GS4GG Validation (Design Certification) DRAFT Report

Project Title

72 MWac Kamuthi Renewable Energy Project

For
Kamuthi Renewable Energy Limited

Report No.
CDM.VAL.18.30

Executive Summary:

A) Basic information			
Title of project activity	72 MWac Kamuthi Renewable Energy Project		
GS project ID	7079		
Host County	India		
Project Participants (PPs)	Kamuthi Renewable Energy Limited.		
Scale of project	Large		
Sectoral scope (UNFCCC)	1		
GS4GG Sectoral Scope:	2		
GS4GG Activity Requirements:	RE Activity Requirements		
Certification Pathway	Impact statements & products		
GS4GG version	GS4GG v 1.2		
Technical Area	1.2		
Applied methodology/ies	ACM0002, version 20.0: "Grid-connected electricity generation from renewable sources"		
Type of crediting period	Renewable		
Length of crediting period	5 years		
Estimated Annual Emission Reductions:	110,868 tCO2/year		
Selected Sustainable Development Goals (SDGs):	7, 8,13		
B) Documents versions	**PDD**		
	Version	**Date**	
First	03	23/04/2019	
Final	05	10/09/2020	
C) Validation Report	**Version**	**Date**	
Draft	01	23/09/2020	
Final	-	-	
D) Validation Team			
Team Leader	Ravi Kant Soni		
Validator	Anshika Gupta		
Technical Expert (TA 1.2)	Ravi Kant Soni		
Financial Expert, if any	NA		
E) Technical Review / Approval			
Technical Reviewer	Shreya Garg	**Date**	23/09/2020
Technical Expert (TA 1.2)	Shreya Garg		
F) Authorization			
Managing Director			
Date			

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1. Design Certification Summary

Earthood Services Private Limited (ESPL) has been contracted by Kamuthi Renewable Energy Limited to perform GS CER validation of the proposed CDM project activity entitled "72 MWac Kamuthi Renewable Energy Project" (UNFCC ref.No-10581). The project proponent has applied the baseline and monitoring methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0.

The Validation was performed in accordance with the GS4GG and UNFCCC criteria for the Clean Development Mechanism Validation and Verification Standard for project activity (Version 02.0) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The verification is consisted of three phases:

i) Desk review of the project;

ii) Follow-up onsite visit and interviews with project stakeholders;

iii) Resolution of outstanding issues and the issuance of the final verification report and opinion.

The overall validation, from Contract Review to Validation Report & Opinion, was conducted following ESPL internal quality procedures.

During the validation process 03 CARs, 01 CL and 01 FAR was raised. All the findings have been closed satisfactorily and the same has been discussed in Appendix 4.

Validation scope includes an independent and objective review of the project design document, against the GS4GG requirements, against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. The validation report is finalized based on the assessment of the Gold Standard GS PDD and applying standard auditing techniques including but not limited to document reviews, follow up actions (e.g. site visit, telephone or e-mail interviews) and also the review of the applicable approved methodology and underlying formulae and calculations.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

As a summary of the validation, the review of the Gold Standard GS PDD and the subsequent follow-up interviews have provided ESPL with sufficient evidence for the determination of the project's fulfillment with all stated criteria.

In our opinion, the project meets all relevant GS4GG, CDM criteria and all relevant host country criteria. The project correctly applies methodology ACM0002 version 20.0 "Grid-connected electricity generation from renewable sources". It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 554,345 tCO2e over a 5 year crediting period, averaging 110,868 tCO2e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

Note: The project activity is also being validated under CDM and the request for registration has also been submitted to UNFCCC[1] by the DOE and currently undergoing the review process. Hence this report will be finalized by ESPL after the project is registered under CDM by CDM EB. In case if any issues raised by UNFCCC during the registration process that may impact on amount of CERs estimated or eligibility of project as the GS4GG guidelines , shall be addressed by the assessment team in this report on its final issuance.

2 .Introduction

Objective:

Earthood Services Private Limited (ESPL) has been contracted by Kamuthi Renewable Energy Limited to perform a validation of the proposed CDM project activity entitled "72 MWac Kamuthi Renewable Energy Project" in India (hereafter called project). This project has already been submitted to UNFCCC for registration as a CDM project (UNFCCC reference number 10581). The objective of this validation is a thorough and independent assessment of registered CDM project activities against the applicable GS4GG requirement by the DOE.

The objective of this validation is a thorough and independent assessment of GS project activities against the applicable GS4GG requirement by the DOE. The validation process shall determine whether the proposed project activity complies with the requirements of paragraph 37 of the CDM &, GS4GG criteria, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the GS registry. The GS validation seeks premium quality carbon credits, by ensuring that CDM meets the additional requirements set out by GS and the project result in real and measurable benefits to local stakeholders.

Scope

The scope of validation is to assess the claims and assumptions made in the project design document (PDD) against the Gold Standard GS4GG requirement & CDM criteria, including but not limited to, GS4GG, CDM PS for PAs, and CDM VVS for PAs version 02.0, applied methodology and other relevant rules and requirements established for GS project activities.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarification and/or correction actions request may have provided inputs for improvement of the project design.

3. Description of project

The project activity involves the installation of 72 MW_{AC} Solar Photovoltaic Project is located at Ramanthpuram district, in the state of Tamil Nadu, in India.The project will reduce the GHG emissions generated by the current generation energy mix in India's Power Grid, which is dominated by fossil fuel based grid connected power plants. The power generated through the proposed project activity will be supplied to Indian grid through a contractual arrangement (PPA). Therefore, the project activity results in an equivalent amount of CO2 emission reduction which otherwise would have resulted from fossil fuel combustion at the power grid.

4. Methodology

ESPL assessed and determined whether the proposed implementation and operation of the project activity, and the steps taken to report emission reductions comply with the GS4GG criteria and relevant guidance provided by the GS registry. The validation process consist of the following three phases;

- A desk review of the GS PDD
- Site visit and follow up interviews with project stakeholders
- The resolution of outstanding issues and issuance of final validation report and opinion.

[1] https://cdm.unfccc.int/Projects/DB/Applus1595357498.47/view

4.1 Desk review

The validation is performed primarily as a document review of the GS PDD and associated documents as stated in details in Appendix-3 of this document. The assessment is performed by a validation team using a validation protocol. The cross checks between information provided in the PDD and information from sources other than those used, if available, the validation team's sectoral or local expertise and, if necessary, independent background investigations.

