but reimbursable against fees for first issuance (not reimbursable in the event of an unsuccessful application for exceptional circumstances). Penetration level significantly higher than the 5% benchmark, when proposed as an exception, are unlikely to be approved.</p> <p>c. Projects must still demonstrate additionality at the time of design certification.</p>	<p>NA</p>	<p>Not applicable for RCP</p>

<p>2.1.7 An exception to paragraph 2.13 is pre-approved for distributed installations of renewable technologies, as outlined below;</p> <p>a. Grid connected Renewable Energy projects/ VPAs that involve distributed installation of Renewable technology, where individual unit size is up to a maximum 500 kW of installed capacity, are eligible for the issuance of GSVERs or GS-CERs.</p> <p>b. Projects/ VPAs must be submitted to Gold Standard for preliminary review on or before 31/12/2023.</p> <p>c. Projects/ VPAs must still demonstrate additionality at the time of design certification or inclusion, as applicable.</p>	<p>NA</p>	<p>Not applicable as this project does not involve implementation of distributed installations.</p>
<p>2.1.8 Additional eligibility criteria for specific Renewable Energy project technologies like Hydropower, projects using biomass resources, biogas, waste heat/gas recovery, fossil co-generation, waste incineration and gas, and waste handling and disposal etc., are prescribed in Annex A.</p>	<p>NA</p>	<p>Not applicable for solar project</p>
<p>2.1.9 Projects seeking to issue of both Renewable Energy Labels and GS VERs shall meet the applicable requirements of:</p> <p>a. Applied Impact Quantification Methodologies for Emissions Reductions</p> <p>b. GHG Emissions Reductions &amp; Sequestration Product Requirements</p> <p>c. Renewable Energy Label Product Requirements</p>	<p>NA</p>	<p>Not applicable as the project will issue only GS VER</p>
<p>3.1.1 Eligible projects shall include physical action/implementation on the ground. Pre-identified eligible project types are mentioned in the paragraph 2  above.</p>	<p>Yes</p>	<p>The solar project is already implemented on ground.</p>
<p>3.2.1 Eligible projects may be located in any part of the world. Hydropower projects shall not be located in High Conservation Values (HCVs)<sup>12</sup> areas. Please refer to Annex A for further information on hydropower projects.</p>	<p>Yes</p>	<p>Fulfill the criteria as there is no restriction on the location of the project.</p>
<p>3.3.1 Project Area and Boundary shall be defined in line with the applicable Methodologies and Product Requirements.</p>	<p>Yes</p>	<p>The project area and boundary is defined as per applicable Methodologies and Product Requirements. Please refer Section B.3 below</p>
<p>3.3.2 The following scale categories are applied to RE activities:</p> <p>a. Microscale</p>	<p>Yes</p>	<p>Since the project capacity is greater than 15 MW per annum, this project will</p>

<p>i. RE project issuing less than or equal to 10,000 GS VERs</p> <p>ii. RE project seeking any product other than GS VERs with an installed capacity less than equal to 2 MWelectricity / 6 MWthermal</p> <p>b. For the purpose of applying GS approved methodologies for quantification of GS VERs/CERs, 'small scale' is defined as per the indicated type, as follows;</p> <p>i. Renewable energy Project with a maximum output capacity of 15 MW (or an appropriate equivalent). In this context:</p> <p>a. "Output" is the installed/rated capacity as indicated by the manufacturer of the equipment or plant, irrespective of the actual load factor of the plant. The installed/rated capacity of renewable electricity generating units that involve turbine generator systems shall be based on the installed/rated capacity of the generator;</p> <p>b. Regarding the "appropriate equivalent" of 15 MW, the project developer may refer to MW(p)<sup>13</sup>, MW(e) or MW(th). As MW(e) is the most common denomination, MW is defined as MW(e), and otherwise an appropriate conversion factor shall be applied;</p> <p>c. For biomass, biofuel and biogas project activities, the maximal limit of 15 MW(e) is equivalent to a 45 MW thermal output of the equipment or the plant (e.g. boilers). For thermal applications of biomass, biofuels or biogas (e.g. cookstoves), the limit of 45 MW(th) is the installed/rated capacity of the thermal application equipment or device(s) (e.g. biogas stoves). For electrical or mechanical applications, the limit of a 15 MW installed/rated output shall be used. In the case of co-firing renewable and fossil fuels, the rated capacity of the system when using fossil fuel shall apply;</p> <p>d. For thermal applications of solar energy project activities, "maximum output" shall be calculated using a conversion factor of 700 W(th)/m<sup>2</sup> of aperture area of glazed flat plate or evacuated tubular collector, that is, the eligibility limit in terms of aperture area is 64,000 m<sup>2</sup> of the collector.<sup>20</sup> The project participants may also use other conversion factors determined as per the requirements in paragraph 73 above, but shall then justify why the chosen</p>		<p>fall under 'large scale project type'</p>
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<p>conversion factor is more appropriate to the project activity;</p> <p>ii. End-use energy efficiency improvement project activities that reduce energy consumption, on the supply side, with a maximum energy saving of 60 GWh per year (or an appropriate equivalent) in any year of the crediting period. In this context, for project activities that improve thermal energy efficiency, the maximum energy saving of 60 GWh(e) per year is equivalent to 180 GWh(th) per year saving</p> <p>iii. Other project types not included in Renewable and End use energy project types that result in GHG emission reductions not exceeding 60,000 tCO<sub>2</sub>eq per annum in any year of the crediting period.</p>		
<p>3.4.1 Certain Impact Quantification methodologies allow projects to account for a Suppressed Demand scenario when establishing a baseline. In such cases, the application of the Suppressed Demand baseline is limited to small scale and microscale projects.</p>	NA	Not applicable
<p>3.5.1 A single Renewable Energy project may potentially pursue any number and combination of Certified Impact Statements or Products. However, certain Product Requirements, which supersede the generic requirements stated in this document can set restrictions on co-issuance of Certified Impact statements or Products. For instance, GS VERs or GS CERs with REC labels cannot be claimed for the same MWh.</p>	Yes	The project fulfills the GS VER product requirement
<p>3.5.2 Where a Suppressed Demand baseline is applied, it is not allowed to 'stack' Gold Standard Certified Impact Statements or Products as the definition of the baseline may be contradictory.</p>	NA	Not applicable

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

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The respective Project proponents have 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 GS VER and other legal rights are with the respective project proponent as given in the below table:

Project	Capacity	Legal owner of VER and other legal rights
ITA	7 MWp	PT Infrastruktur Terbarukan Adhiguna (ITA)
ITB	7 MWp	PT Infrastruktur Terbarukan Buana (ITB)
ITC	7 MWp	PT Infrastruktur Terbarukan Cemerlang (ITC)
ITL	21 MWp	PT Infrastruktur Terbarukan Lestari (ITL)

No other parties or communities are involved in the project.

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

1. Commissioning Certificate
2. Approvals

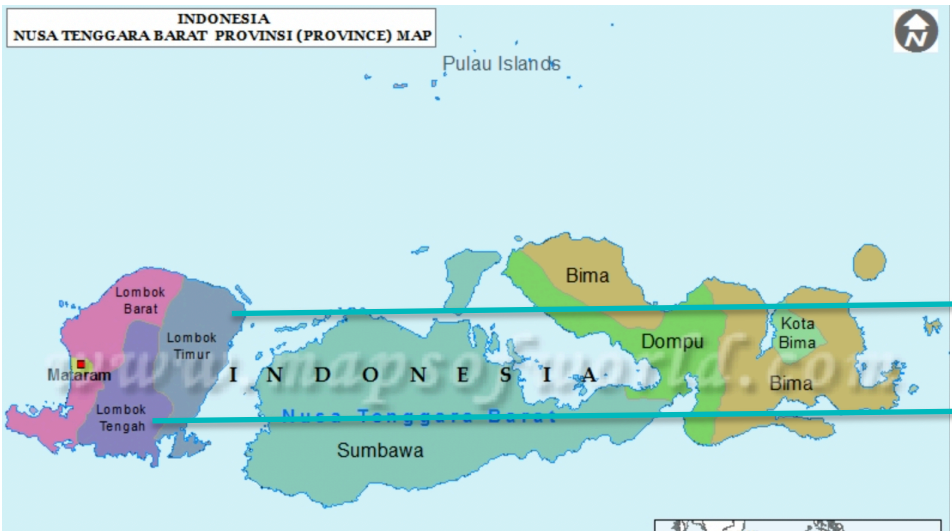
## A.2 Location of project

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The projects are located in in Indonesia. The location & GPS coordinates of the each project activity are given in below:

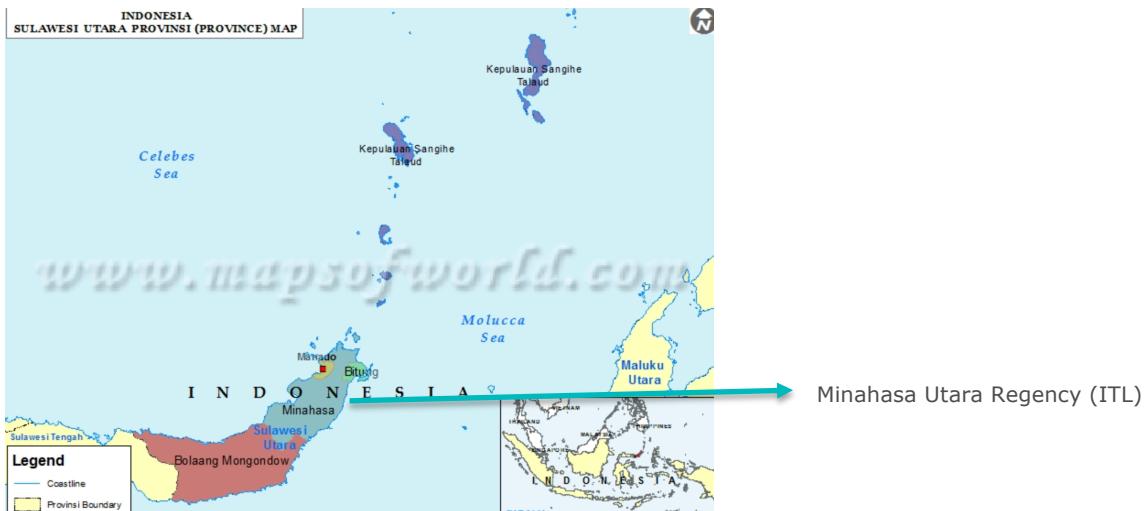
Project	Capacity	Region/Province	City/Town/Community	Geographical Location
ITA	7 MWp	Nusa Tenggara Barat Province	Cemporonan sub-village, Pringgabaya Utara village, Pringgabaya district, Lombok Timur regency	8.519° S 116.634° E
ITB	7 MWp	Nusa Tenggara Barat Province	Geres Baret sub-village, Geres village, Labuhan Haji district, Lombok Timur regency	8.658° S 116.574° E
ITC	7 MWp	Nusa Tenggara Barat Province	Sengkol 1 sub-village, Sengkol village, Pujut district, Lombok Tengah regency	8.794° S 116.294° E
ITL	21 MWp	Sulawesi Utara Province	Wineru Village, Likupang Timur District, Minahasa Utara Regency	1.658° N 125.096° E

