GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

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CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	Carbon Check (India) Private Limited. /GCCV004/01 http://globalcarboncouncil.com/wp-content/uploads/2021/10/carbon-check-india-private-limited-ccipl.pdf
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation E-0052 Valid from 28/03/2019 until 01/06/2024 https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0052 ☒ ISO 14065 Accreditation https://nabcb.qci.org.in/wp-content/uploads/2023/06/004.html Valid from 28/06/2021 until 27/06/2024
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	**GCC Scope** • Green House Gas (GHG# - ACC) • Environmental No-harm (E+) • Social No-harm (S+) • Sustainable Development Goals (SDG+) **GHG Sectoral Scope** • Energy (renewable/non-renewable sources)
Validity of GCC approval of Verifier	08/03/2023 to 31/05/2024
Title, completion date, and Version number of the PSF to which this report applies	10 MW Shanmukha Subramanya mini Hydel scheme in Karnataka, India Version 1.2 Dated 13/11/2023
Title of the project activity	10MW Shanmukha Subramanya mini Hydel scheme in Karnataka, India
Project submission reference no. (as provided by GCC Program during GSC)	S00603

[1] **Note:** GCC Verifier under Individual tack is not eligible to conduct verifications for the GCC project that intends to supply carbon credits (ACCs) for CORSIA requirements.

<table>
<tr><td>Eligible GCC Project Type[2] as per the Project Standard
(Tick applicable project type)</td><td>☒ Type A:
☐ Type A1
☒ Type A2
☒ Sub-Type 1
☐ Sub-Type 2
☐ Sub-Type 3
☐ Sub-Type 4

☐ Type B – De-registered CDM Projects:
☐ Type B1
☐ Type[3] B2</td></tr>
<tr><td>Date of completion of Local stakeholder consultation</td><td>08/02/2022</td></tr>
<tr><td>Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.</td><td>16/11/2022 to 30/11/2022
No comments were received during GSC.
https://www.globalcarboncouncil.com/global-stakeholders-consultation.html</td></tr>
<tr><td>Name of Entity requesting verification service
(can be Project Owners themselves or any Entity having authorization of Project Owners)</td><td>Perla Hydro Power Private Limited
Greenko Energies Private Limited</td></tr>
<tr><td>Contact details of the representative of the Entity, requesting verification service
(Focal Point assigned for all communications)</td><td>M. Murali Krishnam Raju
muraliraju.m@greenkogroup.com
Greenko Energies Private Limited</td></tr>
<tr><td>Country where project is located</td><td>India</td></tr>
<tr><td>GPS coordinates of the Project site(s)</td><td>
<table>
<tr><td colspan="3">Weir</td></tr>
<tr><td>Latitude(N)</td><td>12°52'43"</td><td>12.8786114°</td></tr>
<tr><td>Longitude(E)</td><td>75°05'26"</td><td>75.090556°</td></tr>
<tr><td colspan="3">Power House</td></tr>
</table>
</td></tr>
</table>

[2] Project Types defined in Project Standard and Program Definitions on GCC website.

[3] GCC Project Verifier shall conduct Project Verification for all project types except B_2.

	<table><tr><td>Latitude (N)</td><td>12°52'42.0"</td><td>12.878338°</td></tr><tr><td>Longitude (E)</td><td>75°05'24.8"</td><td>75.090216°</td></tr></table>
Applied methodologies (approved methodologies of GCC or CDM can be used)	AMS-I.D.: Grid connected renewable electricity generation --- Version 18.0
GHG Sectoral scopes linked to the applied methodologies	GHG-SS 1: Energy (renewable/non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2, ISO 14064-3 ☒ GCC Rules and Requirements ☒ Applicable Approved Methodology ☒ Applicable Legal requirements /rules of host country ☒ National Sustainable Development Criteria (if any) ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13- Climate Change) ☒ Others – CORSIA requirements
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☒ CORSIA requirements
Project Verifier's Confirmation: The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	The GCC Project Verifier, Carbon Check (India) Private Limited, certifies the following with respect to the GCC Project Activity "10 MW Shanmukha Subramanya mini-Hydel scheme in Karnataka, India" ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 1.2, dated 13/11/2023) including the applicability of the approved methodology [CDM methodology, AMS-I.D. version 18] and meets the methodology applicability conditions and is expected to achieve the forecasted

	real, measurable and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated 193,018 tCO_{2e} over the crediting period, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels: ☒ Environmental No-net-harm Label (**E**$^{+}$) ☒ Social No-net-harm Label (**S**$^{+}$) ☒ The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of *6* SDGs (SDG 3, 4, 7, 8, 9, and 13), with the following[4] SDG certification label (**SDG**$^{+}$): ☐ Bronze SDG Label ☐ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☒ Diamond SDG Label ☒ The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project ☒ The Project Activity complies with all the applicable GCC rules[5] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Reference No.: CCIPL1353/GCC/VAL/SSMH/20220520 Version no.: 3.0

[4] SDG Certification labels: Bronze label (1 star): by achieving 2 out of 17 SDGs; Silver label (2 star): by achieving 3 out of 17 SDGs; Gold label (3 star): by achieving 4 out of 17 SDGs; Platinum label (4 star): by achieving 5 out of 17 SDGs; and Diamond label (5 star): by achieving more than 5 out of 17 SDGs.

[5] "GCC Rules" are defined in Project Definitions and refers to the rules and requirements set out by the GCC program related to GHG emission reductions and its voluntary certification labels and are available on the GCC Program's public website: https://www.globalcarboncouncil.com/resource-centre.html

	Date: 14/11/2023
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	 Vikash Kumar Singh, Compliance Officer Date: 14/11/2023

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

Perla Hydro Power Private Limited and Greenko Energies Private Limited has appointed the Project Verifier, Carbon Check (India) Private Ltd. (CCIPL), to perform an independent project verification of the project activity "10 MW Shanmukha Subramanya mini Hydel scheme in Karnataka, India" (hereinafter referred to as "project activity"). This report summarizes the findings of verification of the project, performed on the basis of GCC rules and requirements as well as criteria given to provide for consistent project operations, monitoring and reporting. This report contains the findings and resolutions from the project verification and a verification opinion.

The project activity, is developed and owned by Perla Hydro Power Private /4/ which is a SPV under Greenko Energies Private Limited. The purpose of the project activity is to utilize the hydrological resource in a run-of-the-river scheme to generate electricity. The project activity aims to utilise water from the Mudimegeru stream which is tributary of west flowing river Nethravathi and partially displace the fossil fuel dominated power in the Indian Grid. The project activity involves the installation of 2 generating units of 5.00 MW each. The approximate average annual electricity supplied to grid will be 21,240 MWh, translating into annual average emission reductions of around 19,302 tCO_2e.

The project also contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+), CORSIA requirements (C+) and 6 United Nations Sustainable Development Goals (SDG+).

"The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project".

The purpose of the project verification is to have a thorough and independent assessment of the proposed Project Activity against the applicable GCC rules and requirements, including those specified in the Project Standard, applied methodology/methodological tools and any other requirements, in particular, the project's baseline, monitoring plan and the host Party criteria. These are verified to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Verification requirement for all GCC projects activity is necessary to provide assurance to stakeholders of the quality of the Project Activity and its intended generation of Approved Carbon Credits (ACCs).

Location

The project activity is implemented near Shamburi Village of Bantwal Taluk in South Canara (Dakshina Kannada) District of Karnataka State in India. Details of the same are as follows:

	Latitude (N)		Longitude (E)	
Diversion Weir	12°52'43"	12.878611°	75°05'26"	75.090556°
Power House	12°52'42.0"	12.878338°	75°05'24.8"	75.090216°

Scope of Project Verification

The project verification scope is defined as the independent and objective review of the project submission form (PSF /1-a/). The PSF /1-a/ is reviewed against the relevant criteria and decisions by the GCC, including the applied CDM baseline and monitoring methodology, AMS-I.D., version 18.0 /B02/, and allied CDM tools. The verification team has, based on the recommendations in the GCC Project Standard, Version 3.1 /B01-1/, Project Verification Standard Version 3.1 /B01-2/, Project Sustainability Standard v 3.0 /B01-5/ and Environment & Social Safeguards Standard v 3.0 /B01-4/, employed a rule-based approach, focusing on the identification of significant risks for project implementation and the generation of ACCs.