4.2 Follow up interview with project stakeholders

ESPL as a part of validation procedure conducted a comprehensive interaction with stakeholders. It was done during the site visit on 25/05/2019. It included interaction with the local villagers, representatives of PP.The validation team have interviewed the local stakeholders and they were questioned for various topics as summarized below;

- Effect of project on their livelihood and income
- Any problem related to project operation in nearby areas
- Are they happy with the benefits and development as CSR activity of the PP
- General feedback about solar power plant
- Do they know about the grievance and feedback back register/mechanism?
- Any feedback; Concern (C) Positive (P) and Negative (N)

S. No.	Name of stakeholder	Affiliation	Feedback (Positive/Negative/Concerns)
1	M.Ravi Chandran	Local Villager	Positive
2	K. Boominathan	Local Villager	Positive
3	M.Suresh Kumar	Local Villager	Positive
4	K.Ayaangar	Local Villager	Positive
5	M. Satya	Local Villager	Positive
6	R. Jeeva	Local Villager	Positive
7	A.Muthumalai	Local Villager	Positive
8	V.Ramaswamy	Local Villager	Positive
9	V. Vijaya	Local Villager	Positive
10	A.Satyamorty	Local Villager	Positive

Interviews with project participants:

Sr.No-	Name	Affiliation	Date	Subject
1.	Mr. V.Murugantham	KREL (Manager)		Project implementation, Organizational structure, Monitoring of SDG parameters
2.	Mr.P.Raman	KREL (Assistant Engineer)		Monitoring Plan & Methodology, Training procedures, Data management procedures.
3.	Mr.K.Prakash	KREL(Assistant Manager)		Employment to local villagers, social and economic benefits to local community due to implementation of the project activity.
4.	Mr.Yash Lakhotia	Infinite solutions(		Grievance mechanism and its

		Consultant)		implementation

4.3 Onsite visit

The assessment involved a desk review of relevant documentation as well as an on-site visit(s). The personnel employed and their role in this assessment is mentioned below;

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader and Local Expert	EI	Soni	Ravi Kant	Central office	Y	Y	Y	Y
2.	Validator	IR	Gupta	Anshika	Central office	Y	N	N	Y
3.	Technical Expert and Meth Expert	EI	Soni	Ravi Kant	Central office	Y	Y	Y	Y

The CV of validation team members is included under Appendix-2.

4.4 Reporting of findings

As an outcome of the validation process, the validation team can raise different types of findings:

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met

Where a non-conformance arises the validator shall raise a Corrective Action Request (CAR)**.** A CAR is issued, where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The CDM requirements have not been met;
- There is a risk that emission reductions cannot be monitored or calculated.

Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

Corrective Action Requests and Clarification Requests are raised in a separate finding document (Appendix- 4). In this document, the project participant is given the opportunity to “resolve” the outstanding CARs and respond to CLs and FARs.

4.5 Technical review

A draft validation report that is prepared by validation team is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable GS4GG and CDM rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team.

During the technical review process additional findings may be identified or the closed out findings may be opened, which needs to be satisfactorily resolved before the request for registration is submitted to Gold Standard Board. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that needs to be resolved by the validation team. The decision taken by the Technical Reviewer is final and is authorized by the Managing Director on behalf of Earthood Services Private Limited.

5. Assessment of Design Certification (Validation):

5.1 Project Approval

The Approval is provided by the Indian DNA (he Ministry of Environment, Forest and Climate Change, Govt of India). Assessment team checked the HCA supplied by the project participant and also cross checked the same from the web site:
(https://ncdmaindia.gov.in/PublicReportProjectDetail.aspx?pub=RTTdbnFOOrE=)

The project participant is Kamuthi Renewable Energy Limited from India, and is a private entity. The project participant is correctly listed in table under section A.4 of the PDD and information is consistent with the contact details provided in Appendix 1 of the PDD.
The DNA of India issued a Letter of Approval on 15/04/2019, approving participation of M/s. Kamuthi Renewable Energy Limited as a project participant and confirming that the project assists in achieving sustainable development in India.

5.2 Scale of the project

The project activity is identified as a large-scale project in section A.6 applying a large-scale methodology ACM0002 version 20.0.The installed capacity of the project is 72 MW_{AC} that is exceeding the threshold capacity under small-scale project activity (15MW). Thus, the project is correctly identified as large-scale project activity.

5.3 Host Country or State

The project is a unilateral project and hence the host country (India) is the only party involved in the project activity.
India (Host Country) fulfils the requirements to participate in the CDM and ratified the Kyoto protocol on 26/08/2002 /06/ and established a DNA as National CDM Authority (NCDMA) under Ministry of Environment, Forest and Climate Change, Govt. of India as per the participating requirements for CDM under the Kyoto Protocol.

5.4 Type of project

The project activity involves electricity generation using solar power to reduce atmospheric CO_2 emission by replacing equivalent amount of electricity from the grid of India. The project type is identified as renewable energy project in section A.6 of the GS PDD. The project activity complies with the requirement of 'the generation and delivery of energy services (e.g. electricity) from non-fossil and non-deployable energy sources' as defined in GS4GG v1.2. The project activity generates and supplies renewable electricity to the regional grid thereby displacing the electricity which would have generated in fossil fuel based power plants connected to the grid.

5.5 Greenhouse Gases

The project activity involves the generation of electricity using solar energy. Hence, there are no project emissions associated with this project activity. The PP has considered only CO_2 gas for the baseline emissions is conservative and also in line with the methodology. The exclusion of CH_4 & N_2O in the baseline scenario is appropriate.

5.6 Official Development Assistant (ODA)

The project activity neither received any public funding from Annex 1 parties nor diverted ODA for project finance as mentioned in section A.5 of the PDD/01/. This has been confirmed from the CDM Validation report documents/03/ that clearly indicates debt and equity portion for the project activity. Further, the PP has provided declaration for no ODA/12/. This is found to be appropriate and it is accepted.

5.7 Project timeframe

Other certification schemes:

1. Project activity is currently submitted for registration under CDM Programme (UNFCCC ref.No-10581), this verified through https://cdm.unfccc.int/Projects/DB/Applus1595357498.47/view . The project activity has not applied, confirmed by project developer, for any other certification like Green or White certification. This is verified through the double counting clarification vide GS guideline on double counting in the context of Green Certificate Schemes, 22/01/2015.
3. The project activity is not registered under REC mechanism and the same is confirmed through the REC web site (https://recregistryindia.nic.in/).

Even though the project seeking registration under the CDM, it shall not claim credits for the same GHG emission reduction under the GS and the CDM. This was confirmed through a declaration/14/ submitted by the PP and hence accepted by the assessment team. Therefore, the assessment team is able to confirm that the project activity meets the applicability criteria of Gold Standard.