The location of the ITA, ITB & ITC project sites are shown in the map below:



The location of the ITL project sites is shown in the map below:

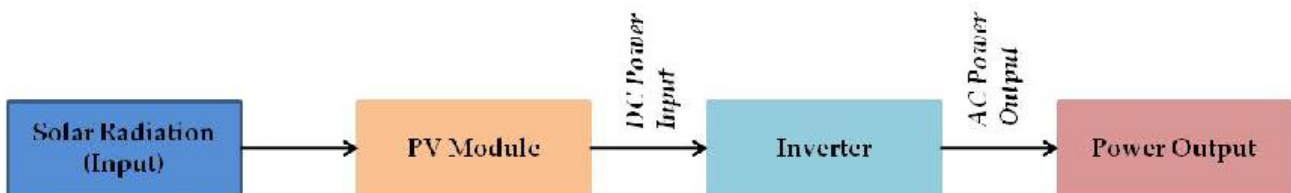




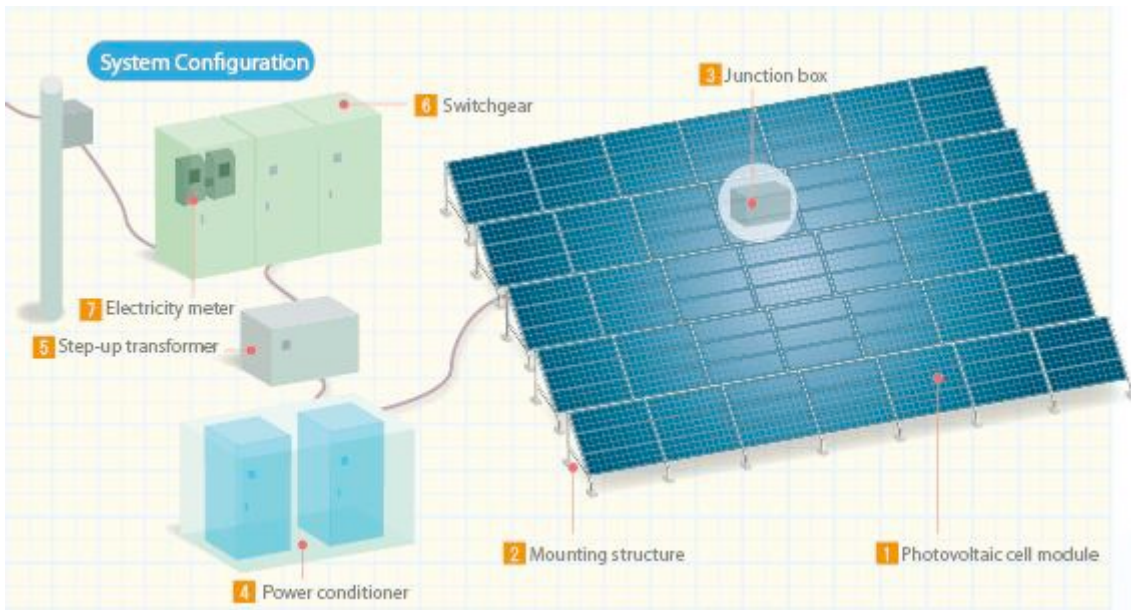
### A.3 Technologies and/or measures

Photovoltaic (PV) is a method of generating electrical power by directly converting sunlight into electricity. This conversion is facilitated by special semiconductor material which exhibit photoelectric effect. PV modules which are made up of the semiconductor material are used for power generation. The semiconductor materials used for the modules could be monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride and copper indium selenide/sulfide. Currently all the panels erected at the project activity uses polycrystalline modules. The project activity is the installation of an environmentally safe and sound technology since there are no GHG emissions associated with the electricity generation.

The technical specifications as below.



The Project would generate electricity by converting solar radiations into electricity using photo – electric properties of silicon semiconductors. Grid connected solar PV project employs two-step process for converting solar radiations into AC power to be fed into the grid. The process flow of power generation process in a PV plant is as depicted below.



A grid connected PV project typically has solar modules, inverters, unit control switchboard, energy meter and transformer as main components.

The solar PV power plant has solar PV modules, inverters, transformers and other protection system and supporting components as under:

Project	ITA	ITB	ITC	ITL
<b>Solar PV modules</b>				
Solar PV modules (Make)	Trina Solar	Trina Solar	Trina Solar	Trina Solar
Technology	Polycrystalline	Polycrystalline	Polycrystalline	Polycrystalline
Capacity	325 Wp	325 Wp	325 Wp	325 Wp
No. Of Modules	21,560	21,560	21,560	64,720
Capacity, MW (DC)	7.007 MWp	7.007 MWp	7.007 MWp	21.034 MWp
<b>Inverter</b>				
Input voltage of inverter	550 - 885 V	550 - 885 V	550 - 885 V	550 - 885 V
Rated output voltage of	380 V	380 V	380 V	380 V
Inverter output (min)	680 kWac	680 kWac	680 kWac	680 kWac
Number of Inverter	8	8	8	24
Total AC Capacity	5.44 MW	5.44 MW	5.44 MW	16.32 MW
<b>Inverter Transformer</b>				
Capacity	1.360 kVA	1.360 kVA	1.360 kVA	1.360 kVA
Input Voltage range	100 -380 V	100 -380 V	100 -380 V	100 -380 V
Output Voltage	20k V	20k V	20k V	20k V
Number of transformer	4	4	4	4
<b>Power Transformer</b>				
Capacity	NA	NA	NA	20 MVA
Input/ Output Voltage	NA	NA	NA	20 kV/66kV
Number of transformer	NA	NA	NA	1

<b>Grid Connection</b>				
Interconnection Voltage	20 kV	20 kV	20 kV	66 kV
Transmission line distance	3 km	6 km	2.1 km	0.2 km
Substation	150/20kV Pringgabaya	150/20kV Selong	150/20kV Sengkol	66/20kV Likupang
Total Capacity, MW (DC)	42 MWp			
Total Capacity, MW (AC)	32.6 MWac			

The average lifetime of the project is around 25 years as per the equipment supplier specifications. The plant load factor assessed at project sites as below:

<b>Project</b>	<b>ITA</b>	<b>ITB</b>	<b>ITC</b>	<b>ITL</b>
PLF (DC)	17.17%	18.02%	17.97%	17.70%
Generation	10,526 MWh	11,047 MWh	11,018 MWh	32561 MWh

The total annual net generation is estimated to be 65,152 MWh in the first year. Considering 0.5% degradation factor, the estimated net generation on the 6<sup>th</sup> year (1<sup>st</sup> year of 2<sup>nd</sup> crediting period) is 62,907 MWh.

In the absence of the project activity the equivalent amount of electricity sold to grid would have been generated by grid connected power plants from the respective grid, which is predominantly based on fossil fuels, hence baseline scenario of the project activity is the grid based electricity system, which is also the pre-project scenario.

The technology and the project do not pose any adverse threat to the environment and contribute positively in reducing GHG emissions by displacing energy generation from fossil fuel powered projects. The proposed project activity is environmentally safe to implement and operate.

#### **A.4 Scale of the project**

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The project is seeking emission reduction certification from 42 MWp/32.6 MW<sub>AC</sub> Solar Power Project. The estimated emission reduction from this project is 33,775 tCO<sub>2</sub>/year. Since the annual estimated emission reduction is greater than 10,000 tCO<sub>2</sub>eq, the project falls under “non-micro scale” category as per the Renewable energy activity requirement, v1.4

#### **A.5 Funding sources of project**

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

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

### B.1. Reference of approved methodology (ies)

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Title: Grid-connected electricity generation from renewable sources

References: Approved Large Scale Consolidated Methodology: ACM0002 “Grid-connected electricity generation from renewable sources” (Version 21)<sup>3</sup>

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

- Methodological Tool: Tool to calculate the emission factor for an electricity system - Version 7<sup>4</sup>.