The verification activity aims to establish that the proposed project activity meets the requirements set forth in the aforementioned frameworks and standards and also fulfils applicable Legal requirements/rules of host country, National Sustainable Development Criteria and CORSIA requirements and other GCC requirements related to aspects such as project design, applicable conditions, project boundary, baseline scenarios, additionality, emission reduction, monitoring plan, local stakeholder consultation, global stakeholder consultation, GHG emission reductions (ACCs), environmental no-net harm label (E+), social no net harm label (S+), Diamond SDG label (SDG+), CORSIA+.

The verification is not meant to provide any consulting to the project owner. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the program design.

While carrying out the verification, CCIPL determines if the PSF complies with the requirements of the applicability conditions of the selected methodology /B02/, guidance issued by the GCC and also assess the claims and assumptions made in the PSF /1/ without limitation on the information provided by the project owner.

Verification Process

Strategic risk Analysis and delineation of the Verification plan:

CCIPL employed the following Project Verification process:

1. Conflict of interest review at the time of contract review;
2. Selection of Audit Team at the time of contract review;
3. Kick-off meeting with the client;
4. Review of the draft PSF listed on GCC website for public consultation;
5. Development of the Verification plan;
6. Desktop review and evaluation of emission reduction calculations;

7. Follow-up interaction with the client; and final statement and report development.

The Verification process has utilized to gain an understanding of the:

- Project's design, GHG emission sources and reductions,
- Baseline determination and additionality,
- GHG monitoring plan,
- Environmental & Social impacts,
- Stakeholder's consultation,
- SD indicators integrated with the project and
- Verify the collection and handling of data, the calculations that lead to the results, and the means for reporting the associated data and results.

Development of the Verification Plan:

The Audit Team formally documented its Verification plan.

The Verification plan was developed based on discussion of key elements of the Verification process during the kick-off meeting and as per the criteria of engagement. Client had the opportunity to comment on key elements of this plan for Verification. Based on items discussed above and agreed upon with the client in the signed contract, the plan identified the CCIPL audit team members based on following:

- Reasonableness of the assumptions, limitations and methods used to forecast information

- Standards of evaluation and reporting for the Verification.

It also provides an outline of the Verification process and established project deliverables. The project verification consists of the following four phases:

I. A desk review of the project submission form.
   - A review of the data and information;
   - Cross checks between information provided in the PSF /1/ and information from sources with all necessary means without limitations to the information provided by the project owner;

II. Follow-up interviews with project stakeholders
   - Interviews with relevant stakeholders in host country with personnel having knowledge with the project development;
   - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project owner;

III. Reference to available information relating to projects or technologies similar projects under verification and review based on the approved methodology /B02/ being applied, of the appropriateness of formulae and accuracy of calculations.

IV. The resolution of outstanding issues and the issuance of the final verification report and opinion.

The Verification team confirms the contractual relationship between the Project Verifier, CCIPL and the Project Owner signed on 21/06/2022 /B20/. The team assigned to the Verification meets the CCIPL's internal procedures including the GCC requirements for the team composition and competence. The Verification team has conducted a thorough contract review as per GCC and

CCIPL's procedures and requirements.

The report is based on the assessment of the PSF /1/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodology /B02/ and their underlying formulae and calculations.

This report contains the details of the resolution of findings from the project verification which are successfully resolved by the PO to confirm the program design in the documents is sound and reasonable and meets the stated requirements and identified criteria.

Conclusion

Carbon Check (India) Private Ltd. is of the opinion that the project activity "10 MW Shanmukha Subramanya mini Hydel scheme in Karnataka, India" in India as described in the final PSF (Version 1.2, dated 13/11/2023) /1-c/ meets all relevant requirements of GCC and has correctly applied the CDM baseline and monitoring methodology AMS-I.D.: 'Grid connected renewable electricity', Version 18.0 /B02/. The review of the PSF, supporting documentation and subsequent follow-up actions (onsite audit and interviews) have provided CCIPL with sufficient evidence to determine the fulfilment of the voluntary labels E+, S+ /B01-4/ and SDG+ with diamond rating /B01-5/.

The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 /B01-6/ paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project".

Carbon Check (India) Private Ltd. therefore is able to recommend the project activity to the GCC Steering Committee with a request for registration.

Section B. Project Verification team, technical reviewer and approver

B.1. Project Verification team

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader / Technical	IR	Agarwalla	Sanjay Kumar	CCIPL	X	X	X	X

	Expert / Financial Expert								
2.	Team Member	IR	Halder	Manas	CCIPL	X	-	-	X
3.	Team Member	ER	Nayak	Kiran[6]	-	X	-	-	X
4.	Trainee Assessor	IR	Nadkarni	Tanvi	CCIPL	X	-	-	X
5.	Trainee Assessor	IR	Tekapso	Leslie	CCIPL	X	-	-	X
6.	Trainee Assessor	IR	Shirke	Rishika[7]	CCIPL	X	X	X	X

B.2. Technical reviewer and approver of the Project Verification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)
1.	Technical reviewer / Financial Expert	ER	Seshan	Ranganathan	CCIPL
2.	Approver	IR	Singh	Vikash Kumar	CCIPL

Section C. Means of Project Verification

C.1. Desk/document review

The report is based on the assessment of the initial PSF/1-a/ and final PSF/1-c/ undertaken through verification of information using the source provided by the project owner, stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, interviews) and also the review of the applicable approved methodological and relevant tools, guidance and GCC decisions. Additionally, the cross checks were performed for information provided in the PSF using information from sources other than the verification sources, the verification team's sectoral or local expertise and, if necessary, independent background investigations.

List of all documents reviewed or referenced during the project verification is provided in Appendix-3.

C.2. On-site inspection

Duration of on-site inspection: 06/02/2023				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Discussions and review of: • Project Design • Project Technology • Project boundary	Village: Near Shamburi Village,	06/02/2023	Sanjay Kumar Agarwalla, Rishika Shirke

[6] Worked until 05/09/2023
[7] Worked until 31/08/2023

	• Applicability of CDM methodology • Environmental Management Plan/ EIA • Local stakeholders meeting process • Management structure with Roles and Responsibilities • Project implementation schedule • Pre project (existing) scenario to meet the energy (heat and electricity) demand • Monitoring Plan • Socio-economic Impacts of the project activity • Sustainability aspects of the project (SDGs) • Baseline Scenarios and alternatives • Project additionality • Emission reduction calculations	Taluk: Buntwal, District: South Canara, State: Karnataka		

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Thirupathama	Arla	Zenith Energy	06/02/2023	Discussion on project implementation, monitoring, Environmental impact, Management structure with Roles and Responsibilities, Socio-economic Impacts of the project activity Sustainability aspects of the project, local stakeholders meeting, legal ownership of the project activity	Sanjay Kumar Agarwalla, Rishika Shirke
2.	Mesta	Gurudas	AGM (Perla)			
3.	Reddy	Manohar	Assistant Manager (Perla)			
4.	B. S.	Sudhir	HR Manager (Perla)			
5.	Raj	Varada	LSC		Environment and Social impacts of the project	
6.	Poojary	Prakash	LSC		Environment and Social impacts of the project	
7.	Kumar	Ranjith	LSC		Environment and Social impacts of the project	
8.	Pai	Venkatesh	LSC		Environment and Social impacts of the project	

C.4. Sampling approach

No sampling approach has been used for this project activity verification.