5.8 Project boundary

As per the guidelines mentioned in the methodology ACM0002, version 20.0, *"The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to*". The project activity will supply electricity to the National Grid. The project boundary includes the solar plant, the metering points and the grid, which has been illustrated in the Section B.3 of the GS PDD and gives clear understanding of the project boundary; thus it is acceptable. The same has been confirmed during the site visit and is found to be appropriate.
The project boundary gives a clear understanding of emission sources related to the baseline scenario. There are no sources attributable to project emissions or leakage emissions, which can contribute more than 1% of overall expected annual emission reductions, and which are not addressed by the applied methodology, involved, as the project activity is electricity generation through solar power. No leakage emissions involved as equipment's were not transferred from another activity or to another activity.
The project boundary in section B.3 of the GS PDD properly explains the physical description of the project activity. Also it is found that all the components and facilities to mitigate GHG gases are included in the project boundary

5.9 Baseline identification

The project activity involves the installation of a Greenfield grid-connected solar PV power plant that exports the generated electricity to the Indian grid system in India, hence, according to the methodology ACM0002 Version 20.0, the baseline scenario is determined properly as:
"Electricity delivered to the grid by the Project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".
The approved methodology that is applied prescribes the baseline scenario, and the same has been opted in this project, therefore, no further analysis on baseline is required.

5.10 Eligibility Principles Assessment

Principle 1. Contribution to Climate Security & Sustainable Development

The project activity applies the approved consolidated baseline and monitoring methodology ACM0002, "Grid-connected electricity generation from renewable sources" version 20.0/11/. The

applicability of the methodology and tools referred by the methodology is justified under section D.4.1 of the CDM validation report/03/.
The National CDM Authority (NCDMA), which is the Designated National Authority (DNA) for the Government of India (GOI) under the Ministry of Environment and Forests (MoEF), has mentioned four indicators for the sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India. Thus the project's contribution towards sustainable development has been addressed based on the following sustainable development aspects:

i. Social well-being:
The project activity provided / provides job opportunity to local people during commissioning and operation of the project activity. Frequency of visiting villages and nearby areas by skilled, technical and industrialist increase due to installation /site visit/operation and maintenance work related to solar PV. This directly and indirectly positively effects the economy of villages and nearby area.

ii. Economic well-being:
The project activity generates permanent and temporary employment opportunity within the vicinity of the project. The electricity supply in the nearby area improves which directly and indirectly improves the economy and life style of the area.

iii. Environmental well-being**:**
The solar power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

iv. Technological well-being:
The project activity is step forward in harnessing the untapped wind potential and further diffusion of the solar PV technology in the region. The project activity leads to the promotion of solar and demonstrates the success of such projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.

Principle 2: Safeguarding Principles

SOCIAL & ECONOMIC SAFEGUARDING PRINCIPLES				
Safeguarding principle	Assessment question	Assessment of relevance to the project (Yes/potentially/no)	Justification	Mitigation measure (if required)
1. Human Rights	a. The Project Proponent and the Project shall respect Internationally proclaimed human rights and shall not be complicit in violence or human	No	Assessment team during the onsite visit confirms that Project activities are not expected to cause any human rights abuse. As a member of United Nations[2] and part of UN	Not Required.

[2] https://labour.gov.in/lcandilasdivision/india-ilo

	rights abuses of any kind as defined in the Universal Declaration of Human Rights. b. The Project shall not discriminate with regards to participation and inclusion.		Agreement on Human Rights[3], it is ensured by law in India that no action can be taken against human rights. As India Is Signatory to International Human right under UN resolution and the Company is abide by the law and regulation of the Host country, assessment team confirm that project do not discriminate with regards to participation and inclusion	
2. Gender Equality & Women's Rights	1. The Project shall complete the following gender assessment questions in order to inform Requirements, below: a. Is there a possibility that the Project might reduce or put at risk women's access to or control of resources, entitlements and benefits? b.Is there a possibility that the Project can adversely affect men and women in marginalised or vulnerable communities (e.g., potential increased burden on women or social isolation of men)? c. Is there a possibility that the	No	Assessment team checked during the onsite visit that men-women have equal participation and equal pay is given for equal work. The employment contract for both Men and women is checked and Salary Slip for both Men and women are checked to confirm equal pay for equal work. Projects do not affect men and women in marginalized or vulnerable communities. Both men and women are employed as per the Skill level and requirement of the Organization. Local Men and women who are uneducated are provided unskilled job during the construction as well as operation phase of the project which generated employment opportunity for the local people. The Project design do not increase women work	Not Required

[3] https://www.ilo.org/newdelhi/lang--en/index.htm

	Project might not take into account gender roles and the abilities of women or men to participate in the decisions/designs of the project's activities (such as lack of time, child care duties, low literacy or educational levels, or societal discrimination)? d. Does the Project take into account gender roles and the abilities of women or men to benefit from the Project's activities (e.g., Does the project criteria ensure that it includes minority groups or landless peoples)? e. Does the Project design contribute to an increase in women's workload that adds to their care responsibilities or that prevents them from engaging in other activities? f. Would the Project potentially reproduce or further deepen discrimination against women based on gender, for instance, regarding their full participation in design and implementation or		load however on contrary generated employment opportunity for them. The project has Women cell in case of any Sexual harassment case is noticed and the same is resolved on priority basis. Moreover, since the project generated employment for women its improves their overall life of the family as well. The project does not discriminate the local community on basis of gender or caste or religion and therefore equally serve to all.[4]. KREL does not involve in any form of discrimination in any kind. India also ratified relevant ILO core conventions on equality, namely Equal Remuneration Convention (Convention No 100) and Discrimination (Employment and Occupation) Convention (Convention No 111) in 1997[5].	

[4] https://labour.gov.in/sites/default/files/equal_remuneration_act_1976.pdf

[5] https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_650119.pdf

	access to opportunities and benefits? g. Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and priorities of women and men in accessing and managing environmental goods and services? h. Is there likelihood that the proposed Project would expose women and girls to further risks or hazards? 2. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equalityand/or the situation of women. a. Sexual harassment and/or any forms of violence against women - address the multiple risks of gender -based violence, including sexual exploitation or human trafficking. b. Slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls.			

	c. Restriction of women's rights or access to resources (natural or economic). d. Recognise women's ownership rights regardless of marital status - adopt project measures where possible to support to women's access to inherit and own land, homes, and other assets or natural resources. 3. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work, specifically: a. Where appropriate for the implementation of a Project, paid, volunteer work or community contributions will be organised to provide the conditions for equitable participation of men and women in the identified tasks/activities. b. Introduce conditions that ensure the participation of women or men in Project activities and benefits based on pregnancy, maternity/paternity leave, or marital status.			

	c. Ensure that these conditions do not limit the access of women or men, as the case may be, to Project participation and benefits. 4. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks.			
3. Community Health, Safety & Working Conditions	a. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community.	NO	Assessment team checked during the onsite visit that all employees undergo training and Safety measure for Occupational Safety, Health and Working Conditions and UN Agreement on Human Rights [6] . The Safety equipment's such as Safety boots, Hand Gloves, Helmet etc are provided to all the operational personal and same is practiced and followed onsite by each and every personal working in Shifts. Hence project avoids exposure to increased health risks and shall not adversely affect the health of the workers and the community.	Not Required.
4.Cultural Heritage, Indigenous Peoples, Displacement and Resettlement	a. Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional	NO	Assessment team checked the ESIA report/22/ prepared by the 3rd party and as mentioned under section	Not required.