### B.2. Applicability of methodology (ies)

>>

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

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

<sup>3</sup> <https://cdm.unfccc.int/UserManagement/FileStorage/ZPFJL01OU2RYC6N3HASIXV7K84QBG9>

<sup>4</sup> [http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.0.pdf/history\\_view](http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.0.pdf/history_view)

<p>plant(s)/unit(s); (d) involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) involve a replacement of (an) existing plant(s)/unit(s)</p>	
<p>In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that:</p> <ul style="list-style-type: none"> <li>(a) Integrate BESS with a Greenfield power plant;</li> <li>(b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic<sup>1</sup> or wind power plant(s)/unit(s);</li> <li>(c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s);</li> <li>(d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s)</li> </ul>	<p>Not applicable as the project does not involve integration of BESS.</p>
<p>The methodology is applicable under the following conditions:</p> <ul style="list-style-type: none"> <li>(a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;</li> <li>(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the</li> </ul>	<p>The project activity is the installation of a new grid connected solar power project. Thus, it meets the first applicability condition</p>

<p>existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;</p> <p>(c) In case of Greenfield project activities applicable under paragraph 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents);</p> <p>(d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies<sup>2</sup> may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period.</p>	
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<p>During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.</p>	
<p>In case of hydro power plants, one of the following conditions shall apply:</p> <ul style="list-style-type: none"> <li>(a) The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of reservoirs; or</li> <li>(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/m<sup>2</sup>; or</li> <li>(c) The project activity results in new single or multiple reservoirs and the power density calculate equation (3), is greater than 4 W/m<sup>2</sup>.</li> <li>(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/m<sup>2</sup>, all of the following conditions shall apply.             <ul style="list-style-type: none"> <li>(i) The power density calculated using the total installed capacity of the integrated</li> </ul> </li> </ul>	<p>The proposed project activity is the installation of solar power plant. Therefore, the said criteria is not applicable</p>

<p>project, as per equation (4) is greater than <math>4W/m^2</math>;</p> <p>(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;</p> <p>(iii) Installed capacity of the power plant(s) with power density lower than or equal to <math>4 W/m^2</math> 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</p>	<p>The proposed project activity is the installation of solar power plants/units. Therefore, the said criteria is not applicable</p>

<p>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 methodology is not applicable to:                  (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;                  (b) Biomass fired power plants;</p>	<p>The proposed project activity is the installation of solar power plant. 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 solar power plants. Therefore, the said criteria is not applicable</p>
<p><b>In addition, the above applicability conditions the applicability conditions of tool referred in the methodology ACM0002, version 21.0 has been referred here under:</b></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</p>	<p>This condition is applicable. OM, BM and CM are estimated using the tool for calculating baseline emissions.</p>

<p>that would have been provided by the grid(e.g. demand-side energy efficiency projects).</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 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.</p>	<p>Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly.</p>
<p>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.</p>	<p>The project activity is located in Indonesia, a non-Annex I country. Therefore, this criterion is not applicable for the project activity</p>
<p>Under this tool, the value applied to the CO<sub>2</sub> emission factor of bio fuels is zero</p>	<p>The project activity is a grid connected solar power project and therefore, this criterion is not applicable for the project activity</p>

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

### B.3. Project boundary

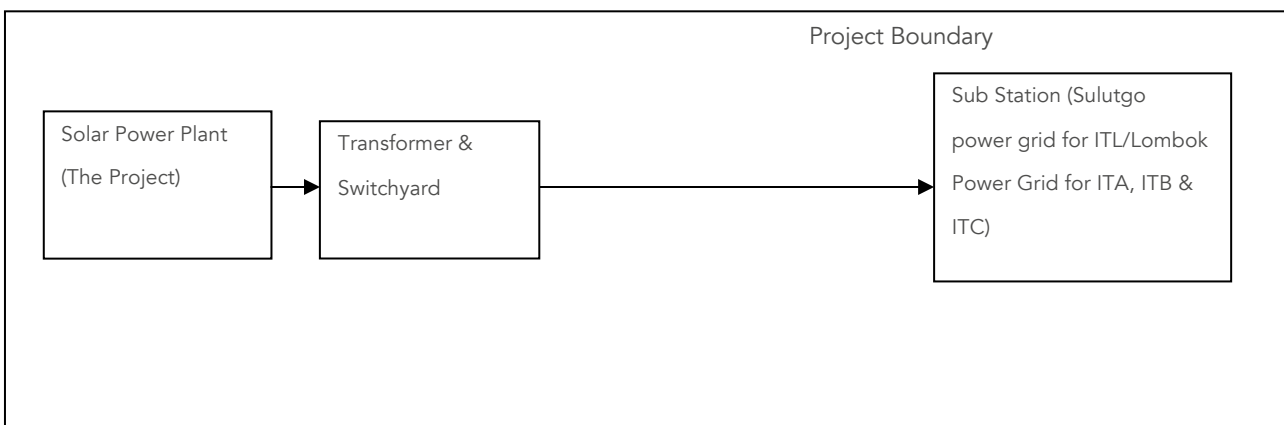
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As per the approved methodology ACM0002, Version 21, following gases and emission sources have been included in the project boundary.

Source	GHGs	Included ?	Justification/Explanation	
Baseline scenario	CO <sub>2</sub>	Yes	Main emission source.	
	CH <sub>4</sub>	No	Minor emission source.	
	N <sub>2</sub> O	No	Minor emission source.	
Project scenario	For dry or flash steam geothermal power plants, emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam	CO <sub>2</sub>	No	The project is a not a geothermal project. Hence not applicable.
		CH <sub>4</sub>	No	
		N <sub>2</sub> O	No	
	For binary geothermal power plants, fugitive emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam	CO <sub>2</sub>	No	The project is a not a geothermal project. Hence not applicable.
		CH <sub>4</sub>	No	
		N <sub>2</sub> O	No	
	For binary geothermal power plants, fugitive emissions of hydrocarbons such as n-butane and isopentane (working fluid) contained in the heat exchangers	Low GWP hydrocarbon/ refrigerant	No	The project is a not a geothermal project. Hence not applicable.
	CO <sub>2</sub> emissions from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants	CO <sub>2</sub>	No	The project is neither solar thermal power plant nor geothermal power plant. Hence not applicable
		CH <sub>4</sub>	No	
		N <sub>2</sub> O	No	
	For hydro power plants, emissions of CH <sub>4</sub> from the reservoir	CO <sub>2</sub>	No	The project is not a hydro power plant. Hence, not applicable
		CH <sub>4</sub>	No	
N <sub>2</sub> O		No		

As per applied baseline and monitoring methodology ACM0002, Version-21 the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to. This includes the solar plant installation, pooling and sub-stations.

The proposed project activity evacuates the power to the regional grid. Therefore, all the power plants contributing electricity to the respective regional grid (Sulutgo/Lombok Power Grid) have been considered in the project boundary for the purpose of baseline estimation. The project activity targets reduction of CO2e as main GHG greenhouse gas in baseline, there are no GHG emission associated with project activity.



**Power Evacuation:**

Power will be evacuated at 20 kV voltages in each power station. The details of the power evacuation is given below:

Details	ITA	ITB	ITC	ITL
Interconnection Voltage	20 kV	20 kV	20 kV	20 kV
Transmission line distance	3 km	6 km	2.1 km	0.2 km
Substation	150/20kV Pringgabaya	150/20kV Selong	150/20kV Sengkol	66/20kV Likupang

**B.4. Establishment and description of baseline scenario**

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Updated baseline for the second crediting period in line with the CDM tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period." Version 03.0.1. This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period. The tool stipulates the following steps to be carried out.

## **Step 1: Assess the validity of the current baseline for the next crediting period**

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

The baseline scenario remains unchanged and is in compliance with all the relevant mandatory national and/or sectoral policies. Current baseline of the project met all relevant mandatory national and sectoral policies. Directorate General Electrical under the Ministry of Energy and Mineral Resources, who has the authority over the energy related activities in Indonesia has released the new operating margin, build margin and combined margin emission factor for Lombok Grid (for ITA, ITB & ITC) and Sulutgo grid (for ITL) for the year of 2019, The average combine margin used for Lombok grid is 1.11 tCO<sub>2</sub>/MWh and for Sulutgo grid is 0.72 tCO<sub>2</sub>/MWh. The Government of Indonesia has a strong commitment to accelerate the electric power development project using renewable energy. This commitment was formalized by releasing regulation. Here are list of regulation that have been released:

- Presidential Regulation No.4/2010 concerning the assignment to PT PLN to conduct electric power development acceleration using renewable, coal and gas.
- Minister Energy and Mineral Resources Regulation No 15 / 2010 on the List of Electric Power Development Acceleration Projects Using Renewable, Coal and Gas which has been amended by Minister Energy and Mineral Resources Regulation No 1/2012 and Minister Energy and Mineral Resources Regulation No 21 / 2013.
- Presidential Regulation No.61/2011 on National Action Plan in Reducing GHG Emission (RAN-GRK).
- Presidential Regulation No 62/2014 on the Ratification of the Statute of the International Renewable Energy Agency. □ Minister Energy and Mineral Resources Regulation No. 17/2014 on Purchase of Electricity and Steam From Geothermal by PLN.

- Minister Energy and Mineral Resources Regulation No. 50/2017 on the use of Renewable Energy for Electricity Supply

The regulations above do not mandate the use of solar power hence those regulations do not impact upon the baseline scenario. The project has consistently met & align those laws and regulations current electricity generation mix complies with the policies and regulations to achieve the Indonesian government's energy target as well as to promote development of clean energy and enhance protection of environmental functions.

Also these regulations does not restrict operation of any type of the power plant in the respective regional grid and hence, this will not affect the baseline scenario of the project activity.

Indonesia has implemented carbon registry as from 0/01/2021 as per Director General's letter Directive S.798/MELHK-PHPL/KPHP/HPL.0/5/2021 of 11 May 2021 and Presidential Decree Number 98 2021 dated 29/10/2021, includes the Implementation of Carbon Economic Value for The Achievement of The Target National Determined Contributions and Greenhouse Gas Emissions Inventory in National Development. Also, Ministry of Environment, though its regulation No 21/2022 dated 21 September 2022 published guidelines for implementation of carbon economic value i.e. carbon trading, results-based payments, carbon levy, and other carbon pricing schemes in Indonesia. This outlines the retention of emission buffer carbon units as a risk mitigation measure to support Indonesia's nationally determined contribution (NDC) targets. Additional regulations are expected to be introduced, specifying buffer requirements for different project technologies. These regulations do not impact carbon credit trading outside the country; however, a designated percentage of buffer units must be reserved by the host country for NDC purposes. The project developer has confirmed that all regulations will be adhered to once the NDC regulations are fully operational.

Hence the current baseline is in compliance with the relevant mandatory national and/or sectoral policies.

### **Step 1.2: Assess the impact of circumstances**

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

The Government of Indonesia released some regulations to accelerate the electric power development projects using renewable energy, coal and gas since 2010. In year 2014, Minister Energy and Mineral Resources has released regulation No.12/2017 on Purchase Renewable Resources for the Provision of Electricity by PLN including wind power, it means that government is very concerned about the geothermal project development to achieve the Indonesian government's target as well as to promote development of clean energy.

Directorate General Electrical under the Ministry of Energy and Mineral Resources, who has the authority over the energy related activities in Indonesia has released the new operating margin, build margin and combined margin emission factor for Lombok grid and Sulutgo Grid for the year of 2017, 2018 and 2019. The average combine margin used for Lombok grid is 1.11 tCO<sub>2</sub>/MWh and Sulutgo Grid is 0.72 tCO<sub>2</sub>/MW which is different from the previous release in 2018 due to the change in the grid mix. The Project baseline scenario is the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted). Even though the price of VER is very low in the market, but the project is continued into 2nd crediting period as a company commitment's to supply clean energy.