C.5. Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A_1, A_2, B_1, B_2	-	-	-
General description of project activity	A_1, A_2, B_1, B_2	-	1	-
Application and selection of methodologies and standardized baselines	A_1, A_2, B_1, B_2	-	-	-
- Application of methodologies and standardized baselines	A_1, A_2, B_1, B_2	-	2	-
- Deviation from methodology and/or methodological tool	A_1, A_2, B_1, B_2	-	-	-
- Clarification on applicability of methodology, tool and/or standardized baseline	A_1, A_2, B_1, B_2	-	-	-

- Project boundary, sources and GHGs	A_1, A_2, B_1, B_2	-	1	-
- Baseline scenario	A_1, A_2, B_1, B_2	-	1	-
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	1	1	-
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	2	1	-
- Monitoring plan	A_1, A_2, B_1, B_2	2	-	-
Start date, crediting period and duration	A_1, A_2, B_1, B_2	-		-
Environmental impacts	A_1, A_2, B_1, B_2	-	-	-
Local stakeholder consultation	A_1, A_2, B_1	-	1	-
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2	-	-	-
Project Owner- Identification and communication	A_1, A_2, B_1, B_2	-	-	-
Global stakeholder consultation	A_1, A_2, B_1	-	-	-
PSF Template	A_1, A_2, B_1, B_2	-	1	-
Others (Supporting Documents)	A_1, A_2, B_1, B_2	1	-	-
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	1	-	-
Social Safeguards (S^+)	A_1, A_2, B_1		-	-
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	1	-	-
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1	-	-	1
CORSIA Eligibility (C^+)		-	-	-
Total		8	9	1

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	DR, I
Findings	No findings pertaining to this section.
Conclusion	The Verification team reviewed the PSF /1/ and confirms that the Project Owner determines the type of proposed GCC project activity as Type A2, Sub-Type 1 in accordance with §11 of GCC Project Standard (version 03.1) /B01-1/ as well as §29 of GCC clarification no.01, version 1.3 /B01-6/. *"These types of projects are prompt-start and had already started their operations as of 5th July 2020. Their start date of operations shall be after 1st January 2016 but before 5th July 2022. The start date of the Crediting Period for such GCC Project Activities shall be on or after 1 Jan 2016 but not more than one year after the start date of the operations of the GCC Project Activity."* Furthermore, as per §03 (c), (iv) of GCC clarification no.01 the deadline for submission of A2 projects has been extended. As per clarification, "A2 type projects are required to make initial submission to GCC program, for uploading for global stakeholder consultation, prior to 5 July 2022"/B01-6/. The proposed project activity has started its operations on 12/12/2016 (date of interconnection with the grid), the start date of crediting period is 03/07/2017 and it was published for global stakeholder consultation from 16/11/2022 to 30/11/2022. The project activity was submitted to GCC on 24/06/2022. The start date of the project activity has been duly verified against the commissioning report /8/ and found to be acceptable by the verification team. This complies with the requirement of §11 of the GCC Project Standard (version 03.1) including GCC Clarification No. 01 (version 1.3) /B01-1/ and § 25 (b) of GCC Project Verification

	Standard (version 03.1) /B01-2/ and hence the determined project activity type i.e., Type A2, Sub-Type 1 is found to be acceptable by the verification team. Furthermore, the project verification team along with the help of local expert checked the other GHG programmes like, Clean Development Mechanism (CDM) Registry /B08/, VERRA Registry /B09/, and Gold Standard Registry /B10/, for the information regarding the consistency of the title of the project activity, GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the project owner has not submitted the said project activity under any other GHG program apart from GCC.

D.2. General description of project activity

Means of Project Verification	DR, I
Findings	CAR 02 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The description of the project activity contained in the PSF /1-c/ can be considered transparent, detailed and provides a clear overview of the project. The same was confirmed by means of document review and interviews to verify the accuracy and completeness of the project description. The project activity is a run-of-river mini hydel power project with a total installed capacity of 10 MW. The purpose of the project activity is to utilize the hydrological resource in a run of the river scheme to generate zero carbon emission electricity. The project activity aims to utilise water from the Mudimegeru stream, a tributary of Nethravathi River as well as excess water from Nethravathi river from the Perla Barrage and partially displace the fossil fuel dominated power in the Indian Grid. The project verification team has confirmed the same by cross verifying the commissioning report /8/, PPA /5/ and physical verification of project site /28/. The project consists of approach channel from the reservoir of the gated barrage across river Nethravathi, intake diversion weir, powerhouse, tailrace pool and open tail channel discharging water back into the river. The project envisages the installation of 2 horizontal full Kaplan turbines of rated capacity 5.3 MW each and 2 Generators of rated capacity 5.00 MW each. The anticipated power generation is 21,240 MWh per year at a plant load factor of 26.74% with an expected lifetime of 25 years. The same has been verified from the DPR /7/. Furthermore, the expected lifetime of plant is 40 years as confirmed from the DPR /7/ and technical specifications provided by the manufacturer /6/. The power generation from the project activity replaces the equal amount of power which would otherwise have been supplied from the fossil fuel dominated grid. Thus, project activity helps in an average annual emission reduction of 19,302 tCO_2e/year for a period of 10 years /2/ with an annual electricity generation estimated at 21,240 MWh. The same has been crosschecked from the actual generation records /11/ during the physical onsite visit and is found to be acceptable. The project activity is a greenfield activity, which involves installation of new hydel power generation gear at the project activity site. As confirmed during the site visit /28/ and discussion with the project owner, there was no renewable energy power plant operating at the project activity location prior to the implementation of the said project activity.

In the baseline scenario the equivalent amount of 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. The main emission source in the baseline scenario is the power plants connected to the grid and main greenhouse gas involved is CO_2.

The project activity is implemented near Shamburi village, Bantwal Taluk of Dakshina Kannada District in the state of Karnataka, India. The geographic co-ordinates for the project activity are:

	Latitude (N)		Longitude (E)	
Diversion Weir	12°52'43"	12.878611°	75°05'26"	75.090556°
Power House	12°52'42.0"	12.878338°	75°05'24.8"	75.090216°

The same was confirmed by the measurement of co-ordinates using google earth software and GPS at the project site and were found appropriate.

The verification team confirms that project owner has described the GHG emission-reduction activity, including schematics, specifications and a description of how the project reduces GHG emissions. The same is in accordance with §36 of Project Standard Version 03.1 /B01-1/ and cross checked with PSF /1/. Furthermore, the Project Activity is a voluntary action by the project owner as confirmed by the verification team upon review of the PSF /1/ and on-site visit interviews /28/.

As stated in the PSF /1/, the project activity also voluntarily contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) and 6 United Nations Sustainable Development Goals (SDG+).

As per the PSF /1/, the start date of the Project Activity is 12/12/2016 /8/. The same is in accordance with requirements of §38 of Project Standard (version 03.1) /B01-1/ as well as §13 of the GCC Clarification No. 1 version 1.3 /B01-6/. The project verification team confirmed the same during the physical onsite visit /28/ as well as from the commissioning certificate /8/.

The crediting period is a fixed crediting period of 10 years from 03/07/2017 to 02/07/2027. This is cross checked with the PSF /1/ and conforms with the requirements of §39 and §40 of Project Standard Version 03.1 /B01-1/.

CCIPL verification team is therefore able to confirm that the description of the proposed Project Activity in the PSF is accurate and complete and it provides a clear understanding of the Project Activity. The same is found to be acceptable.

Furthermore, the verification team cross checked other GHG programmes like Clean Development Mechanism (CDM) Registry /B08/, VERRA Registry /B09/, Gold Standard Registry /B10/,and voluntary non-GHG Programs like I-REC /B12/ Renewable Energy Certificate (REC) Mechanism /B11/ in India for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the project owner has not submitted the said project activity under any other GHG program apart from GCC.

D.3. Application and selection of methodologies and standardized baselines

D.3.1 Application of methodology and standardized baselines

<table>
<tr><td>Means of Project Verification</td><td>DR, I</td></tr>
<tr><td>Findings</td><td>CAR 03 and CAR 04 were raised and closed successfully. Please refer to Appendix 4 for further details.</td></tr>
<tr><td>Conclusion</td><td>The applied methodology is CDM small scale methodology AMS-I.D., version 18.0 /B02/. It is applicable to Grid connected renewable electricity. Applicability of the methodology was confirmed by means of interviews with the PO representatives and document review.

The applied methodology is correctly quoted and is identical to the version available on the CDM website. The applied methodology version of the baseline and monitoring methodology /B02/ is valid at the time of submission of the PSF for global stakeholder consultation. All applicability criteria in the methodology are assessed in the below table:

<table>
<tr><th>Applicability criteria of the methodology (AMS-I.D., version 18.0)</th><th>Justification in the PSF</th><th>Project verifier assessment</th></tr>
<tr><td>Paragraph 4 of the applied methodology states that:

This methodology is applicable to project activities that:

(a) Install a Greenfield plant; (b) Involve a capacity addition in (an) existing plant(s);

(c) Involve a retrofit of (an) existing plant(s);

(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s).</td><td>The project activity is a Greenfield grid connected hydro-electric project. Hence it satisfies the methodology requirement.</td><td>The project activity involves the installation of a 10 MW Hydro Power Plant, where there was no renewable power plant operating prior to implementing the project activity (Greenfield plant).