[6] https://www.ohchr.org/EN/Countries/AsiaRegion/Pages/INIndex.aspx

	or religious values or intangible forms of culture (e.g., knowledge, innovations, or practices)? b. Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)? c. Does the Project require any change to land tenure arrangements and/or other rights? d. For Projects involving land-use tenure, are there any uncertainties with regards land tenure, access rights, usage rights or land ownership? e. Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?		3.5 (p.72) of the ESIA report that there are no protected archeological and cultural heritages sites are reported within the project footprint. Law on Cultural heritage is protected against alteration, damage or removal by the "law on cultural heritage[7]". The project land has been leased by KREL from willing owners as verified through ESIA report (p.72) and since this is a private land no case of re-settlement observed. Moreover, since the project is located in an isolated place having less traffic volume therefore there is no additional burden to the existing traffic. In addition, the project proponent built new roads for those sites which do not have road access. The Land records are checked and it is found that the Land belongs to KREL and hence there are no uncertainties regarding land tenure, access rights, usage rights or land ownership.	
Corruption	a. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects.	No	India has ratified UN convention against Corruption in 2011[8]. All the organization in the host country follows the resolution and moreover, organization follows	Not required

[7] https://cpwd.gov.in/Publication/ConservationHertBuildings.pdf

[8] https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XVIII-14&chapter=18&clang=_en#EndDec

			ethical code of conduct and hence project do not involve or complicit in or inadvertently contribute to or reinforce corruption or corrupt Project.	
Economic Impact	a. The project does not employ and is not complicit in any form of child labour. b. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. c. The project does not involve and is not complicit in any form of forced or compulsory labor.	NO	Assessment team checked that KREL and their subcontractors complying with all relevant national laws regarding child labour. KREL will not employ children in any shape or form for their works. India has ratified ILO "C138 – Minimum Age Conventions" and "C182 – Worst Forms of Child Labour Convention"[9].	Not required
ENVIRONMENTAL & ECOLOGICAL SAFEGUARDING PRINCIPLES				
1. Climate and Energy	a. Will the Project increase greenhouse gas emissions over the Baseline Scenario? b. Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	NO	The project being a renewable energy project decreases greenhouse gas emission over the baseline. The baseline of the project would be National grid which is predominately connected by fossil fuel plant. The project need some amount of import energy for auxiliary consumption. However, it's to be noted that the auxiliary power consumed by the plant is generated as renewable	Not required.

[9] https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102691

			energy and thereby no emission involved. The project is using solar radiations as the raw material for power generation and hence there is no use of fuel resource (such as wood, biomass) that provides for other local users	
Water	a. Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity? b. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? If 'Yes' or 'Potentially' proceed to question 2. c. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	NO	As per the ESIA report (p.259), there is no perennial river or large static water body located within the project study area. As per the EIA report project do not cause additional erosion and/or water body instability or disrupt the natural pattern of erosion. As per the EIA report project do not involve or susceptible to excessive erosion.	Not required
Environment, Ecology and Land Use	a. Does the Project involve the use of land and soil for production of crops or other products? b. Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes,	NO	a. As per the section 5.7, p.104 of the ESIA report the project site land falls in open scrub (96.9%) and agricultural (3.1%). Although the land ownership of the site are private, most of the land are left fallow due to non-availability of water.	Not required

	subsidence, landslides, erosion, flooding, drought or Other extreme climatic conditions? c. Could the Project be negatively impacted by the use of genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development)? d. Could the Project potentially result in the release of pollutants to the environment? e. Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? f. Will the Project involve the application of pesticides and/or fertilisers? g. Will the Project involve the harvesting of forests? h. Does the Project modify the quantity or nutritional quality of food available such as through crop regime		b. The project is solar power project and is not susceptible to or leads to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding, and drought. c. Point c is not applicable for the project. d. The project is solar power project and hence there is no question of release of pollutants to the environment. e. The project is solar power project and hence there is no question of manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials f. The project is solar power project and project does not involve the use of Fertilizer. g. The project is implemented in open scrub/Barren land and the land is not fit for agriculture practice. h. The project does not modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives. Land leased to KREL by the land owners was either not cultivated or single crop due to lack of irrigation facilities (ESIA	

	alteration or export or economic incentives? i. Will the Project involve animal husbandry? j. Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites [11] identified? k. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? l. Does the Project potentially impact other areas where endangered species may be present through trans boundary affects?		report ,p.29). i. The project do not involve animal Husbandry j. As per the ESIA report (p.71) project do not affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites. k & l. As per the ESIA report (P.51) there are no National Park and Sanctuaries located within 10km radius of the project, hence the project do not hamper the endangered species and also do not fall in the route of any migratory birds.	

The SDG goals are also described below:

SDG Goal	Assessment of Methodological choices/approaches for estimating the SDG outcome

SDG 7 –Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all	Measurement Method: - Quantity of net electricity supplied to the grid" ($EG_{PJ,y}$) will be being calculated on monthly basis as difference of electricity exported to the grid and electricity imported from the grid by the project and those are being measured by energy meters of accuracy class 0.2s located at project. These export and import parameters are measured continuously and at least monthly recording. This is in line with methodology and is accepted. Monthly values of $EG_{PJ,y}$ obtained directly from the monthly generation statements issued by TANGEDCO. QA/QC Process: The invoicing will be done against electricity supplied by the project plant to the grid. The measurement results shall be cross checked with records of invoices and energy meters will be calibrated once in 5 years line with national standard. Relevant SDG Target: By 2030, increase substantially the share of renewable energy (117,708 MWh per annum) in the global energy mix. Corresponding indicator: Renewable energy share in the total final energy consumption
SDG 8 – Descent Work and Economic Growth: Promote inclusive and sustainable economic growth, employment and decent work for all	Measurement Method: - Training and employment generation is monitored through training records, staff register or letter from O&M contractor for training and employment details or HSE/HR records. QA/QC Process: This parameter is based on records, data and no any QA/QC procedure required. The DOE will confirm this parameter with interview with PP or Site in charge or employees for training and employment generation. Relevant SDG Target: 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. (Training: 1 nos annually and Employment of 20 staff) Corresponding indicator: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities.