The conditions used to determine the baseline emissions in the previous crediting period are still valid.

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

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

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

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

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

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

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

In line with the CDM Project Standard for Project Activities, version 03.0, the impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant EB guidance with regard to renewal of the crediting period at the time of requesting renewal of crediting period; and the correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

The approved baseline methodology, ACM0002 (Version 21), has been used to determine the baseline and the estimation of emission reductions for the applicable crediting period. As referred in the methodology “Tool to calculate the emission factor for an electricity system” (version 07.0) has been used to determine continued validity of the baseline based on combined margin (CM) calculations.

As per latest database, the fossil fuel dominated electricity is more than renewable sector and is continuing with same pattern. In light of the above discussion, it is to be concluded that in accordance with relevant guidelines stipulated in the CDM Project Standard version 03.0, national and/or sectoral policies and circumstances had been considered towards formulating the OM & BM baseline scenario. Hence the baseline scenario as applied for the present project activity remains justified.

As per the approved Methodology ACM002 (Version 21): *“The spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system<sup>6</sup> that the CDM project power plant is connected to.”*

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

In the absence of the project activity, the equivalent amount of power would have been drawn from the respective regional grid (Lombok & Sulutgo grid). Hence, the baseline for the project activity is the equivalent amount of power from the respective regional grid. The emission factor will be fixed for the entire 2<sup>nd</sup> crediting period.

The combined margin ( $EF_{grid,CM,y}$ ) is the result of a weighted average of two emission factor pertaining to the electricity system: the operating margin (OM) and build margin (BM). Calculations for this combined margin must be based on data from an official source (where available) and made publicly available. The Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019 published by Director

General of Electricity<sup>5</sup> is the latest available data at the time of PD submission to VVB for validation, hence same is considered for emission factor calculations.

**Combined Margin Emission factor Calculation:**

PP choose to fix the emission factor Ex-ante for this 2<sup>nd</sup> crediting period as per the version 7 of "tool to calculate the emission factor of an electricity system". For the ex-ante calculation, following approaches for emission factor calculations has been used:

- (a) Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the approved methodology "Tool to calculate the emission factor for an electricity system". OR
- (b) The weighted average emissions (in t CO<sub>2</sub>/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

**Option (a) has been considered to calculate the grid emission factor as per the**

'Tool to calculate the emission factor for an electricity system' since data is available from an official source.

CO<sub>2</sub> Baseline Database for the Indonesian Power Sector, published by Directorate General of Electricity (Ministry of Energy and Mineral Resources or DNA Indonesia) has been used for the calculation of emission reduction.

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

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

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<sup>5</sup> [https://gatrik.esdm.go.id/frontend/download\\_index/?kode\\_category=emisi\\_pl](https://gatrik.esdm.go.id/frontend/download_index/?kode_category=emisi_pl)

STEP 6: Calculate the combined margin (CM) emission factor.

**STEP 1: Identify the relevant electricity power systems**

The tool defines that “for determining the electricity emission factors, identify the relevant electricity system. Similarly, identify any connected electricity systems”. It also states that, “If the DNA of the host country has published a delineation of the project electricity system and connected electricity systems, these delineations should be used”. The project chooses following grid based on the projects connected to respective grid:

Project	Connected Grid
ITA, ITB & ITC	Lombok grid
ITL	Sulutgo grid

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

Project participants have the option of choosing between the following two options to calculate the operating margin and build margin emission factor:

**Option I:** Only grid power plants are included in the calculation.

**Option II:** Both grid power plants and off-grid power plants are included in the calculation.

Option I corresponds to the procedure contained in earlier versions of this tool. Option II allows the inclusion of off-grid power generation in the grid emission factor. Option II aims to reflect that in some countries off-grid power generation is significant and can partially be displaced by CDM project activities, e.g. if off-grid power plants are operated due to an unreliable and unstable electricity grid. Option II requires collecting data on off-grid power generation and can only be used if the conditions outlined therein are met. Option II may be chosen only for the operating margin emission factor or for both the build margin and the operating margin emission factor but not only for the build margin emission factor. If Option II is chosen, off-grid power plants should be classified in different classes of off-grid power plants. Each off-grid power plant class should be

considered as one power plant  $j$ ,  $k$ ,  $m$  or  $n$ , as applicable. In case of the project Option I is chosen with only grid power plants included in the calculation.

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

The calculation of the operating margin emission factor ( $EF_{\text{grid,OM},y}$ ) 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.

PP has chosen Option (a) i.e. simple OM, to determine the operating margin. Other available options in the tool were ruled out considering the fact that data required to calculate simple adjusted OM or dispatch data analysis is not available publicly. As per the tool, low cost/must run resources typically include hydro, geothermal, wind, low-cost biomass, nuclear and solar generation. Data for the same, as published by Central Electricity Authority, has been presented below which illustrates that low cost/must run resources constitute less than 50% of total Indonesia Power Grid generation, hence, the average OM method could not have been used.

The above data clearly shows that the percentage of total grid generation by low cost/must run plants (on the basis of average of three most recent years) for the Indonesia Power Grid is less than 50 % of the total generation. Thus the average emission rate method cannot be applied, as low cost/must run resources constitute less than 50% of total grid generation.

The "Simple operating margin" has been calculated as per the weighted average emissions (in  $tCO_2/MWh$ ) of all generating sources serving the system, excluding hydro, geo-thermal, wind, low- cost biomass, nuclear and solar generation;

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 post option, thus, monitoring and recalculation of the emissions factor during the crediting period is required.

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

The simple OM emission factor is calculated as the generation-weighted average CO<sub>2</sub> emissions per unit net electricity generation (tCO<sub>2</sub>/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 CO<sub>2</sub> 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.

This database data published By Directorate General of Electricity (Ministry of Energy and Mineral Resources or DNA Indonesia provides information about the Combined Margin Emission Factors of all the regional electricity grids in Indonesia. The Combined Margin in the database is calculated ex post 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 for calculating the Baseline Emission Factor.

As per „Tool to calculate the emission factor for an electricity system“, Option A ("Based on the net electricity generation and a CO<sub>2</sub> emission factor of each power unit") is used to calculate simple OM emission factor. Where Option A is used, the simple OM emission factor is calculated based on the electricity generation of each power unit and an emission factor for each power unit, as follows:

$$EF_{\text{grid,OMsimple,y}} = \sum (EG_{m,y} \times EF_{EL,m,y}) / \sum EG_{m,y}$$

Where:

$EF_{grid,OMsimple,y}$  Simple operating margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh)

$EG_{m,y}$  Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)

$EF_{EL,m,y}$  CO<sub>2</sub> emission factor of power unit m in year y (tCO<sub>2</sub>/MWh)

m All power units serving the grid in year y except low-cost / must-run power units

y the relevant year as per the data vintage chosen in STEP 3

PP chooses Ex-ante option (Option B) in estimation of OM. As per the data published Directorate General of Electricity (Ministry of Energy and Mineral Resources or DNA Indonesia), the weighted average OM for the year 2019 is estimated to be:

Project	Grid	Value <sup>6</sup>	Units
ITA, ITB & ITC	Lombok grid	1.27	tCO <sub>2</sub> /MWh
ITL	Sulutgo grid	0.67	tCO <sub>2</sub> /MWh

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

The project participants have chosen Option I, i.e. fixing build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of GS PDD submission to the VVB for validation.

The build margin emissions factor is the generation-weighted average emission factor of all power units m during the most recent year y for which power generation data is available, calculated as follows:

$$EF_{grid, BM,y} = \frac{\sum(EG_{m,y} \times EF_{EL,m,y})}{\sum EG_{m,y}}$$

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<sup>6</sup> [https://gatrik.esdm.go.id/assets/uploads/download\\_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf](https://gatrik.esdm.go.id/assets/uploads/download_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf)

Where:

- $EF_{grid,BM,y}$  = Build margin CO<sub>2</sub> emission factor in year  $y$  (t CO<sub>2</sub> e/MWh)
- $EG_{m,y}$  = Net quantity of electricity generated and delivered to the grid by power unit  $m$  in year  $y$  (MWh)
- $EF_{EL,m,y}$  = CO<sub>2</sub> emission factor of power unit  $m$  in year  $y$  (t CO<sub>2</sub> e/MWh)
- $m$  = Power units included in the build margin
- $y$  = Most recent historical year for which power generation data is available

The CO<sub>2</sub> emission factor of each power unit  $m$  ( $EF_{EL,m,y}$ ) is determined as per the procedures given in step 4 (a) for the simple OM, using options A1B1 using for  $y$  the most recent historical year for which power generation data is available, and using for  $m$  the power units included in the build margin. As per the data published Directorate General of Electricity (Ministry of Energy and Mineral Resources or DNA Indonesia), the OM for the year 2019 is estimated to be:

Project	Grid	Value <sup>7</sup>	Units
ITA, ITB & ITC	Lombok grid	1.61	tCO <sub>2</sub> /MWh
ITL	Sulutgo grid	0.90	tCO <sub>2</sub> /MWh

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

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

$$\begin{aligned}
 EF_{grid,y} &= ( EF_{OM,y} \times W_{OM} ) + ( EF_{BM,y} \times W_{BM} ) \\
 &= ( EF_{OM,y} \times 75\% ) + ( EF_{BM,y} \times 25\% )
 \end{aligned}$$

<sup>7</sup> [https://gatrik.esdm.go.id/assets/uploads/download\\_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf](https://gatrik.esdm.go.id/assets/uploads/download_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf)

The Ex-post emission factor was estimated by the Directorate General of Electricity (Ministry of Energy and Mineral Resources or DNA Indonesia) and the final values are presented below:

Project	Grid	Value	Units
ITA, ITB & ITC	Lombok grid	1.11	tCO2/MWh
ITL	Sulutgo grid	0.72	tCO2/MWh

### B.5. Demonstration of additionality

The table below is only applicable if the proposed project is deemed additional, as defined by the applied approved methodology or activity requirement or product requirement.