CCIPL project verification team has confirmed the same during the site visit /28/ as well as from the PPA/14/, and the commissioning certificates /8/.

The said criterion is fulfilled by the project activity and hence the methodology is applicable to the project activity.</td></tr>
<tr><td>Paragraph 5 of the applied methodology states that:

Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:
(a) The project activity is implemented in an existing</td><td>The project activity does not have a water reservoir. Hence this methodology clause is not applicable for the project activity.</td><td>The project activity involves the installation of 10 MW, run-of-river, Hydro Power Plant, with electricity generated being evacuated to the Grid. This was confirmed from the DPR /7/, commissioning report /8/ and PPA/5/.</td></tr>
</table>
</td></tr>
</table>

	reservoir with no change in the volume of reservoir; (b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m^2; (c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m^2.		CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.
	Paragraph 6 of the applied methodology states that: If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The project activity does not have a water reservoir. Hence this methodology clause is not applicable for the project activity. The project activity does not involve use of fossil fuel for power generation. It is a greenfield power project based on hydel power. Hence satisfy the methodology requirement	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. The project activity does not have a non-renewable component. Hence it is not applicable. CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.
	Paragraph 7 of the applied methodology states that: Combined heat and power (co-generation) systems are not eligible under this category.	No co-generation systems are part of the project activity. Hence satisfy the methodology requirement.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. The project activity design does not involve combined heat and power (co-generation) system. CCIPL project verification team confirmed the same during the onsite visit /28/.

			Hence this condition is not applicable to the project activity.
	Paragraph 8 of the applied methodology states that: In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	The project activity do not involve of retrofit, rehabilitation or replacement. Hence this methodology clause is not applicable for the project activity.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. This was confirmed from the DPR /7/, commissioning report /8/ and PPA/14/. The project activity design does not involve capacity addition of renewable energy generation units at an existing renewable power generation facility. CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.
	Paragraph 9 of the applied methodology states that: In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	The project activity does not involve the capacity addition at an existing renewable power generation facility. Hence this methodology clause is not applicable for the project activity.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. This was confirmed from the DPR /7/, commissioning report /8/ and PPA/14/. The project activity design does not involve retrofit, rehabilitation or replacement. CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.

	Paragraph 10 of the applied methodology states that: In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.	The project activity is a new grid connected hydro-electric project. Hence this methodology clause is not applicable for the project activity.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. This was confirmed from the DPR /7/, commissioning report /8/ and PPA/14/. CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.
	Paragraph 11 of the applied methodology states that: In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	The project activity is a new grid connected hydro-electric project. Hence this methodology clause is not applicable for the project activity.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. This was confirmed from the DPR /7/, commissioning report /8/ and PPA/14/. No biomass is sourced from plantations. CCIPL project verification team confirmed the same during the onsite visit /28/. Hence this condition is not applicable to the project activity.

Tool 01: Tool for the demonstration and assessment of additionality; Version 7.0	**Justification in the PSF**	**Project verifier Assessment**
Paragraph 9 states that: The use of the "Tool for the demonstration and	Since the applied methodology is not a new methodology, the project proponent has	The project activity applies an approved CDM small scale methodology i.e., AMS-

	assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	applied this tool for the demonstration of additionality in compliance with the tool. Refer to section B.5 of the PSF for the detailed applicability of this tool and additionality assessment. Hence, this tool is applicable	I.D. "Grid connected renewable electricity", version 18.0 /B02/ and no new methodology is proposed. Hence this condition is applicable to the project activity.
	Paragraph 10 states that: Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	In line with the methodology requirement, Project developer has applied this tool for the demonstration of additionality assessment. Hence, this tool is applicable	The said tool is included in the applied methodology AMS-I.D., version 18.0 /B02/. Hence, this condition is found to be met.
	Tool 07: Tool to calculate the emission factor for an electricity system; Version 7.0	**Justification in the PSF**	**Project verifier Assessment**
	Paragraph 3 states that: This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g., demand-side energy efficiency projects).	This condition is applicable. OM, BM and CM are estimated using the Tool under section B.6.1 for calculating baseline emissions.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid. In the absence of this project activity, same amount of electricity would have been generated by the operation of existing/proposed grid connected power plants, predominantly fossil fuel-based. The baseline emissions are calculated from electricity supplied to the grid by the project activity multiplied with emission factor of the Indian grid, which is calculated using OM, BM and CM using this tool. The same has been elaborated upon in

			section D.3.6 of this report. Hence this condition is applicable to the project activity and found to be met.
	Paragraph 4 states that: 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, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in "Appendix 1: 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.	The project activity is a grid connected Hydro Power project. Estimation of OM & BM has been prepared and published by the In India, Central Electricity Authority (CEA), Government of India and accordingly the same has been used. The latest CO_2 Baseline Database for the Indian Power Sector, Version 17, October 2021, published by Central Electricity Authority (CEA), Government of India has been used for the calculation of emission factor. The above CO_2 Baseline Database follows the "Tool to calculate the emission factor for an electricity system" Version 07.0.	The project activity has chosen the option to calculate the emission factor for grid power plants only by referring to the data published by CEA /17/. This confirms that only grid connected power plants have been considered for OM, BM and CM calculations and is found to be acceptable by the project verification team. The point has been assessed in detail under section D.3.6 of the report.
	Paragraph 5 states that: 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.	No portion of the Project Electricity system (i.e. Indian Grid) is in an Annex I country	The project activity is situated in India, which is not Annex I country, hence the condition is not applicable. The same can be confirmed from UNFCCC website (https://unfccc.int/process/parties-non-party-stakeholders/parties-convention-and-

			observer-states?field_parties_date_of_ratifi_value=All&field_parties_date_of_signature_value=All&field_parties_date_of_ratifi_value_1=All&field_parties_date_of_signature_value_1=All&combine=)
	Paragraph 6 states that: Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	No biofuels are used.	The project activity involves the installation of 10 MW Hydro Power Plant, with electricity generated being evacuated to the Grid and does not involve biofuels. The same was confirmed from PPA/14/ and site visit /28/. Hence the condition is not applicable.
	TOOL 27: Investment analysis; Version 11.0	**Justification in the PSF**	**Project verifier Assessment**
	Paragraph 2 states that This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	Project activity applies "Tool for the demonstration and assessment of additionality". Hence, this tool is applicable.	The project activity utilises the methodological tool "Tool 01: Tool for the demonstration and assessment of additionality", version 07 /B04/. Hence this condition is applicable to the project activity and found to be met.
	Paragraph 3 states that: In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are	Not applicable The applied approved baseline and monitoring methodology does not contain requirements for the investment	The applied methodology, AMS-I.D. version 18.0 /B02/ does not contain requirements for investment analysis which are different from that specified in the tool.

	different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	analysis that are different from those described in this methodological tool. Hence, not applicable	Hence the condition is not applicable.

Demonstration of debundling as per Tool 20: Assessment of debundling for small-scale project activity", version 04.0 and GCC Clarification No. 01, V1.3 – 2022

The step wise approach as per the tool has been provided in the PSF/1/. From those references given in the PSF it is evident that no other small scale project activity is registered nor any application for such registration under any GHG scheme by the legal owner i.e., Perla Hydro Power Private Limited. Hence it can be concluded that the project activity is not a de-bundled component of a large project activity. Hence the project activity is not a debundled component of a large project activity as per applicable TOOL.

The same has been crosschecked with publicly available resources i.e., GCC, CDM, VERRA, GS Registries and found the information provided by the project owner is correct and acceptable. However, there are two large scale (24 MW each) CDM registered project activities on the same Perla barrage, whose excess water the said Project Activity is utilizing. CDM Project No. 2112 is by M/s AMR Power Private Limited and CDM Project No. 2736 by M/s Rithwik Energy Generation Private Limited. The aforementioned two project activities are within 1 Km of the proposed project activity and are registered with CDM in 2009 /31/.

The project is the installation of hydro power plant (same technology) which was installed and operated by the single legal owner and applied the same baseline, additionality determination. As Per GCC Clarification No. 01, V1.3 /B01-6/, the project has been considered as single project. The same has been verified with documents like Power purchase agreements /5/ and commissioning certificates /8/ of the project installations.