SDG 13 – Climate Action: Take urgent action to combat climate change and its impacts	Measurement Method: - The emission reduction parameter is calculated as product of net electricity supplied to grid and grid emission factor. The grid emission factor is ex-ante parameter and determined based on data obtained from "CO_2 Baseline Database for Indian Power Sector" version 13, published by the Central Electricity Authority, Ministry of Power, and Government of India. This is in line with "Tool to calculate the emission factor for an electricity system, version 7". The emission reductions are calculated as per the formula provided by the approved methodology ACM0002 version 20.0 QA/QC Process: This parameter is calculated, and no any QA/QC procedure required. Relevant SDG Target: Integrate climate change measures into national policies, strategies and planning (110,868 tCO_2 per annum) from the project. Corresponding indicator: Emission reductions in tCO_{2e} from the project activity. Number of countries that have communicated establishment or operationalization of an integrated policy/ strategy/ plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

Principle 3: Stakeholder Inclusivity

As per the CDM/GS requirements, it is necessary to invite the relevant stakeholders, before the validation process starts. The project is undergoing retroactive GS validation. As per the CDM PDD, The local stakeholder consultation was conducted on 10/06/2015 prior to the start date of the Project i.e. 13/06/2015. The project participant identified the relevant stakeholder like Local village head, villagers, technology suppliers and local vendors as local stakeholders for the project activity. Based on the observations of the validation team during the site visit and as per the definition of 'stakeholder' in the latest version of Glossary of CDM terms, the identification of stakeholders for consultation was found to be appropriate. Thus, the validation team is of the opinion that the relevant stakeholders have been consulted appropriately and adequately.
Identified stakeholders were invited to the Local Stakeholder Consultation Meeting through public notice and personal invitation letters on 05/06/2015.Also the PP submitted minutes of meeting of Local Stakeholder Consultation Meeting conducted on 10/06/2015 at site office located at O. Karisalkulam village, in Ramanathpuram district and attendance sheet of local stakeholder attended the meeting. The summary of comments is checked for negative comments if any for the project activity. It is found that no negative comments were received for the project activity by local villagers.

Stakeholder Feedback Round (SFR):

The project activity is a retroactive project and therefore PP was required to conduct a physical meeting during Stakeholder Feedback Round (SFR) covering the issues highlighted in the pre-feasibility assessment. Stakeholder Feedback Round (SFR) was conducted on 25/05/2019 at project site office (Village: Kamuthi) in Ramanthpuram district, Tamilnadu.

All the stakeholders have been invited through public notice to attend the stakeholders meeting while the GS, locals NGO were informed via email dated 09/05/2019 /25/.

As per the GS guidelines, project documents were made available publically via website http://infisolutions.org/krel-adani/ for a minimum of 2 months i.e. from 09/05/2019 to 08/07/2019.

The local stakeholders meeting were attended by local persons including local villagers, local vendors and technology suppliers.

The stakeholders identified by the project participant were local villagers who are the major population of the particular area, local communities and gram panchayat (Village head), solar PV supplier, project proponent representatives, internal O&M Team and other people involved in the project. Validation team verified the list of participants who attended the stakeholder meeting and feedback form and confirms the stakeholders identified are relevant. The validation team also verified the minutes of meeting to note that no negative comments were received and the same was cross checked with the information obtained during follow up interviews with the stakeholder's. Thus, Validation team is of the opinion that the stakeholder meeting was adequate and appropriate. The assessment of SFR is carried out below:

a. Different representative of stakeholders like local villagers, head of panchayats, NGOs,project employees were invited for stakeholders feedback round /23/

b. The people were invited by using different mode like emails and personnel invitations /23 & 25/.

c. The personnel invitation letter was also send to representative of local panchayat and NGOs /23/.

d. The meeting was organized at site office at Kamuthi village and the local was considered convenient and easily approachable to all.

e. The meeting was also attended by the DOEs auditor (team leader) of the project /24/.

f. The queries raised by stakeholders has been addressed properly and recorded in the feedback form /24/

g. The minutes of the meeting which includes the list of participants and topic discussed has been made and recorded/24/.

h. The meeting was facilitated by Mr. Alpesh Gedia (Associate Manager, Adani Group) /24/.

i. No negative comments were received and stakeholders were very satisfied with the project activity implementation and operation in their area.

j. For any cases of public grievance, the grievance register will be placed at site office.

The assessment team is in opinion after witnessing the consultation process and document review and interaction with the local stakeholders that SFR has been conducted in line with GS guidelines and a grievance/input mechanism is established. No negative comments were received during the stakeholder feedback round. It is concluded that the stakeholder consultation carried out adequately.

The comments received from the participants present in the meeting and the responses from the project proponent representatives have been placed below:

Stakeholder name and comment	**Was comment taken into account (Yes/ No)?**	**Explanation (Why? How?)**
Name: M.Ravichandran Comment: What kind of CSR projects has been carried out in the area?	No	It carries out various CSR activities in the region like distribution of solar street light, construction of hospital approach road, development of ponds for water harvesting, drinking water requirements.

Stakeholder name and comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Name: M.Suresh Kumar Comment: How would locals be employed by the company?	No	Employment opportunities are available in both technical and non-technical areas. For technical jobs qualified persons have been employed, however for non-technical jobs like security and transportation, construction preference has been for employment of local persons.
Name: R. Jeeva Comment: What impact does the project have in reducing the shortage of electricity faced in the area?	Yes	The electricity generated by the project helps the grid to meet its demand and as a result over the past few years the hours for electricity shut downs has decreased and now electricity is available with only minor disruptions.
Name: A. Muthumalai What will be the impacts on rains due to the operation of solar power projects?	No	There is no impact of weather/rains due to operation of solar power projects.

Principle 4: Demonstration of real outcomes

Sustainable monitoring plan:

SDG Parameter	Indicator	Monitoring
SDG 7 : Affordable and Clean Energy	"Quantity of net electricity supplied to the grid" ($EG_{PJ,y}$)in MWh	This parameter will be being calculated on monthly basis as difference of electricity exported to the grid and electricity imported from the grid by the project and those are being measured by energy meters of accuracy class 0.2s located at project. These export and import parameters are measured continuously and at least monthly recording. The invoicing will be done

		against electricity supplied by the project plant to the grid. The measurement results shall be cross checked with records of invoices and it is in line with applied methodology. Thus this parameter is considered in emission reduction calculations. During the site visit it is observed that there are 6 energy meters installed at project site out of those 3 energy meters (main, check and standby meter) are owned by the project participant and other 3 meters (main, check and standby meter) are under control of state utility (TANGEDCO) and are sealed in presence of both the state utility official & representative of PP. Joint Meter Reading is being taken jointly by the officials of state utility and project participant's representative on monthly basis and accordingly JMR Report is being prepared. The monitoring plan also considers sufficient details about the parameters being monitored and takes enough measures for the correct estimation of the same. Therefore, the monitoring plan has complied with the requirements in the approved methodology.
SDG 8 : Decent Work and Economic Growth	Quantitative employment and income generation	Project participant have Documentation pertaining to employment, attendance register and documentary details of training/capacity building. Assessment team also checked the salary slips and confirms that due to project activity peoples are getting more than minimum wages as a salary and this salary is better than local level salary. Based on the roles and responsibility of employee, the salary will be

		higher than the minimum salary of the region and hence the parameter monitoring is acceptable to the assessment team.
SDG 8 : Decent Work and Economic Growth	Quality of employment	The training records are maintained on regular basis with annual consolidation. Assessment team checked onsite that at least 20 people are expected to be employed at site during crediting period. The employment opportunities generated are local or temporary or permanent as checked and confirmed by the assessment team. The training related to O&M, Safety, emergency procedure, fire safety etc. are provided to employees. Since local people are employed due to project activity, the training given to employees improves the quality of employment. Apart from these training to employees, the PP organizes few events which will be beneficial to society as a part corporate social responsibility (CSR) activities as per their policy. As the parameter is subjected to monitoring the same will be checked during the verification of the project activity. It will be ensured that safe working condition and safety equipment's has been provided for all skilled and unskilled Labour. It will be checked during verification through site visit observations and interview with people if noise level is maintained within permissible limit. Safety equipment to be provided to workers both skilled and unskilled will be checked

		during the verification of the project activity. Assessment team however checked the same is already provided to the workers as part of companies CSR (EHS) policy.
SDG 13: Climate Action	Emission Reductions	The emission reduction calculation will be done as per the formula mentioned in the GS PDD. As the parameter is subjected to monitoring the same will be checked during the verification of the project activity.