<p>Specify the methodology or activity requirement or product requirement that establish deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).</p>	<p>As per the applied methodology ACM0002, Version 20, under section 5.3.1 details a Simplified procedure to demonstrate additionality.</p> <p>As per para 29 of the methodology, “A specific technology in the positive list is defined as automatically additional if at the time of PDD submission any of the following conditions is met:</p> <p style="padding-left: 40px;">(a) The percentage share of total installed capacity of the specific technology in the total installed grid connected power generation capacity in the host country is equal to or less than two per cent; or</p> <p style="padding-left: 40px;">(b) The total installed capacity of the technology in the host country is less than or equal to 50 MW”</p>
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<p>Describe how the proposed project meets the criteria for deemed additionality.</p>	<p>The project technology is solar photovoltaic power generation which is included in the positive list of technology as per para 28 of the methodology.</p> <p>The total installed capacity of the grid connected power plant in Indonesia as on December 2018 is 62,255.81 MW<sup>9</sup></p> <p>Total installed capacity of the grid connected solar power plant as on December 2018 is 24.42 MW<sup>10</sup>.</p> <table border="1" data-bbox="823 965 1426 1503"> <tr> <td data-bbox="823 965 1219 1178">Total grid connected power plant capacity in Indonesia (As on December 2018)</td> <td data-bbox="1219 965 1426 1178">62,255.81 MW</td> </tr> <tr> <td data-bbox="823 1178 1219 1391">Grid connected solar power plant capacity in Indonesia (As on December 2018)</td> <td data-bbox="1219 1178 1426 1391">24.42 MW</td> </tr> <tr> <td data-bbox="823 1391 1219 1503">% of solar capacity share (24.42/ 62,255.81)</td> <td data-bbox="1219 1391 1426 1503">0.039%</td> </tr> </table> <p>From the above data, the total installed capacity of the project technology (Solar PV) is merely 0.039% of total installed</p>	Total grid connected power plant capacity in Indonesia (As on December 2018)	62,255.81 MW	Grid connected solar power plant capacity in Indonesia (As on December 2018)	24.42 MW	% of solar capacity share (24.42/ 62,255.81)	0.039%
Total grid connected power plant capacity in Indonesia (As on December 2018)	62,255.81 MW						
Grid connected solar power plant capacity in Indonesia (As on December 2018)	24.42 MW						
% of solar capacity share (24.42/ 62,255.81)	0.039%						

<sup>9</sup> <https://www.esdm.go.id/assets/media/content/content-handbook-of-energy-and-economic-statistics-of-indonesia-2018-final-edition.pdf> (Table 6.4.1)(Table 32, page 68)

<sup>10</sup> <https://www.esdm.go.id/assets/media/content/content-handbook-of-energy-and-economic-statistics-of-indonesia-2018-final-edition.pdf> (Table 6.4.1)

	<p>grid connected power generation in the host country (Indonesia) which is lesser than 2%. Also, the total installed capacity of the project technology (Solar PV) in the host country (Indonesia) is less than 50 MW. Hence, the project is automatically additional.</p> <p><u>Note:</u> The latest data made available by Ministry of Energy and Mineral Resources, Indonesia is up to December 2018 and hence the same is considered for the above analysis.</p>
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Serious Consideration of carbon revenue:

<b>Activity</b>	<b>Date</b>
Board decision on investment of the project	02/05/2018
Notice to proceed to EPC Contractor (Start date)	10/08/2018
Appointment of Consultant for securing GS registration status	01/12/2018
Appointment of VVB for validation of project under GS	01/06/2019
Start date of the project	10/08/2018
First submission of PDD to GS	31/07/2019
Stakeholder consultation	20/09/2019, 20/02/2020 & 21/02/2020
Stakeholder feedback round	09/07/2020 to 08/09/2020

From the above chronology, it is clear that PP has taken continuous real actions to secure the carbon revenue for this project. Hence, carbon revenue is seriously considered in this project. From the above table it is clear that the first submission of project is within 1 year from the start date of the project. Hence the prior consideration eligibility requirement is fulfilled .

#### B.5.1 Prior Consideration

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

### B.5.2 Ongoing Financial Need

Previously issued VERs have given support to the ongoing financial sustainability of the project. Both low demand for VERs and a sharp decrease in prices caused Project Owner not to benefit from carbon revenue as expected. Even, the sales prices were so lower than the expected ones at the investment time, sold VERs provided contribution of the ongoing financial sustainability of the project. VER revenue from the project is mostly used for the operation costs of the project activity to be covered.

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

Details	% to Net Income	Remarks
Income	99.7%	Income occurring from electricity sales (sole income except carbon revenues) is 0.997 times the net income
Net Expenses	32%	Overall expenses (including depreciation costs) make up to 0.32 times the gross income.
Carbon Costs	0.13%	Carbon certification costs amount to 0.13% of the net income and net carbon sales income amount
Carbon Income	0.3%	Net Carbon Income consists of 0.3% of net Income mainly the carbon credits are issued and sold only till 31 <sup>st</sup> December 2020

It shall also be noticed that that as on H2 of 2024, the total installed capacity of the utility scale solar power projects by private sector in Indonesia is merely 112.75 MWp<sup>11</sup> which is about 1% of the total installed power plants capacity in Indonesia. Hence, it is clear that the solar projects in Indonesia need additional carbon revenue to promote the same.

<sup>11</sup> <https://iesr.or.id/pustaka/indonesia-solar-energy-outlook-2025/>

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

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

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

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

Monitoring parameter	Total electricity produced: Renewable
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Baseline estimation approach	In the baseline scenario no solar 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

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 solar energy power plant operation and maintenance that will help to explore new upcoming job opportunities

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

For the SDG 13, the emission reduction calculations were carried out as per the applied CDM methodology ACM0002, v21.

The baseline emission is calculated in line with para 47 of ACM0002, Version 21.0, using equation below

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

Where,

$BE_y$  Baseline emissions in year y (t CO<sub>2</sub>/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 project activity in year y (MWh/yr)

$EF_{grid,CM,y}$  Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using TOOL07 (t CO<sub>2</sub>/MWh)

AS per para 49 of ACM0002, version 21.0, when the project activity is installation of Greenfield power plant, then:

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

Where,

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

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

Hence the baseline emission equation is as below:

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

### PROJECT EMISSION:

The project activity involves in harnessing solar power. As per the approved consolidated Methodology ACM0002 (Version 21.0) para 31:

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

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

Where,

$PE_y$  Project emissions in year y (t CO<sub>2</sub>e/yr)

$PE_{FF,y}$  Project emissions from fossil fuel consumption in year y (t CO<sub>2</sub>/yr)

$PE_{GP,y}$  Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (t CO<sub>2</sub>e/yr)

$PE_{HP,y}$  Project emissions from water reservoirs of hydro power plants in year y (t CO<sub>2</sub>e/yr)

$PE_{BESS,y}$  Project emissions from charging of a BESS using electricity from the grid or from fossil fuel electricity generators (t CO<sub>2</sub>e/yr)

As the project activity is the installation of a new grid-connected solar power plant/ unit and does not involve any project emissions from fossil fuel, operation of dry, flash steam or binary geothermal power plants, and from water reservoirs of hydro power plants. Therefore  $PE_{FF,y}$ ,  $PE_{GP,y}$ ,  $PE_{HP,y}$  are equal to zero and thus,  $PE_y = 0$ .

So the emissions from the project are zero.

## LEAKAGE

As per the approved consolidated Methodology ACM0002 (Version 21.0) para 61, no leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected

## EMISSION REDUCTION (ER<sub>y</sub>):

The project activity mainly reduces carbon dioxide through substitution of grid electricity generation with fossil fuel fired power plant by renewable electricity. The emission reduction ER<sub>y</sub> by the project activity during a given year y is the difference between Baseline emission and Project emission & Leakage emission. As per the applied methodology, leakage emissions are excluded for solar projects and hence the same is not used. The emission reduction is calculated in line with para 62 of ACM0002, Version 21, using equation below:

$$ER_y = BE_y - PE_y$$

Where,

ER<sub>y</sub> = Emission Reduction in tCO<sub>2</sub>/year

BE<sub>y</sub> = Baseline emission in tCO<sub>2</sub>/year

PE<sub>y</sub> = Project emissions in tCO<sub>2</sub>/year

### B.6.2 Data and parameters fixed ex ante

#### SDG13

Data/parameter	EF <sub>CM</sub>
Unit	tCO <sub>2</sub> eq/MWh
Description	Combined Margin emission factor
Source of data	Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019 values have been used for the calculation. <a href="https://gatrik.esdm.go.id/assets/uploads/download_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf">https://gatrik.esdm.go.id/assets/uploads/download_index/files/96d7c-nilai-fe-grk-sistem-ketenagalistrikan-tahun-2019.pdf</a>
Value(s) applied	Lombok grid – 1.11 tCO <sub>2</sub> /MWh Sulutgo grid – 0.72 tCO <sub>2</sub> /MWh
Choice of data or Measurement methods and procedures	Derived from Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019 published by the Director General of Electricity, Government of Indonesia  It is calculated based on Operating Margin (OM) and Build Margin (BM) using the weights of w <sub>OM</sub> = 0.75 and w <sub>BM</sub> =

	0.25
Purpose of data	Baseline Emission calculation
Additional comment	The above value is fixed and it is same for the entire crediting period

B.6.3 Ex ante estimation of SDG Impact

SDG	Parameter	Baseline impact	Project impact	Net impact (baseline – project)
SDG 13	Amount of GHGs emissions avoided  (refer the detail calculation below)	0	57,565	57,565
SDG 7	Total electricity produced: Renewable (MWh)	0	62,907	62,907
SDG 8	Total Number of Jobs	0	70	70

**13. GHG Emission Reduction**

**Baseline Emission:**

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

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

The  $EG_{\text{facility}, y}$  is estimated from the PLF provided as per the third party PV Syst report:

Project	$EG_{P,y}$ for year 1	Source	$EG_{P,y}$ for year 6 (considering 0.5% annual degradation)

ITA	10,526 MWh	PVsyst Report	10,265 MWh
ITB	11,047 MWh	PVsyst Report	10,774 MWh
ITC	11,018 MWh	PVsyst Report	10,745 MWh
ITL	32,561 MWh	PVsyst Report	31,755 MWh
Total	65,142 MWh	Calculated	63,539 MWh

As per section B.6.1 above, the combined margin grid emission factor (  $EF_{grid,CM,y}$  ) for Lombok grid is 1.11 tCO<sub>2</sub>/MWh and Sulutgo grid is 0.72 tCO<sub>2</sub>/MWh

Hence the annual baseline emission is calculated as below:

Project	Grid	EGPJ,y	EF <sub>grid,CM,y</sub>	BE <sub>y</sub> = EG <sub>facility, y</sub> * EF <sub>grid,CM,y</sub>
ITA	Lombok	10,265 MWh	1.11 tCO <sub>2</sub> /MWh	11,395 tCO <sub>2</sub>
ITB	Lombok	10,774 MWh	1.11 tCO <sub>2</sub> /MWh	11,959 tCO <sub>2</sub>
ITC	Lombok	10,745 MWh	1.11 tCO <sub>2</sub> /MWh	11,927 tCO <sub>2</sub>
ITL	Sulutgo	31,755 MWh	0.72 tCO <sub>2</sub> /MWh	22,864 tCO <sub>2</sub>
Total	-	63,539 MWh	-	58,144 tCO <sub>2</sub>

**Project Emission:**

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

$$PE_y = 0 \text{ tCO}_2$$

**Leakage:**

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

$$LE_y = 0 \text{ tCO}_2$$

**Emission Reduction:**

$$ER_y = BE_y - PE_y = 58,144 - 0 = 58,144 \text{ tCO}_2 \text{ (for year 1)}$$

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

**SDG 13: Amount of GHGs emissions avoided**

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	58,144	0	58,144
Year 2	57,853	0	57,853
Year 3	57,564	0	57,564
Year 4	57,276	0	57,276
Year 5	56,990	0	56,990
Total	287,827	0	287,827
<b>Total number of crediting years</b>	5		
<b>Annual average over the crediting period</b>	57,565	0	57,565

**SDG 7: Total electricity produced: Renewable (MWh)**

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	0	63,539	63,539
Year 2	0	63,222	63,222
Year 3	0	62,906	62,906
Year 4	0	62,591	62,591
Year 5	0	62,278	62,278
Total	0	3,14,536	3,14,536
<b>Total number of crediting years</b>	5		
<b>Annual average over the crediting period</b>	0	62,907	62,907

**SDG 8: Total Number of Jobs**

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	0	70	70
Year 2	0	70	70
Year 3	0	70	70

Year 4	0	70	70
Year 5	0	70	70
Total	0	NA	NA
<b>Total number of crediting years</b>	5		
<b>Annual average over the crediting period</b>	0	70	70

### B.7. Monitoring plan

#### B.7.1 Data and parameters to be monitored

### SDG 7 & SDG 13

<b>Data / Parameter</b>	<b>EGy</b>	
<b>Unit</b>	MWh	
<b>Description</b>	Quantity of net electricity supplied to the grid during the year y.	
<b>Source of data</b>	Monthly energy generation statement issued by PLN. These are called Meter reading records.	
<b>Value(s) applied</b>	Project	EG,y (Year 1)
	ITA	10,265 MWh
	ITB	10,774 MWh
	ITC	10,745 MWh
	ITL	31,755 MWh
	Total	63,539 MWh
<b>Measurement methods and procedures</b>	<p>Net electricity supplied will be calculated based on the difference between values of “export” and “import” on the energy meter at the sub-station (evacuation point). (Net Electricity = Export – Import)</p> <p>The net electricity will be calculated by PLN and provided in the monthly generation statement. Hence, the net electricity reading will be directly sourced from the monthly generation statement.</p>	

Monitoring frequency	Measurement: Continuous Recording: Monthly Monitoring Method: recording in "generation statement" This statement includes, monthly recording of electricity export, import & transmission loss. Energy meters of accuracy class 0.2
QA/QC procedures	Net electricity supplied to the grid by the project activity will be cross checked with invoices. The meter(s) shall be calibrated and maintained by the PLN as per their schedule, and this frequency of meter calibration is not within the control of the Project Proponent. However, the project proponent shall ensure that calibration of electricity meters is carried at least once in 5 year calibration or whenever abnormal difference/inconsistency is observed between main meter and check meter.
Purpose of data	Calculation of baseline emissions and to monitor the contribution to SDG 7
Additional comment	The Monitored Data to be kept for a minimum of two years after the end of the crediting period or the last issuance whichever is later.

**SDG 8:**

Data / Parameter	Total number of Jobs
Unit	-
Description	Total employment generated due to the implementation of project activity
Source of data	Plant employment records
Value(s) applied	70 (Out of which 52 are male and 18 are female)
Measurement methods and procedures	Maintaining Employment records
Monitoring frequency	Yearly Once
QA/QC procedures	-
Purpose of data	To monitor the contribution to SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)
Additional comment	-

B.7.2 Sampling plan

Not applicable

B.7.3 Other elements of monitoring plan

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**SDG 7 & 13:**

PP has dedicated O&M team in site for the operation and maintenance of solar power plants. The O&M team is technically well-equipped and it will take care of day-to-day Operation and maintenance of power plant. O&M team will provide a monthly report, which includes generation data, major breakdown events and machine availability.

All the four project activities have entered a power purchase agreement with PLN for a period of 30 years. The electricity is fed to the Lombok & Sulutgo regional Grid of Indonesia. Monitoring consists of metering the net electricity supplied to the grid ( $EG_{facility,y}$ ). This parameter is based on the Monthly energy generation statement issued by PLN (BA-I or JMR).

**Roles and responsibilities of stakeholders:**

Role	Responsibility
PLN representative	PLN representative is responsible recording meter reading monthly and generate monthly energy meter reading statement (BA-I) and submit to site manager. PLN is also responsible for calibration of meter as per the defined frequency.
General Manager	Overall responsible for the management of project activity
Site Manager	Ensuring proper data recording and calibration of relevant meters as per the defined frequency in coordination with PLN. Site manager confirms the correctness of the monthly energy meter reading statement (BA-I) provided by the PLN. Upon verification, this will be forwarded to HQ for billing and carbon consultant for calculating emission reduction.

Carbon consultant	Carbon consultant is responsible for maintaining the data, preparation of monitoring report, appointment of VVB, resolving queries in verification and coordination with GS board for issuance of the carbon credits.
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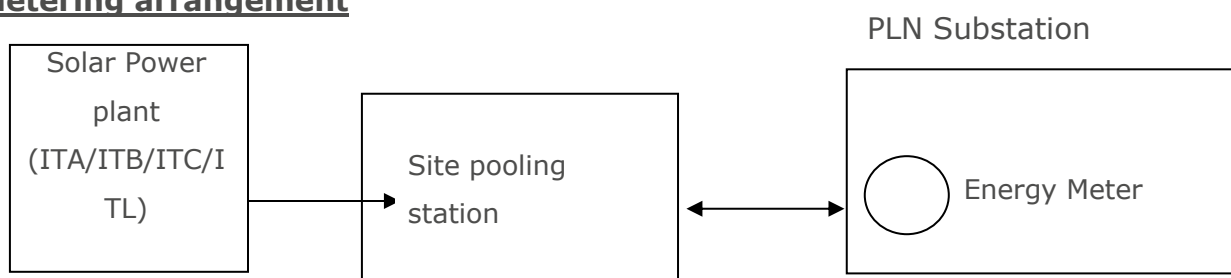
**Metering**

The project activity includes metering at the respective substation managed by PLN & PP. The electricity generated is supplied to grid. The electricity exported & imported from each line are measured by Energy meters (main meter) installed at each project in the respective substation. The reading is recorded and the difference from last month reading gives the number of units imported/exported.

In each line, a check meter is installed which reading will be considered for billing when the main meter is found to be malfunctioning.

All the meters used in the project activity will be calibrated on an at least once in 5 years by PLN.

**Metering arrangement**



**Recording**

The energy meter reading (both export & import) will be recorded by PLN & PP. The difference between current reading and previous month reading will be determined. Based on the energy meter reading, a Monthly energy generation statement will be issued by PLN (BA-I or JMR). The PP will then raise monthly electricity sales invoices to PLN based on the BA-I reading.

**Quality Check:**

The monitored data will be reported by the PP to the GS consultant on a monthly basis for the calculation and estimation of emission reductions. This data will be checked against invoices raised.

## **Data storage and Archiving**

In accordance with the methodology all the data collected during the crediting period will be archived electronically and kept for at least two years after the end of crediting period.

### **SDG 8**

Number of staff employed in the project is maintained by HR department which will be updated as and when required.

The money spent on the operation and maintenance activities are recorded on daily basis by accounts department which will be reported annually in the company balance sheet.

## **SECTION C. DURATION AND CREDITING PERIOD**

### **C.1. Duration of project**

C.1.1 Start date of project

10/08/2018 (Date of notice to proceed to EPC contractor)

C.1.2 Expected operational lifetime of project

25 Year

### **C.2. Crediting period of project**

C.2.1 Start date of crediting period

02/07/2024 (Second crediting period)

C.2.2 Total length of crediting period

5 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><b>Principle 3</b></p>	<p>The O&amp;M log book records all the parameters as listed:</p> <ul style="list-style-type: none"> <li>• Hazardous waste generated, disposed, any spillages</li> <li>• Waste oil generated, disposed, any spillages</li> <li>• Leakage of any diesel or waste oil</li> </ul>
<p><b>Principle 4</b></p>	<p>Detailed ESIA study conducted to understand if any of the location needs to be altered.</p> <p>Locals were consulted wherever the solar power plant location or access road was in vicinity to a settlement.</p> <p>Drainage facilities are constructed in the plant in order to reduce the risk of soil erosion.</p>
<p><b>Principle 9</b></p>	<p><b>General soil erosion and sediment control measures would include:</b></p> <ul style="list-style-type: none"> <li>• Keep open areas of excavation to a minimum and construction activities restricted to dry months to avoid heavy rainfalls;</li> <li>• Using existing roads and lanes used by land owner.</li> <li>• Stockpiles of materials placed away from drainage lines and formed with sediment control structures placed immediately down slope;</li> </ul>

- Construction debris and excavated material were cleared up at regular intervals
- Excavated material stock piled and used for backfilling of foundations, platforms etc.
- Minimization of traffic in construction zones and use of a dedicated parking area, i.e. site compound;
- Re-vegetation taken up as necessary after construction, in order to reduce the risk of soil erosion.