The applied baseline and monitoring methodology and relevant tools are valid and applicable to the project activity. The project fulfils all relevant criteria of the applied methodology 'AMS-I.D.: Grid connected renewable electricity' – Version 18.0 /B02/ and Tool to calculate the emission factor for an electricity system; (Version 7.0) /B05/. Hence, use of the selected methodology is appropriate for this project activity.

D.3.2 Clarification on applicability of methodology, tool and/or standardized baseline

Means of Project Verification	DR, I
Findings	No findings pertaining to this section.
Conclusion	No further clarifications were sought as the applicability criteria of methodology, and the associated tools was found to be fulfilled.

D.3.3 Project boundary, sources and GHGs

Means of Project	DR, I

Verification	
Findings	CAR 05 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	As per §20 of the applied methodology AMS-I.D., version 18.0 /B02/, the project boundary is stated as "*The spatial extent of the project boundary includes the project power plant/unit and all power plants/unites connected physically to the electricity system that the CDM project power plant is connected to".* Section B.3 of the PSF /01/ clearly depicts the project boundary along with a pictorial representation. The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified and the same was found to be in conformity with the applied methodology /B02/. Furthermore, the physical boundary of the project activity identified by the project owner has been cross verified during the site visit /28/ and duly verified from the commissioning report /8/ as well as from the PPA /5/ and was found to be appropriate and acceptable. The verification team also confirmed that all GHG sources required by the methodology have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology or accuracy of the emission reductions. The verification team therefore confirms that the identified boundary and the selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	DR, I
Findings	CAR 06 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	As per §19 of the applied methodology AMS-I.D., version 18.0/B02/, the baseline scenario is 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. The Project activity involves generation of electricity by harnessing hydro power and selling it to the Indian grid. The same was confirmed through the PPA /5/ and commissioning report /8/. In the absence of this project activity, same amount of electricity would have been generated by the operation of existing/proposed grid connected power plants, predominantly fossil fuel based. The verification team confirms that all assumptions and data used by the project participants are listed in the PSF, including their references and sources. All relevant national and/or sectoral policies and circumstances are considered and listed in the PSF /1/. Furthermore, the verification team also concludes that the identified baseline scenario reasonably represents what would occur in the absence of the project activity. The baseline scenario in the PSF/1/ is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the Indian Grid. The baseline scenario applied in the PSF was compared with the requirements of the baseline described in the applied methodology /B02/ and found to be consistent. Therefore, the verification team concludes that the identified baseline scenario reasonably represents what would occur in the absence of the project activity and is found to be acceptable.

D.3.5 Demonstration of additionality

Means of Project Verification	DR, I
Findings	CL 06 and CAR 07 were raised and closed successfully. Please refer Appendix 4 for further details.
Conclusion	Project Owner has described the Demonstration of additionality according to the GCC Project Standard Version 03.1 /B01-1/ and the applied methodology AMS-I.D., version 18.0 /B02/ and relevant methodological tools. In section B.5 of the PSF /1-c/, two components are applied for the demonstration of additionality: - A Legal Requirement Test - Additionality Test Legal Requirement: The project activity is a Type A project and requires undergoing a Legal Requirement Test. The relevant national acts and regulations pertaining to generation of energy in the host country i.e., India are Electricity Act 2003 /B13/, National Electricity Policy 2005 /B14/, National Action Plan on Climate Change (NAPCC) 2008/B16/, Renewable Energy Certificates (RECs), 2011 /B17/ verified by the assessment team. It was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions. The assessment team assessed the relevant regulations of the host county to confirm the requirements and also confirmed based on the local expertise by the verification team the project is not implemented to meet any legal requirement. The project activity is therefore voluntary in nature and hence is additional as per § 46 of GCC Project Standard V3.1 /B01-1/ and passes the legal requirement test. Additionality Test: To cover this requirement from the GCC Project Standard 3.1, section 6.4.8, paragraph 45 and as per the applied methodology AMS-I.D. Version 18.0 /B02/, additionality of the project activity is demonstrated and assessed using the latest version of Tool 01: Tool for the demonstration and assessment of additionality" Version 7.0 /B04/. The PO has adopted the stepwise approach for demonstrating and assessing the additionality of the project activity as follows: ***Step 0: Demonstration whether the proposed project activity is the first-of-its-kind*** The project activity is a grid connected hydro power project in India. This is not the first such project to be installed in the country and therefore project activity does not meet this criterion. ***Step 1: Identification of alternatives to the project activity consistent with current laws and regulations***

	Sub-step 1a: Define alternatives to the project activity Alternative 1: The proposed project activity not undertaken as a GCC project activity. Alternative 2: Continuation of the present situation, i.e., the power generated from the project activity will be fed into India National Grid. ***Sub-step 1b: Consistency with mandatory laws and regulations*** All the alternatives are consistent with the laws and regulations of India. The environmental regulations, legislations and policy guidelines in respect to the project activity are governed by various regulatory agencies. The principal environmental regulatory agency in India is Ministry of Environment, Forest and Climate Change (MoEF &CC), Delhi supported by Central Pollution Control Board (CPCB). The Mini Hydel Power Projects are not covered under the ambit of EIA Notification, 2006. Hence, it does not require preparation of Environmental Impact Assessment Report and pursuing Environmental Clearance from Ministry of Environment, Forest and Climate Change (MoEF & CC). (Annexure-II MOEF&CC, OM on J-11013/41/2006-IA. II (I) dated 7th July 2017) /B18/ Further, MoEF & CC has included Mini Hydel Power Projects under "White category" for Consent to Establish/Operate. Newly introduced White category contains 36 industrial sectors which are practically non-polluting. There shall be no necessity of obtaining the Consent to Establish/Operate for White category of industries and an intimation to concerned SPCB / PCC shall suffice. In accordance with the requirement of the Modified directions under section 18(1)(b) of the Water (P&PC) Act, 1974 and the Air (P & PC) Act, 1981 regarding harmonization of classification of industrial sectors under red/ orange/ green/ white categories by the CPCB /32/ /36/, acknowledgement of Letter to PCB for White Category Industry /35/ received by the PO was checked and found to be acceptable. ***Step 2: Investment analysis:*** In this section it is demonstrated that the project activity is not financially feasible without the revenue from the sale of ACCs. This is demonstrated in following sections as per "Investment analysis" (Version 11.0) /B07/. The proposed project activity was submitted to GCC on 24/06/2022, when version 11.0 of TOOL 27 was latest available version and hence, applicable in accordance with paragraph 15 of the GCC Program Processes, version 4.0 /B01-9/. The proposed project activity received government order for the implementation of the project on 21/05/2013 /15/. This was a key decision stage and the investment decision date for the project proponent to start the project implementation despite inherent financial barriers. The additionality has been established using the data available at the time of investment decision which are mainly from the DPR /7/. ***Sub-step 2a: Determine appropriate analysis method*** Since project activity generates revenue, Option III - Benchmark Analysis has been chosen to carry out investment analysis. ***Sub-step 2b: Option III. Apply benchmark analysis*** Since the project is funded through equity and debt funds, Post Tax Equity IRR has been considered an appropriate financial indicator which will be tested against an appropriate benchmark cost of equity. These indicators are industry accepted indicators and are commonly used for financial analysis of similar kinds of projects.

In line with para 16 of investment analysis /B07/, as the investment analysis is carried out in nominal terms and the available IRR benchmarks are in real terms, therefore, project owner has converted the real term values of benchmarks to nominal values by adding the inflation rate.
As per para 19 of investment analysis, the cost of equity is determined by selecting the values provided in the Appendix, i.e., Default values for cost of equity (expected return on equity) is presented below:

The Required return on equity (benchmark) was computed in the following means:

Nominal Benchmark = {(1+Real Benchmark) * (1+Inflation rate)} – 1

Where:
- Default value for Real Benchmark = 10.55%, as per TOOL27, version11.0, which is the latest version available at the time of preparation of PSF
- Inflation Rate forecast for by Reserve Bank of India (RBI) i.e., Central Bank of India.

TOOL27, version 11.0 specifies default value of expected return on equity in real terms for Energy Industries (Group 1) in India = **10.55%**

As per RBI report “Survey of Professional forecasters” dated 02/05/2013 /30/, the latest report available at the time of decision making, the 10-year inflation forecast projected was 5.90%.

Therefore, Benchmark is calculated as {(1+10.55%) x (1+5.90%)} -1 = **17.07%**

Sub-step 2c: Calculation and comparison of financial indicators
For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet /3/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources.