Principle 5: Financial Additionality & Ongoing Financial Need

The project activity is submitted for registration under CDM (UNFCCC ref.No-10581) and the additionality of the project activity has been demonstrated in line with ""Tool for the demonstration and assessment of additionality" (version 07.0.0) /03/. All steps of the additionality tool have been demonstrated in the final CDM PDD and validation report /03/. As per the "Tool for the demonstration and assessment of additionality", the following requirements have been justified in the CDM validation report (UNFCCC registration number # 10581):

a. Step 1: Identification of alternatives: Baseline alternatives have been identified as per the methodology and the selection of the plausible baseline scenario has been demonstrated, as detailed in CDM PDD and validation report. The identified baseline scenario, as per the methodology, is "Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources";
b. Step 2: Investment analysis: Benchmark analysis has been performed to demonstrate the financial additionality of the project activity. As mentioned in the final CDM PDD and validation report, the equity benchmark of the project activity is 15.64% and the equity IRR of the project activity is 9.82% /2 & 3/.
c. Step 3: Barrier analysis: This step has not been performed in the final CDM PDD /03/.
d. Step 4: Common practice analysis: Through common practice analysis, it has been concluded that the project activity is not a common practice in the geographical region where the project activity is located /03/.

In conclusion, the assessment of the arguments presented in the final CDM validation report is deemed to sufficiently demonstrate that the emission reductions resulting from the proposed project were additional.

6. Calculation algorithms and/or formulae used to determine emission reductions

The project activity is submitted for registration under CDM project and applied ACM0002 version 20.0, since the version of applied methodology referred during CDM validation is the latest one, hence in accordance with the GS4GG requirements.
The baseline scenario and the emission reduction calculations have been performed as per the final CDM PDD /03/. The emission factor of grid, in the final validated CDM PDD, has been calculated using CO2 Baseline Database for the Indian Power Sector, version 13 dated June 2018, published by the Central Electricity Authority, Ministry of Power, Government of India., in line with the provisions of

applied methodology ACM0002 version 20.0 which is the latest version of the methodology and in accordance with the GS requirement.
The emission factor at the time of CDM validation was determined 0.9475 tCO2e/MWh leading to annual emission reductions of 111,528 tCO2e. However, during the current assessment an emission factor of 0.9419 tCO2e/MWh was obtained using the latest CEA CO2 Baseline database version 15 (published in December 2019) which would lead to 110,868 tCO2e emission reductions. On grounds of conservativeness the emission factor obtained using latest version of CEA CO2 Baseline database is used by the PP and found to be satisfactory, hence accepted. The PP has provided the calculation for the same in the ER calculation sheet and it was validated by the assessment team. The baseline emission factor for the electricity system has been calculated on ex-ante basis and will remain fixed for the entire project crediting period.

SDG ex-ante determination:

SDG 13 Climate Actions:

Year	Baseline estimate(tCO_2)	Project estimate(tCO_2)	Net benefit(tCO_2)
Year 1	111,983	0	111,983
Year 2	111,423	0	111,423
Year 3	110,866	0	110,866
Year 4	110,312	0	110,312
Year 5	109,760	0	109,760
Total	554,345	0	554,345
Number of crediting years	5 years		
Annual average over the crediting period	110,868	0 tCO2	110,868

SDG 7: Affordable and Clean Energy

Year	Baseline estimate(MWh)	Project estimate(MWh)	Net benefit(MWh)
Year 1	0	118,891	118,891
Year 2	0	118,296	118,296
Year 3	0	117,705	117,705
Year 4	0	117,116	117,116
Year 5	0	116,531	116,531
Total	0	588,539	588,539
Number of crediting years	5 years		
Annual average over the crediting period	0	117,708	117,708

SDG 8: Decent Work and Economic Growth

Year	Baseline estimate	Project estimate	Net benefit(MWh)
Year 1	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs

Year 2	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs
Year 3	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs
Year 4	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs
Year 5	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs
Total)	0 Training, 0 Jobs	5 Training, 100 Jobs	5 Training, 100 Jobs
Number of crediting years	5 years		
Annual average over the crediting period	0 Training, 0 Jobs	1 Training, 20 Jobs	1 Training, 20 Jobs

7. Final Project Design Certification Statement

Earthood Services Private Limited (ESPL) has performed a validation of the "72 MWac Kamuthi Renewable Energy Project". The validation was performed on the basis of UNFCCC criteria CDM Validation and Verification Standard version 02.0 for the project activity, Gold Standard GS4GG guideline and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the final GS PDD and the subsequent follow-up interviews has provided ESPL with sufficient evidence to determine the fulfillment of stated criteria.

In our opinion, the project meets all relevant UNFCCC and Gold Standard requirements for the Gold Standard and all relevant host country criteria. The project will hence be recommended by ESPL for registration with the Gold Standard Registry.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO_2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 110,868 tCO_2e per year.

The validation has been performed following the requirements of the latest version of the CDM Validation and Verification Standard version 02.0 for the project activity, GS4GG guideline and on the basis of the contractual agreement.

In detail the conclusions can be summarized as follows:

- The project does not result in negative social, environmental and/or economic impacts.

- The project contribution to Environment, Social Development and Economic and technological development

- The project additionality is sufficiently justified in the Gold Standard PDD

- The project does not result in diversion of ODA.

- Conservative assumptions were applied in the project description.

- The monitoring plan of SDG parameters is transparent and adequate.