**Specific mitigation measures followed in the operational phase of the project:**

- Proper drainage controls such as culverts, cut-off trenches shall be used to ensure proper management of surface water runoff to prevent erosion.
- Waste oil generated shall be stored separately in containers in a secured location in the maintenance room. The storage location and the containers are properly marked.
- The waste / used waste oil from the transformers to be disposed of to a authorized vendor.
- A hazardous waste inventory is maintained as per the provisions of appropriate rules. The possibility of soil erosion due to the project operation is negligible to none. Hence, does not involve many mitigation measures

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

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?

Yes, from the pre-feasibility study stage to the operation time, from the stakeholder investigation to the employment, fair chance and gender equality to access the source, information and to reflect their opinions as a main consideration is taken by the project owner. Further, even if the customers both including suppliers and power buyer are also investigated by the project owner for gender equality issues.

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

In Indonesia, the policy on gender equality and empowerment of women has been adopted at the international and national levels<sup>13</sup>:

- (a) at the international and national levels, through the ratification of the UN Convention on the Elimination of All Forms of Discrimination against Women with Law Number 7/1984;
- (b) at the national level, through the People's Consultative Assembly (the highest political body in Indonesia) Decree Number IV/MPR/1999 on the Broad Guidelines of State Policy 1999-2004;
- (c) the establishment of National Machinery for the Advancement of Women with the Presidential Decree of 1978;
- (d) Law Number 25/2000 on the National Development Programme;
- (e) Presidential Instruction Number 9/2000 on Gender Mainstreaming in National Development;
- (f) National Action Plan for the Elimination of Violence Against Women;
- (g) the inclusion of gender-mainstreaming policy in 38 programmes of the National Development Programme (2000-2004);
- (h) Law Number 23/2002 on Child Protection;
- (i) Presidential Decree Number 87/2002 on National Plan of Action on Eradication of Child Commercial Sexual Exploitation;
- (j) Presidential Decree Number 88/2002 on National Plan of Action on Elimination of Trafficking in Women and Children;
- (k) Law no. 12/2003 on General Election in which each political party participating in a general election should consider at least 30% of women representation in the nomination of its

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<sup>13</sup> <https://www.un.org/womenwatch/daw/Review/responses/INDONESIA-English.pdf>

members of national, provincial and local representative council.

Indonesia is ranked 103 out of 1629 countries in 2018 on its Gender Inequality Index (GII)<sup>14</sup>. Moreover, the Human Development Index (HDI) for females (0.681) which is on par with the HDI for males (0.727), which shows the gender policies are effectively implemented in Indonesia. Hence, the project implemented in Indonesia complies with all the laws and policies of the gender equality as follows.

- *The project activity promotes and encourages active participation of women and men during the stakeholder meetings, giving an equal opportunity to both genders.*
- *The project provides equal employment opportunities for men and women.*
- *Equal pay for equal work is followed. No discrimination is made in the salaries of men and women.*

Hence, the project aligned with existing country policies, strategies and best practices.

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Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?

The relevant questions raised in the Gold Standard Safeguarding Principles & Requirements assessment are provided in Principle 2 of Appendix 1. As per the GS preliminary review report, Gold Standard did not mention any requirement for an expert stakeholder opinion (with a specific emphasis on gender and environment expertise) to support the gender safeguards assessment process.

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Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?

The project applies Gold Standard Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines. Please refer section E and stakeholder consultation report. As per the GS preliminary review report, Gold Standard did not mention any requirement for an expert stakeholder opinion (with a specific

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<sup>14</sup> [http://hdr.undp.org/sites/all/themes/hdr\\_theme/country-notes/IDN.pdf](http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/IDN.pdf)

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

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*The Gold Standard Stakeholder’s consultation meeting was held along with the FGD (focus group discussion) with the affected communities in relation to the Community development plan (CDP) on the following dates:*

No	Developer	Meeting Date & location
1	PT Infrastruktur Terbarukan Lestari (ITL)	20.09.2019 at 09.00 AM Location: Gardu Induk Likupang, Tim, Wineru, Likupang Tim, Kabupaten Minahasa Utara, Sulawesi Utara, Indonesia
2	PT Infrastruktur Terbarukan Adhiguna (ITA)	20.02.2020 at 11.00 AM <u>Location:</u> Site office, PT Infrastruktur Terbarukan Adhiguna (ITA), Cemporonan sub-village, Pringgabaya Utara village, Pringgabaya district, Lombok Timur regency, Nusa Tenggara Barat province, Indonesia
3	PT Infrastruktur Terbarukan Buana (ITB)	20.02.2020 at 03.00 PM <u>Location:</u> Site office, PT Infrastruktur Terbarukan Buana (ITB), Geres Baret sub-village, Geres village, Labuhan Haji district, Lombok Timur regency, Nusa Tenggara Barat province. Indonesia
4	PT Infrastruktur Terbarukan Cemerlang (ITC)	21.02.2020 at 11.00 AM <u>Location:</u> Site office, PT Infrastruktur Terbarukan Cemerlang (ITC), Sengkol 1 sub-village, Sengkol village, Pujut district, Lombok Tengah regency, Nusa Tenggara Barat province

Meeting was opened with a formal welcome speech followed by the introduction of the attendees. In the welcome address, PP's representative explained the objective of the meeting and requested them to actively participate in the meeting.

Then Focus Group Discussion (FGD) were held, in which stakeholders suggestion on various requirements of communities under Community development plan (CDP) are discussed.

After the completion of FGD, PP's representative explained about the key project information including the technical details of the four Solar energy plants, relevant dates of the project and the environmental and social impacts of the project. PP's representative also explained about the importance of clean energy for healthy lifestyle and its significance in combating climate change and limiting its devastating effects. Stakeholders were informed that the project is applied for Gold Standard registration and importance of the meeting for obtaining the GS registration and were requested to share their opinion about the project.

In the next session, stakeholders were requested to ask the questions/clarifications requests they have in this project. Several participants came forward to talk about their experiences and passed on their opinions, suggestions, comments and clarification requests, which were addressed satisfactorily. All the comments are in support of the project activity. Most of the stakeholder praised the project and the summary is given below:

- The project generates clean electricity
- New job opportunities created for local people
- Local people income increased.
- The project becomes pride of the region as it is one of the first of its kind in the country
- New community development activities by the developer under CSR

Then stakeholders are requested to ask their doubts/clarification requests about the project. All the doubts/clarification requests asked by stakeholders about the project are clarified by the PP's representative. He also explained about how the solar energy technology is environmentally safe and sound. He listed about the CSR activities conducted till date in the surrounding villages of the respective projects. He also

promised that their suggestions would be considered for further evaluation and inclusion in their CSR plans.

This was followed by the blind sustainable development exercise. The stakeholders were made aware of the safeguarding principles and all actions pertaining to safeguarding were made clear to help guide them with their assessment as yes, no or potentially relevant. Further, information was provided about the 4 SDG’s and their relevant targets that were addressed by the project.

Additionally, a discussion session on the sustainability monitoring plan of the project activity was carried out and based on the stakeholder suggestions appropriate indicators to monitor each of the SDG goals addressed by the project were finalized. Approaches to continuous inputs and grievance mechanisms were discussed. It was agreed that grievance forms would be made available at all the site offices and the stakeholders can meet the project coordinator’s in person or in case of their absence they could be contacted via telephone or email addresses that would be made available.

Feedback forms were distributed and the stakeholders were encouraged to state their feedback about the project and the meeting. Once the feedbacks were collected, PP’s representative thanked the participants for their presence and their valuable inputs.

**Stakeholder Feedback Round:**

The stakeholder feedback round was open for 60 days from 09/07/2020 to 08/09/2020. Email with public web link of project documents are sent to all stakeholders who were invited for the initial stakeholder consultation meeting. The link for the project documents are:

GS Registry link	<a href="https://registry.goldstandard.org/projects/details/2055">https://registry.goldstandard.org/projects/details/2055</a>
Non-Technical Summary	<a href="https://drive.google.com/file/d/1Kxs8d5nNsnOVTtNW1IONBX0AMX_0VQdh/view?usp=sharing">https://drive.google.com/file/d/1Kxs8d5nNsnOVTtNW1IONBX0AMX_0VQdh/view?usp=sharing</a>
GS4GG PDD	<a href="https://drive.google.com/file/d/1Nj1cqwhbC0nkZxMrT3uRnoHSc-PjJIS/view?usp=sharing">https://drive.google.com/file/d/1Nj1cqwhbC0nkZxMrT3uRnoHSc-PjJIS/view?usp=sharing</a>
LSC Report	<a href="https://drive.google.com/file/d/1TipHj_cC_BqsHwm6dAzIHvJvyNSZW8y7/view?usp=sharing">https://drive.google.com/file/d/1TipHj_cC_BqsHwm6dAzIHvJvyNSZW8y7/view?usp=sharing</a>

Also hard copy of project documents are kept at project site for the review of local stakeholders. However no commets received from any stakeholders

## 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 is placed in the site office to convey grievances regarding the project activity
GS Contact (mandatory)	<a href="mailto:help@goldstandard.org">help@goldstandard.org</a>
Telephone access	Site: +62 21 5084 7830
Internet/email access	The Gold Standard Foundation: +41 (0) 22 788 7080 Mr. Adi Nataamadja (HSE Head): <a href="mailto:adi.nataatmadja@venaenergy.com">adi.nataatmadja@venaenergy.com</a>

Grievances received through any form is recorded in excel sheet. The site manager promptly assigns a responsible person to address the grievance. Once resolved, the resolution is documented in the Excel sheet. If grievances are not resolved within the stipulated timeframe, stakeholders may escalate the issue to the HSE head, who will ensure prompt resolution.

## APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

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

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

	<input checked="" type="checkbox"/> NO
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Briefly describe below how the project incorporates a human rights-based approach.

For example, by describing how the project design:

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

During construction and operation of the project the project proponent respected all the human rights. The project is not in any kind of conflict with the livelihood of local people. Project proponent had conducted stakeholder’s consultation and sought their opinion. ESIA Report also confirms that the PP will comply with local regulations related to labor and working conditions and maintain a human rights policy that is consistent with global standards. 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. Section 2.3 of the ESIA Report also confirms the same. Indonesia, as the host country of the project, is a party to Universal Declaration of Human Rights<sup>15</sup> and also ratified ILO Convention 111 on Discrimination (Employment and Occupation)<sup>16</sup>.