GCC project activity has a less favourable Post tax Equity IRR compared to the benchmark, and hence the GCC project activity cannot be considered as financially attractive.

The key data parameters used to calculate Equity IRR are tabulated below:

Parameter	Value	Project verifier assessment
No. of machines	2	The project rated capacity i.e., 10 MW (2 * 5 MW) is based on the 3rd party DPR by Design Group Project Consultants Pvt Ltd /7/. The same was further confirmed

	Capacity /machine (MW)	5 MW	from the commissioning certificate /8/, as well as the PPA/5/ and found to be consistent and thus acceptable. Installed capacity proposed at the time of decision making (i.e., internal management decision) and post decision making (actual implementation) is same.
	Total Capacity (MW)	10 MW	
	PLF	26.74%	Value is based on DPR /7/. The same is in accordance with paragraph 3(b) of "Guidelines for the reporting and verification of Plant load factors" EB 48 Annex 11, as the PLF has been determined by a third party contracted by the PO. The annual generation value can be calculated as Capacity * PLF (%) * 8760 * 1000 and the value comes out to be 23,424 MWh. To further cross-check the robustness of the PLF, validation team has cross-checked the actual generation of the project activity to ascertain the conformity of the estimated PLF to the actual and observed that the generation yielded a PLF of 37.09% /11/ which is higher than the DPR value. However, the actual project cost /29/ has gone up by 148% and therefore, the project remains additional. The same is therefore acceptable.
	Annual generation (MWh)	23,424 MWh	
	Auxiliary consumption and grid losses	2.50%	Value is based on DPR /7/ which was available at the time of investment decision making and is deemed acceptable to the verification team. The same was cross checked with, the month-wise record of auxiliary consumption and it
	Transmission & Wheeling Charges (%)	7.00%	

			was observed that the loss worked out to 0% based on generation records /11/. Therefore, the consideration of the assumed values for IRR calculation is found to be reasonable and hence acceptable.
	Net Annual generation	21,240 MWh	The value is calculated by taking into account the auxiliary consumption and grid losses and is deemed acceptable to the verification team.
	Revenue & Expenses		
	Power tariff	4.90 INR/kWh	The Value is based on DPR /7/. The actual average tariff received by the project activity is 5.61 INR/kWh based on the PPAs signed with multiple consumers /5/. This value is more than the input value for IRR analysis. However, the actual project cost /29/ has increased by 148% and therefore, the project remains additional.
	O & M expenses including insurance cost	18.24 INR million	The value is based on DPR /7/. Annual O & M charges are provided at the rate of 3% of the completed cost with escalation of 5.72 % per annum. The actual O&M cost 10.41 INR million (2017-18), 18.56 INR million (2018-19), 17.90 INR million (2019-20), 25.88 INR million (2020-21), and 23.97 INR million (2021-22). This can be confirmed from the balance sheets /14/ This is deemed acceptable to the verification team.
	Escalation in O&M expenses p.a.	5.72%	The Value is based on 3rd party DPR /7/ which was available at the time of decision making.
	Project cost and financing structure		
	Project cost	541.20 INR Mn	The value is based on the DPR /7/ which was available at the time of investment decision. Actual project cost incurred /29/ for the project is INR

			801.60 million against INR 541.20 million considered for financial analysis which is conservative. The actual project cost was verified by the project verification team by reviewing the CA certificate /29/.
	Equity Investment	162.36 INR Mn	The value is based on the DPR /7/ which was available at the time of investment decision. The value is equivalent to 30% of the total project cost which is deemed acceptable to the project verification team. The actual equity investment since COD /14/ is 13.51 INR million.
	Loan Amount	378.84 INR Mn	The value is based on the DPR /7/ which was available at the time of investment decision. The value is equivalent to 70% of the total project cost which is deemed acceptable to the project verification team. The actual loan amount /14/ is 479.00 INR million.
	Interest on working capital (%)	13.50%	The value is based on 3rd party DPR /7/ which was available at the time of investment decision and is deemed acceptable to the verification team. The same is also reflected in the Central Electricity Regulatory Commission (CERC) Tariff order, dated 02/05/2013 /B06/.
	Salvage Value (%)	10.00%	Salvage value is considered as 10% of the total project cost (plant and machinery). These have been added back to the cash flow. Land cost is also taken into consideration at 2.5 INR million, which is added back into cash flow. The same is also reflected in the Central Electricity Regulatory Commission (CERC) Tariff order, dated 02/05/2013 /B06/.

		This is further validated as per the accounting practises and same has been also cross checked from Schedule II of the Companies Act 2013 which allows 95% of original cost to be depreciated implying a consideration of 5% as salvage value as a standard accounting practice. Thus, the consideration by the PO of 10% salvage value is conservative and hence appropriate for the project activity.
IT Depreciation (SLM) for 10 years IT Depreciation (SLM) from 11th to 25th year	3.40%	The value is based on 3rd Income Tax Rules, Appendix 1A.
Income tax rate (%)	30.00%	The values are based on the DPR /7/ available at the time of investment decision making. The same is also based on the Finance act (FY 2013-14) and is deemed acceptable to the assessment team.
MAT (%)	18.50%	
Service Tax (%)	12.36%	
Surcharge (%)	10.00%	
Education cess (%)	3.00%	

For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet /3/ provided by the PO. GCC Verifier has checked that land cost, salvage value and working capital are considered while doing investment analysis and have been added back in the final year cash flow calculation. GCC verifier also confirms that income tax exemption under section 80IA is considered by the PO while performing investment analysis.
Post tax Equity IRR i.e., 11.38% is less than Cost of Equity i.e., 17.07% and therefore renders the project activity financially non-feasible.

Sub-step 2d: Sensitivity analysis
As per Tool 27, version 11 /B07/, variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation. The Guidance on Assessment of Investment Analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation (± 10%). The project developer has identified PLF, project cost, and electricity tariff as critical assumptions. The sensitivity analysis reveals that even under more favourable conditions, the equity IRR would not cross the benchmark return as given in the following table:

Parameter	-10%	0	+10%
PLF	8.14%	11.38%	14.64%
Project Cost	15.01%	11.38%	8.43%

Electricity tariff Rate	8.14%	11.38%	14.64%

In conclusion, the equity IRR (after tax) will not reach the benchmark of 17.07% within the reasonable fluctuation range of +/-10% of the key financial parameters. The project verification team has cross-checked all the input values and calculations which are found to be correct and in accordance with Tool 27, version 11 /B07/.

The verification team carried out its own an independent assessment on the likelihood of the equity IRR breaching the benchmark and this assessment reveals that the project would become non additional only if:

- PLF goes up by 17.50%
- Project cost goes down by 15.00%
- Tariff increases by 17.50%

PP has submitted that such a reduction in project cost or increase in PLF / tariff is highly unrealistic and unlikely to happen for the following reasons:

PLF: The plant load factor of 26.74% considered for IRR analysis is based on the DPR /7/. The actual PLF achieved by the project activity since commissioning is 37.09% /11/. However, the actual project cost /29/ has been increased by 148% and therefore, the project remains additional.

Project cost: The cost taken into computation is based on the DPR /7/. Since the project activity is already operational since 2017, the cost incurred by the project owner is INR 801.60 MN, as against the assumed amount of INR 541.20 MN, which represents firm cost and as such the question of any reduction in the cost is hypothetical.

Tariff:

The tariff value of INR 4.90 / kWh, considered for IRR analysis is based on the DPR /7/.
The actual average tariff received from the sale is INR 5.61, which is based on the PPAs signed with various consumers /5/. This is more than a 17.5% increase when compared with the assumed tariff of INR 4.90. However, the actual project cost /29/ has been increased by 148% and therefore, the project remains additional.

In conclusion, the post-tax equity IRR will not reach the benchmark of 17.07% within the reasonable fluctuation range of +/-10% of the key financial parameters. The Post-tax equity IRR calculated based on actual values /3/ is 13.78% and does not reach the benchmark of 17.07%.

The project verification team has cross-checked all the input values and calculations which are found to be correct and in accordance with Tool 27, version 11 /B07/.