- The project meets the stakeholder consultation requirements.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
KREL	Kamuthi Renewable Energy Limited
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
EPC	Engineering ,Procurement and Construction
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GHG	Greenhouse Gas(es)
GOI	Government of India
GS4GG	Gold Standard for Global Goals
HCA	Host Country Approval
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JMR	Joint Meter Reading
LoA	Letter of Approval
MoC	Modalities of Communication
MP	Monitoring Plan
MR	Monitoring Report
MWh	Megawatt hour
ODA	Official Development Assistance
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
PRC	Post Registration Changes
PS	Project Standard
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
TR	Technical Review
UID	Unique Identification number
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. CV of validation team

Competence Statement			
Name	Ravi Kant Soni		
Country	India		
Education	B. Tech. (Mechanical Engineering) M. Tech. (Energy Management)		
Experience	8 Years +		
Field	Energy and Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.C., ACM0002		
Local expert	YES (India)		
Financial Expert	No		
Technical Reviewer	No		
TA Expert	YES (TA 1.2)		
Reviewed by	Shreya Garg	**Date**	04/06/2019
Approved by	Anshika Gupta	**Date**	04/06/2019

Name	Anshika Gupta		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	4 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.A., AMS-II.G., ACM0002, AMS-III.A.V.		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	Yes (TA 1.2, TA 3.1)		
Reviewed by	Shreya Garg	**Date**	12/03/2019
Approved by	Kaviraj Singh	**Date**	12/03/2019

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	**Date**	01/03/2018
Approved by	Ashok Gautam	**Date**	01/03/2018

Appendix 3. Documents reviewed or referenced

Sr. No.	Author	Title	References to the document	Provider
1	PP	GS Project Design Document	Version 03, dated 23/04/2019 Version 04, dated 05/02/2020 Version 05, dated 10/09/2020	PP
2	PP	Investment Analysis (Project IRR and Benchmark Calculation) Sheet (CDM Approved)	Version 03, dated 26/05/2020	PP
3	PP	Final approved CDM PDD	Version 05, dated 10/07/2020	PP
	Applus+certification	Final approved CDM Validation report	Version 03,dated 16/07/2020	
4	PP	Emission reduction calculation spread sheet (For GS validation)	Version 03, dated 10/09/2020	PP
5	GOI	Host Country Letter of Approval	Dated 15/04/2019	PP
6	UNFCCC	Status of ratification of the Kyoto Protocol.	https://unfccc.int/node/61082	Other
7	GS Registry	Project web page (GS7079) https://registry.goldstandard.org	-	Other

		/projects/details/2345		
08	CEA	CO2 baseline database published (in June 2018) by Central Electricity Authority, Govt. Of India,	Version 13	Other
		CO2 baseline database published (in December 2019) by Central Electricity Authority, Govt. Of India,	Version 15	
09	PP	Minutes of meeting of Local Stakeholder's consultation (CDM)	Dated 10/06/2015	PP
10	PP	Attendance sheet of Local Stakeholder Consultation meeting (CDM)	Dated 10/06/2015	PP
11	CDM EB	Approved methodology ACM0002 "Grid-connected electricity generation from renewable sources"	Version 20.0	Other
12	PP	Declaration from KREL for no ODA	-	Other
13	PP	Training Records of project staff at site	-	PP
14	United Nation	Universal declaration of Human Rights https://www.un.org/en/universal-declaration-human-rights/	-	Other
15	CDM EB	CDM VVS for PAs	Version 02.0	Other
16	CDM EB	CDM PS for PAs	Version 02.0	Other
17	CDM EB	CDM PCP for PAs	Version 02.0	Other
18	GS registry	GS4GG Principles & Requirements	Version 1.2	Other
19	UNFCCC	Project web page (UN Ref-10581) https://cdm.unfccc.int/Projects/Validation/DB/NDH4VJWJ5V306A60CB7BR5FW5HG80T/view.html	-	Other
20	GOI	Ministry of Labor and Employment https://labour.gov.in/	-	Others
21	GOI	National Prevention of Corruption Act of Government of India http://legislative.gov.in/sites/default/files/A1988-49.pdf	-	Others
22	Greencindia Consulting Private Limited	ESIA report for project activity	Sept 2015	PP
23	PP	Invitation letters and Public Notice regarding SFR	Dated 15/05/2019	PP
24	PP	Minutes of meeting records for SFR and attendance list	Dated 25/05/2019	PP
25	PP	Emails sent to NGO, Stakeholders, villagers for stakeholder feedback round	Dated 09/05/2019	PP
26	PP	Stakeholder Consultation Report(SCR) for the project	Dated 12/09/2020	PP

27	Infinite solutions	Publication of project for 2 months period. website http://infisolutions.org/krel-adani/	-	Others

APPENDIX 4. FINDINGS OVERVIEW

Table 1. Remaining FAR from validation

FAR ID	01	**Section no.**	Preliminary Review	**Date :** 31/08/2020
Description of FAR				
Please address the following issues raised during the Preliminary Review: Issue #1: Please submit the benchmark calculation and IRR calculation sheet approved during CDM validation and submitted to UNFCCC. Issue #2: All the safeguarding principles assessment shall be supported with evidences/references/expert's opinion. The PP is requested to provide the same for GS VVB validation. Issue #3: The Stakeholder Consultation shall include at least one public in-person meeting and one Stakeholder Feedback Round of lasting a minimum of 2 months. The PP is requested to provide the details in the PDD and submit the relevant evidences to GS VVB. Issue #4: GS VVB shall check the mentioned agreements to confirm the ownership of the project activity. Please submit the relevant documents. Issue #5: GS VVB Shall validates the same about expert recommendation on certain safeguarding principles. Kindly submit the relevant documentary evidences.				
Project participant response				**Date :** 12/09/2020

1. FAR#1- The benchmark and IRR calculation sheet submitted for registration to UNFCCC are enclosed.

2. FAR#2- All the safeguarding principles assessment is supported with references and ESIA. Same is submitted to VVB for assessment.

3. FAR#3- Stakeholder Feedback Round has been conducted at the project site. The expert stakeholders have been intimated for the SFR round and along with the invitations they were provided a public link where all the project related documents are available. All the documents have been made available to public through website http://infisolutions.org/services/carbon-mgt-services/krel-adani/ for a minimum of 2 months i.e. from 09-May-2019 to 08-July-2019. There were no negative comments from the stakeholders through any means of communication channels (E-mails, Phone calls, Grievance Register available at the project site).

4. FAR#4- The Power purchase Agreement between Kamuthi Renewable Energy Project and Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) and the commissioning certificate has been submitted to the GSVVB to confirm the ownership of the project activity.

5. FAR#5- The SFR was conducted at project site on 25-May-2019 and the GS VVB was present during the meet. The Sarpanch, Panchayath officer as well as Principals of the Local Government school act as an expert for various local issues considering land rights, local agricultural issues, local historical heritages as well as local environmental issues like impact of project on nearby water bodies, nallahs etc. Apart from the above group of stakeholders, the PP has also invited farmers Discom officials, EPC contractors as well as labors during the SFR to understand the concerns as well as demonstrate the work done as well as impacts achieved by the project. Agricultural group was represented by Panchayath Development Officer and farmers of the village and the Government and regulatory agencies and organizations were represented by Panchayath Development Officer, Local government school principals and Sarpanch of nearby village. Further the minutes of meetings with all the details and the answers of the expert for the relevant questions of the project site has been submitted to the DOE.