**P.2 | Gender Equality and Women’s Empowerment**

P.2.1.1	Have women’s groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2	Does the project prevent men and women from having equal opportunities to participate in identified tasks and	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

<sup>15</sup> <http://www.komnasham.go.id/profil>

<sup>16</sup>

[https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200\\_COUNTRY\\_ID:102938](https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:11200:0::NO::P11200_COUNTRY_ID:102938)

	activities, whether through paid work, volunteer work, or community contributions, as appropriate?	
P.2.1.2	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.2	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.3	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.2.1.4	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

Would the project potentially involve or lead to:

P.2.1.1	adverse impacts on gender equality and/or the situation of women and girls?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.1	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.2	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.2.1.2	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

Briefly describe below how the project is addressing any identified risk to gender equality and women's empowerment.

NA

### P.3 |Community Health AND Safety

P.3.1.1	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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P.3.1.2	Does the project involve any potential risks to the workers' safety and health?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

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

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

*The O&M log book records all the parameters as listed:*

- *Hazardous waste generated, disposed, any spillages*
- *Waste oil generated, disposed, any spillages*
- *Leakage of any diesel or waste oil*

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

##### **P.4.1 | SITES OF CULTURAL AND HISTORICAL HERITAGE**

P.4.1.1	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

*Please add text here....*

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

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

The following management measures shall be followed to avoid impact due to landscape modification:

- Detailed ESIA study conducted to understand if any of the location needs to be altered.
- Locals were consulted wherever the solar power plant location or access road was in vicinity to a settlement.

- Drainage facilities are constructed in the plant in order to reduce the risk of soil erosion.

**P.4.2 | Forced Eviction and Displacement**

P.4.2.1	Does the project involve any risks related to involuntary relocation of people?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.2.1	risk of forced evictions or involuntary relocation of people?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.2.2	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.2.2	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.2.2	If answer to question above is "YES" or "POTENTIALLY", <ul style="list-style-type: none"> <li>- has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community?</li> <li>- has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design?</li> </ul>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.2.3	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.2.3	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.4.3 | Land tenure and other rights**

P.4.3.1	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.3.1	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.3.1	uncertainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.3.2	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.2	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
P.4.3.3	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> NA
P.4.3.4	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.4	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.3.5	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.4.4 | Indigenous peoples**

P.4.4.1	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project potentially involve or lead to:

P.4.4.1	affect areas where indigenous peoples are present (including project area of influence)	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.4.1	affect areas, land and territory claimed by indigenous peoples?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.4.1	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.4.7	<p>If answer to above questions is "YES" or "POTENTIALLY",</p> <ul style="list-style-type: none"> <li>- Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people?</li> <li>- Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation?</li> <li>- Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines?</li> </ul>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.3	risk of forcibly removing indigenous people from their lands and territories?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.4.4	<p>utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?</p> <p>Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above</p>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.4.4.5   P.4.4.6	<p>If answer to question above is "YES" or "POTENTIALLY"</p> <ul style="list-style-type: none"> <li>- Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property?</li> <li>- Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ?</li> <li>- Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive?</li> </ul>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

	- Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions, and housing?	
P.4.4.8	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.8	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.9	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.4.4.9	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

## P.5 |Corruption

P.5.1.1	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.5.1.1	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

## ECONOMIC SAFEGUARDING PRINCIPLES

### P.6 |Economic Impacts

#### P.6.1 |Labour Rights and Working Conditions

P.6.1.1	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.1	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

P.6.1.2	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.3	Does the project violate national laws, if available regarding non-discrimination in employment?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.4   P.6.1.5	Does the project allow child labor?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7   P.6.1.8	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.9	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.10	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

Would the project potentially involve or lead to:

(NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)

P.6.1.1	use of forced labour?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1	working conditions that do not meet national labour laws and international commitments?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1	working conditions that may deny freedom of association and collective bargaining?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1	absence of documented working agreements with all individual workers  <i>if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.1	use of migrant workers?  <i>if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

P.6.1.1	having no arrangements for basic services <sup>17</sup> for workers?  <i>the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.2	harassment, intimidation, and/or exploitation, especially in regard to women?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.3	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.4	use of child labour? (including third-party engaged workers)	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.1.4	inadequate and verifiable mechanisms for age verification?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7	no processes and measures in place for the safety and health of project workers?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.7	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

<sup>17</sup> Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

P.6.1.8	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.9	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.10	No grievance mechanism available for workers to voice workplace concerns.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.6.1.11	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

**P.6.2 | Negative Economic Consequences**

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

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

NA

**Would the project involve or lead to:**

P.6.2.2	economic impacts (negative/detrimental) to the local economy?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.6.2.2	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

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

NA

**P.7 | Climate and Energy**

**P.7.1 | GHG Emissions**

P.7.1.1	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.7.1.1	increase greenhouse gas emissions over the Baseline Scenario?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

**P.7.2 | Energy supply**

P.7.2.1	Does the project pose a risk to the availability and reliability of energy supply to other users?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.7.2.1	negative impact on the availability and reliability of energy supply to other users?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

**P.8 | Water**

**P.8.1 | Impact on Natural Water Patterns/Flows**

P.8.1.1	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	<input type="checkbox"/> YES
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		<input checked="" type="checkbox"/> NO
P.8.1.1	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.8.1.1	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.8.1.1	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

Would the project involve or lead to:

P.8.1.1	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.1	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.1	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.1.2	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.8.2 |Erosion and/or Water Body Instability**

P.8.2.1	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.8.2.2   -	negatively impact on the catchment area?	
P.8.2.5	<i>If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.</i>	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.8.2.6	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.9 | Environment, ecology and land use**

**P.9.1 | Landscape Modification and Soil**

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

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

General soil erosion and sediment control measures would include:

- Keep open areas of excavation to a minimum and construction activities restricted to dry months to avoid heavy rainfalls;
- Using existing roads and lanes used by land owner.
- Stockpiles of materials placed away from drainage lines and formed with sediment control structures placed immediately down slope;
- Construction debris and excavated material were cleared up at regular intervals
- Excavated material stock piled and used for backfilling of foundations, platforms etc.
- Minimization of traffic in construction zones and use of a dedicated parking area, i.e. site compound;
- Re-vegetation taken up as necessary after construction, in order to reduce the risk of soil erosion.

Specific mitigation measures followed in the operational phase of the project:

- Proper drainage controls such as culverts, cut-off trenches shall be used to ensure proper management of surface water runoff to prevent erosion.
- Waste oil generated shall be stored separately in containers in a secured location in the maintenance room. The storage location and the containers are properly marked.
- The waste / used waste oil from the transformers to be disposed of to a authorized vendor.

A hazardous waste inventory is maintained as per the provisions of appropriate rules.

The possibility of soil erosion due to the project operation is negligible to none. Hence, does not involve many mitigation measures

Would the project involve or lead to:

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

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

NA

**P.9.2 | Vulnerability to Natural Disaster**

P.9.2.1	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here....

Would the project involve or lead to:

P.9.2.2	any potential risks that require emergency preparedness and response planning?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.2.2	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.9.3 | Biosafety and Genetic Resources**

P.9.3.1	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.3.1	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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P.9.3.1	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance <a href="#">with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?</a>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
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P.9.3.2	If answer to above question is "yes" has any risks identified in the risk assessment?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
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P.9.3.3	Forestry (for example Afforestation/Reforestation) involving GMO planting?  <i>Note - Forestry projects (for example Afforestation/Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.</i>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
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If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

**P.9.4 |Release of pollutants**

P.9.4.1	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here...

Would the project involve or lead to:

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

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

NA

P.9.5 | Hazardous and Non-hazardous Waste

P.9.5.1	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.5.3	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
P.9.5.5	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

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

NA

Would the project involve or lead to:

P.9.5.1	the generation and management of waste materials?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.5.1	treatment, destruction, or disposal of waste material?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.1	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.3	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

P.9.5.3	If answer to above question is "yes", does project has measures in place to address health risks?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.5.4	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO

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

NA

**P.9.6 | Pesticides & Fertilisers**

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

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

NA

Would the project involve or lead to:

P.9.6.1	chemical pesticides use for pest management?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.6.4	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.6.5	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.6.5	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.9.7 | Harvesting of Forests**

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

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

NA

**P.9.8 | Food Security**

P.9.8.1	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.8.1	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
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If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

NA

**P.9.9 | Animal Welfare**

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

		<input checked="" type="checkbox"/> NO
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If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.9.1	animal husbandry or harvesting of fish populations or other aquatic species? <sup>18</sup>	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.1	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.9.3	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.5	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.6	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.7	inappropriate spacing per animal and stocking rates per land unit?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.8	inadequate measures to address the specific needs of aquatic animals?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.9.9   P.9.9.10	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries?  If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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<sup>18</sup> 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

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

NA

**P.9.10 | High Conservation Value Areas and Critical Habitats**

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

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

NA

Would the project involve or lead to:

P.9.10.1	identified habitats as HCV areas and or Critical habitats?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.10.1	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA
P.9.10.1	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
P.9.10.2	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NO
P.9.10.2	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	<input type="checkbox"/> YES <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
P.9.10.3	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	<input type="checkbox"/> YES <input type="checkbox"/> No <input checked="" type="checkbox"/> NA

P.9.10.4	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	<input type="checkbox"/> YES <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
P.9.10.5	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.9.11 | Endangered Species**

P.9.11.1	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

P.9.11.2	distortion of habitats of endangered species?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input checked="" type="checkbox"/> NA
P.9.11.2	If answer to the above question is "yes", does the project plan to protect and enhance them?	<input type="checkbox"/> YES <input type="checkbox"/> POTENTIALLY <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
P.9.11.2	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> NA

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

NA

**P.9.12 | Invasive Alien species**

P.9.12.1	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
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If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

NA

Would the project involve or lead to:

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

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

NA

## APPENDIX 2 - CONTACT INFORMATION OF PROJECT DEVELOPER(S)

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

## APPENDIX 3 - LUF ADDITIONAL INFORMATION

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

## APPENDIX 4 - DESIGN CHANGES

### A4.1. Details of proposed or actual design change

>> NA

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

#### *a. Additionality*

>>

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

>>

#### *c. Compliance with the monitoring plan of the applied methodology*

>>

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

>>

#### *e. Scale of the project activity*

>>

#### *f. Stakeholder consultation*

>>

#### *g. Sustainable development criteria*

>>

#### *h. Safeguarding assessment*

>>

#### *i. Compliance with applicable legislation*

>>

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

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

## Revision History

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