The project verification team therefore concludes that as the project activity is not financially feasible and not a common practice, the project is additional.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	DR, I

<table>
<tr><td>Findings</td><td>CL 02, CL 03, and CAR 08 were raised and closed successfully. Please refer to Appendix 4 for further details.</td></tr>
<tr><td>Conclusion</td><td>The verification team confirms that the equations and parameters used to calculate GHG emission reductions or net anthropogenic removals in the sections B.6 of PSF/1/ are in accordance with applied methodology, AMS-I.D. version 18.0 /B02/.

<u>The baseline emissions are calculated using the formula:</u>

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

Where:
BEy = Baseline emissions in year y (t CO_2)
$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr.)
$EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of “TOOL 07: Tool to calculate the emission factor for an electricity system” (t CO_2/MWh)

The formula has been correctly applied as per §22 of the applied methodology according to which “baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity”.

Furthermore, as per §26 of the applied methodology, if the project activity is the installation of a greenfield power plant then

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

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

As per the PSF the estimated net electricity generation from the project activity ($\boldsymbol{EG_{PJ,y}}$) is estimated to be 21,240 MWh/year. The same have been duly verified and the project verification team confirms that the actual generation from the project activity tallies with the estimation in the PSF /1/ as well as the ER calculation sheet /2/ and hence is acceptable.

The electricity generation from the project activity is calculated based on the value of PLF i.e., 26.74 % which is sourced from the third party DPR /7/. The value considered by the project owner for determining the ex-ante emission reductions in the PSF is therefore deemed acceptable to the verification team.

The project activity has applied the “Tool to calculate the emission factor for an electricity system” version 7.0 /B05/ for the calculation of CO_2 emission factor of the grid. The assessment of the step wise approach for the calculation of the parameter $EF_{grid,y}$ is detailed below:

<table>
<tr><th>Steps for Calculation of combined grid emission factor as per TOOL07: “Tool to calculate the emission factor for an electricity system” version 07</th><th>Assessment</th></tr>
</table>
</td></tr>
</table>

	Step 1: Identify the relevant electricity systems	In accordance with §10(e) of the applied tool, the project activity identifies the Indian Grid as the relevant electricity system. In India, all regional grids have been integrated as a single Indian Grid covering all the states in December 2013 by the Central Electricity Authority (CEA), Government of India. Therefore, in accordance with §17(a) of the applied tool the delineation of the project electricity system and connected electricity systems published by the DNA of the host country i.e., CO_2 Baseline Database for the Indian Power Sector, Version 17, October 2021 published by Central Electricity Authority (CEA), Government of India /17/ is used. This was the latest version available at the time of GSC of the proposed project activity. The same has been duly verified and found to be acceptable.
	Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)	The project activity has chosen only grid power plants. The project verification team has reviewed the ER sheet/2/, the CEA published database/17/ and found the same to be acceptable.
	Step 3: Select a method to determine the operating margin (OM) (**($EF_{grid,OMSimple,y}$)**	With reference to the options provided for the determination of OM under §38 of the Tool, the project activity has selected Simple OM emission factor calculation. The same is found acceptable as the options of Simple adjusted OM and Dispatch data analysis OM could not be utilized due to lack of availability of data. The aforementioned fact is also considered by the Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian Power Sector version 17.0, October 2021 /17/. Furthermore, the Average OM method also cannot be applied as low cost/must run resources (LCMR) constitute less than 50% of total grid generation for recent 5year data (2016-2017 to 2020-2021). The same has been verified against the CEA Baseline database /17/.

		Therefore, as the LCMR share for the recent 5 years is less than 50%, simple OM can be used. The same is found to be in compliance with the applied tool and found to be acceptable. The parameter "Simple OM emission factor", is fixed ex-ante.
	Step 4: Calculate the operating margin emission factor according to the selected method	The Simple OM emission factor is calculated as a weighted average generation for the 3 years i.e. 2018-2019, 2019-2020, and 2020-2021. The values have been verified against the database used i.e. Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian Power Sector version 17.0, October 2021 /17/ and found to be accurate. The same is found to be in compliance with §42(a) of the applied tool and found to be acceptable.
	Step 5: Calculate the build margin (BM) emission factor **($EF_{grid,BM,y}$)**	The Build Margin emission factor is calculated based on the recent information available i.e. value for the year 2020-2021. The value has been verified against the database used i.e. Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian Power Sector version 17.0, October 2021 /17/ and found to be accurate. The same is found to be in compliance with §72(a) of the applied tool and found to be acceptable.
	Step 6: Calculate the combined margin (CM) emission factor	The combined margin emission factor is calculated by the Weighted average CM method and is based on the formula provided in §85 of the applied tool. The tool allows the usage of the default weights i.e. W_{OM} =0.50 and W_{BM} = 0.50. The verification team has reviewed the calculation in the PSF/1/ as well as the ER calculation sheet/2/ and found the same to be transparent and accurate. The result of the emission factor calculation is therefore found to be acceptable.

The combined margin emission factor ($EF_{grid,CM,y}$) calculated on the basis of Tool 07 is 0.9088 tCO_2e/MWh. This complies with the requirement stated in paragraph 9 of GCC Clarification no. 3 (version 1.0) /B01-8/, which states that *"if the project owner applies options 8(c) to 8(e) above, the latest available emission factor shall not be older than 3 years, at the time of submission of the project documentation for starting Global Stakeholder Consultation (GSC)".*

Therefore, the baseline emission value per year is derived as 19,302 tCO_2e using the aforementioned formulae and figures and is found to be acceptable.

Project emissions:

According to §26 of the applied methodology /B02/, for most renewable energy power generation project activities, $PE_y = 0$.
During the on-site visit /28/, the project verifier had observed DG sets on site. Therefore, according to paragraph 40 of AMS-I.D., CO_2 emissions from on-site consumption of fossil fuels due to the project activity shall be calculated using the latest version of the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion".
CO_2 emissions from fossil fuel combustion in process j are calculated based on the quantity of fuels combusted and the CO_2 emission coefficient of those fuels, as follows:
Where:

$$PE_{FC,j,y} = \sum_j FC_{PJ,j,y} * COEF_{i,y}$$

$PE_{FC,j,y}$ = Are the CO_2 emissions from fossil fuel combustion in process j during the year y (tCO_2/yr)

$FC_{PJ,j,y}$ = Is the quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)

$COEF_{i,y}$ = Is the CO_2 emission coefficient of fuel type i in year y (tCO_2/mass or volume unit)

i = Are the fuel types combusted in process j during the year y

The actual diesel consumption will be monitored and will be accounted for during emission reduction verification stages.

Project emissions from water reservoirs are not applicable as the project activity is a run-of-river hydro power plant.

Therefore, PEy is considered to be 0 for estimation of emission reductions at project verification stage and is deemed acceptable to the verification team.

Leakage Emissions

As per §42 of the applied methodology /B02/ no leakage emissions are estimated for the project activity.

	The same is in accordance with the applied methodology /B02/ as well as project design and hence is found to be acceptable. Emission reductions In accordance with §43 of the applied methodology, emission reductions are calculated as follows: $ERy = BEy – PEy – LEy$ Where: ERy = Emission reductions in year *y* (t CO_2) BEy = Baseline Emissions in year *y* (t CO_2) PEy = Project emissions in year *y* (t CO_2) LEy = Leakage emissions in year *y* (t CO_2) Therefore, the annual emission reduction value is derived as 19,302 tCO_2e using the aforementioned formulae and figures and is found to be acceptable. CCIPL verification team confirms that the baseline methodology and the applicable tool(s) have been applied correctly to calculate emission factor, project emissions, baseline emissions, leakage and emission reductions. Furthermore, all the data used in the PSF /1/ as well as the ER calculation sheet /2/ is quoted correctly including their source. The verification team therefore concludes that all the values used in the PSF are reasonable and the calculations are complete and accurate without any omissions. The same is found to be acceptable.