Documentation provided by project participant	
Benchmark and IRR calculation sheet ESIA Power purchase Agreement Commissioning certificate Revised PDD ,V 05	
DOE assessment	**Date:** 20/09/2020

Benchmark and IRR analysis sheet submitted to UNFCCC along with request for registration is submitted by the PP. The PP has submitted the Environmental and Social Impact Assessment Report (ESIA), prepared by Greencindia Consulting Private Limited and the aspects of safeguarding principles assessment are well covered in the report. Initial stakeholder meeting was conducted on10/06/2015 as per the CDM requirement and stakeholder feedback round (SFR) is also conducted at project site on 25/05/2019. As per the GS guidelines, project documents were made available publically via website http://infisolutions.org/krel-adani/ for a minimum of 2 months i.e. from 09/05/2019 to 08/07/2019. The PP has submitted the email communications; personal invitations, Mom and attendance sheet for the SFR and found to be appropriate. Ownership of the project is confirmed through the PPA signed by the PP with Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), found to be appropriate. During the SFR, the assessment team has verified village head (Sarpanch), Principals of government school, DISCOM representative and Panchayat Development officer were invited, these peoples are considered to be expert for the land rights, local agricultural issues, and local historical heritages also for environmental issues like impact of project implementation on nearby area. The assessment has interacted with these experts and local villagers as well and it is confirmed that no negative comments received. FAR #1 is closed.

Table 2. CL from this verification

CL ID	01	**Section no.**	3.1	**Date :** 30/05/2019
Description of CL				
Please submit approved preliminary review form for the project activity.				
Project participant response				**Date :** 13/02/2020
Approved preliminary review form for the project activity is being submitted along with this submission				
Documentation provided by project participant				
Approved Preliminary Review report				
DOE assessment				**Date:** 31/08/2020
The PP has submitted the approved preliminary review form and found to be satisfactory. CL #1 is closed.				

Table 3. CAR from this verification

CAR ID	01	**Section no.**	4.3	**Date :** 30/05/2019
Description of CAR				
It is mentioned that 20 persons employed for the project activity but it is not clear how many persons were employed for particular designation i.e. technical staff/security guards/Labor etc. Please clarify and submit the relevant attendance/HR records of the employees. Details of CSR initiatives undertaken by the project developer are not provided in the PDD. Complete information about the internal procedure which will be followed for resolution of the complaints and grievances received from local stakeholders does not provided in the PDD, please include the same.				
Project participant response				**Date :** 13/02/2020

Complete details of the site employees including names, designations, local/non-local, job-types, gender is being provided to the DOE in the excel form. The CSR activities with the training records are yet to be planned by the PP and will be submitted then after. The project proponent has a grievance cell which would look into complaints. The same is there in section D of the PDD. Moreover, a separate Grievance procedure is being submitted to the DOE.
Documentation provided by project participant
Revised PDD *Employee details* *Grievance Mechanism*
DOE assessment **Date:** 31/08/2020
The PP has provided the details of employees including the category and designation, found to be appropriate, hence accepted. At least one training will be provided to the employees in a year, as per the GS requirement. The PP has included this in the revised PDD, found to be appropriate, hence accepted. There is separate grievance cell to handle the complaints/suggestions received from local villagers. The PP has provided the documented “Grievance procedure” implemented at site, found to be appropriate, hence accepted. CAR #1 is closed.

CAR ID	02	**Section no.**	4.5	**Date :** 30/05/2019
Description of CAR				
Section E.1: Please provide the relevant documents with reference to initial stakeholder consultation done on 10/06/2015. Please provide complete information’s about stakeholder feedback round in section E.1 of the PDD, also include the details of the dates during which the stakeholder feedback round was conducted i.e. the documents were made available for public comments for at least 60 days. Please submit SCR (Stakeholder Consultation Report) including the information in all the sections as per the GS template. Also provide the supportive documents (MoM, attendance list ect) for the same. Please submit the updated emission reductions calculation sheet.				
Project participant response				**Date :** 13/02/2020
Relevant documents with reference to both the Initial Local Stakeholder consultation and Stakeholders Feedback Round done on 10/06/2015 and 25/05/2019 respectively are being submitted along with this submission. Now details of both the Stakeholders have been incorporated in revised section E.1 of the PDD. All the invitation dates, period of comments date along with the meeting dates have also been put in the section. The Stakeholder Consultation Report with the supportive documents like Attendance, MOM, Invitations, Photographs etc. are being provided along with. Updated emission reductions calculation sheet is being submitted along with this submission.				
Documentation provided by project participant				
Stakeholder Consultation Report (LSHC) Attendance sheets (*LSHC & SFR)* *MOM (SFR)* *Invitation Letters* (*LSHC & SFR)* *Photographs*				
DOE assessment				**Date:** 31/08/2020

The PP has submitted the invitation letters, attendance sheet, MoM of initial stakeholder consultation conducted on 10/06/2015, found to be appropriate, hence accepted. The PP has submitted the revised PDD including the information's about stakeholder feedback round in section E.1 of the PDD, found to be appropriate, hence accepted. The PP is requested to submit the Stakeholder Consultation Report (SCR) along with the attendance sheet, MOM, invitations, photographs and stakeholder feedback forms. Open CAR #2 is open
Project participant response **Date :** 12/09/2020
Stakeholder Consultation Report (SCR) along with the attendance sheet, MOM, invitations, photographs and stakeholder feedback forms shall be submitted.
Documentation provided by project participant
Stakeholder Consultation Report Attendance sheet, MOM, Invitations, Photographs and stakeholder feedback forms
DOE assessment **Date:** 20/09/2020
The PP has submitted the Stakeholder Consultation Report (SCR) along with the attendance sheet, MOM, invitations, photographs and stakeholder feedback forms, found to be satisfactory. CAR #2 is closed.

CAR ID	03	**Section No.**	5.9 & 5.10	**Date : 31/08/2020**
Description of CAR				
Please clarify why the latest version of the methodology ACM0002 is not referred in the PDD. Please clarify how the grid emission factor used to determine the ex-ante emission reduction is appropriate and conservative.				
Project participant response				**Date :** 12/09/2020
The latest version of the methodology ACM0002 is referred now. The updated Grid emission factor version 15, Dec'19 is now being used throughout the PDD and hence the estimated emission reduction is also revised accordingly.				
Documentation provided by project participant				
Revised ER Sheet *Revised GS PDD version 05*				
DOE assessment				**Date:** 20/09/2020
The PP has referred the latest version of CEA Baseline CO2 Emission Database version 15, dated December 2019 for determination of emission factor, this approach is found to be conservative, hence accepted. CAR #3 is closed.				

Table 4. FAR from this validation

FAR ID	XX	**Section No.**	XX	**Date :**
Description of FAR				
NA				
Project participant response				**Date :** DD/MM/YYYY
NA				
Documentation provided by project participant				

NA
DOE assessment **Date:** DD/MM/YYYY
NA