D.3.7 Monitoring plan

Means of Project Verification	DR, I
Findings	CL 03, CL 04 and CL 05 were raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The monitoring plan described in the PSF is in compliance with the applied methodology AMS-I.D., version 18.0 /B02/. The monitoring plan is also found to be in compliance with the requirements of GCC Environment and Social-Safeguards Standard version 3.0 /B01-4/ and Project Sustainability Standard version 3.0 /B01-5/. The CCIPL project verification team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that no deviations relevant to the project activity have been found. The procedures have been reviewed through document review and interviews with the respective monitoring personnel. The project verification team can hence confirm that the proposed monitoring plan is feasible within the project design. Therefore, the project owner is able to implement the monitoring plan and the achieve emission reductions that can be reported ex-post and verified. **Data and parameters fixed ex-ante:**

Ex-ante parameters provided under section B.6.2 of the PSF /1/ are found to be appropriate and in line with the applied methodology AMS-I.D. (version 18.0) /B02/. Ex-ante parameters of the project activity would be as follows:

Parameter	Verified Value	Assessment
Operating margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,OM,y}$**	0.9522 tCO_2 /MWh	The values are based on latest CO_2 Baseline Database for the Indian Power Sector User Guide, Version 17.0 /17/, October 2021 published by Central Electricity Authority (CEA), Government of India. For parameter **$EF_{grid,OM,y}$**, as per paragraph 42(a) of the "tool to calculate the emission factor for an electricity system" version 7.0, 3-year generation-weighted average, based on the most recent data available at the time of submission of the PSF has been used and found to be appropriate. For parameter **$EF_{grid,BM,y}$**, as per paragraph 72(a) of the "tool to calculate the emission factor for an electricity system" version 7.0, the most recent data available at the time of submission of the PSF has been used and found to be appropriate. The documentation source/17/ has been duly verified to confirm the values. Please also refer section D.3.6
Build margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,BM,y}$**	0.8653 tCO_2 /MWh	
Combined margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,CM,y}$**	0.9088 tCO_2 /MWh	In accordance with paragraph 85 of "Tool to calculate the emission factor for an electricity system" version 7.0, the parameter **$EF_{grid,CM,y}$** is calculated as the weighted average of the operating margin (0.50) & build margin (0.50) values, sourced from CO_2 Baseline

			Database for the Indian Power Sector User Guide, Version 17.0, October 2021/17/. The PSF/1/ as well as Emission Reduction calculation excel sheet/2/ have been duly verified to confirm the calculation. The derived value is found to be appropriate.

Data and parameters to be monitored ex-post:

Ex-post parameters mentioned under section B.7.1 of the PSF /1/ are found to be appropriate and in line with paragraph 65 the applied methodology AMS-I.D. (version 18.0) /B02/. The parameters that are to be monitored ex-post are:

Sr. No.	Parameter	Assessment
1.	**$EG_{PJ,y}$** Quantity of net electricity generation supplied by the project plant/unit to the grid in year y	The electricity generated by the project activity is supplied to the Indian grid. The amount of electricity exported by the project activity is continuously monitored by ABT energy meters (main meter and a check meter) of accuracy class 0.2s which are located at the plant site. The serial numbers mentioned in the PSF are in accordance with the onsite observation /28/. The energy meters installed are jointly inspected and sealed by the state utility and its representatives. The calibration of the meters has been carried out once in 6 months by the state electricity officials as per provision in the PPA /5/. The same has been confirmed during the onsite visit /28/ and by checking the calibration certificates /9/. The verification team also confirmed that the metering is performed as per the single line diagram /12/ checked during the onsite visit. The monitoring parameter is recorded on monthly basis. The meter readings are taken every month from the meter, in the presence of authorised official from state electricity board along with a representative of the project owner, gives the net value of electricity supplied by the project activity to the grid (Export to the grid – Import from the grid). The monthly value of metered energy is the basis for PO to raise monthly invoices to

			the consumers. Therefore, Net electricity supplied to the grid by the project activity will be cross checked with the daily obligation record (generation records) /11/, monthly invoices raised/13/, and JMR records /10/. It can therefore be concluded that the project owner has the ability to implement the monitoring plan mentioned in the PSF /1/. Furthermore, the data collected as part of monitoring will be archived electronically and be kept for at least 2 years after the end of the crediting period or till the last issuance of ACCs for the project activity whichever occurs later.
	2.	$FC_{i,j,y}$	The project activity has a DG set on-site. Therefore, the quantity of diesel will be monitored to compute project emissions from fossil fuel combustion. The parameter will be measured using dip scale and the diesel consumption can be crosschecked with purchase invoices for the same.
	3.	$NCV_{i,y}$	The value for the parameter is taken as 43.3 GJ/ton. Weighted average net calorific value of diesel is based on IPCC default values at the upper limit of the uncertainty at a 95% confidence interval as provided in Table 1.2 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories. Any future revision of the IPCC Guidelines will be taken into account.
	4.	$EF_{CO2,,y}$	The value for the parameter is taken as 0.0748 tCO_2/GJ. Weighted average CO_2 emission factor will be based on IPCC default values at the upper limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories. Any future revision of the IPCC Guidelines will be taken into account.
	5.	CO_2 Emission Reductions *(SDG 13)*	The project activity generates and supplies renewable hydro power based electricity to the grid, where it replaces fossil fuel source-based electricity. Emission reduction is calculated based on the net electricity generation from the project activity and grid emission factor. While the grid emission factor is fixed ex-ante, the net electricity generation is continuously monitored as stated above

			for the monitoring parameter $EG_{PJ,y}$ The calculation procedures for the reduction in CO_2 emissions are correctly defined in the PSF. The parameter is being monitored to assess to contribution SDG goal -13 Climate Change and also the positive environmental impact. Adequate details for monitoring/reporting/recording are defined in the PSF. The CO_2 emission reduction is validated from the ER calculation sheet /02/ and found appropriate.
	6.	Solid waste Pollution from E-wastes	The e-waste generated by the Project activity viz. Spares of SCADA system, inverters and other electrical and electronic parts involved in the project or post their useful life will be disposed as per prevailing laws and regulations of the host country i.e., E-Waste (Management) Rules, 2011 /B22/. Accordingly, the e-waste generated from the project activity will be collected by the SPCB authorized Solid E-Waste recyclers/ dismantlers/ Scrap dealers. The quantity of E-waste reused/recycled/refurbished/disposed of will be monitored per year by means of the records maintained on site. This was further confirmed by interviewing /28/ the monitoring personnel of the project activity during site visit. The monitoring practice followed is therefore found to be appropriate and is acceptable to the verification team.
	7.	Employment – Long Term *(SDG 9)*	This parameter is monitored yearly based on the number of jobs created by the project owner on a long-term basis. The project will at least provide employment to 5 persons yearly which can be verified using the site register / employment records maintained for project activity. PO has provided the Project Activity specific Employee Lists segregated into long term and short-term employments /33/. This was confirmed during interviews conducted on site /28/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.

	8.	Employment – Short Term	This parameter is monitored yearly based on the number of jobs created by the project owner on a short-term basis. The project will at least provide employment to 5 persons yearly which can be verified using the site register / employment records maintained for project activity. PO has provided the Project Activity specific Employee Lists segregated into long term and short-term employments /33/. This was confirmed during interviews conducted on site /28/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	9.	Skill Development Training (SDG 4)	The project owner will provide training for both existing employees and local youth and adults with relevant skills. The project will train at least 3 people throughout the crediting period which can be verified from the training attendance sheet. This was verified by means of training records for all the employees /20/ maintained for project activity. The PO also has a training calendar / schedule in place which is prepared at the beginning of every financial year /20/. This was confirmed during interviews conducted on site /28/ and the monitoring practices followed by the project owner is found to be appropriate in relation to the project activity and its acceptable to the verification team.
	10.	Incidents / Accidents (SDG 8)	The number of major incidents/accidents will be monitored yearly. The project owner conducts occupational safety trainings, display of safety posters at site and follows company EHS policy /24/ strictly. The monitored value can be confirmed from the EHS records maintained on site. This was confirmed during interviews conducted on site /28/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	11.	Efficiency of health services *(SDG 3)*	The project owner will create basic health services, set up health camps and

			distribute medicines and vaccines to local people. The records for the same will be kept by the project owner and will be monitored once in three years. The means of monitoring was confirmed during interviews conducted on site /28/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.

The verification team therefore confirms that the parameters to be monitored have been presented correctly according to methodological as well as Standard specific requirements /B01/ /B02/. This is in conformance with the requirements of GCC Verification Standard (version 3.1) /B01-2/.

D.4. Start date, crediting period and duration

Means of Project Verification	DR, I
Findings	No findings were raised pertaining to this section
Conclusion	The start date of the project activity is 12/12/2016, which marks the start of commercial operations of the project activity. The same has been duly verified against the commissioning reports /8/ and found to be acceptable by the verification team. Crediting period has been chosen as fixed 10 years from 03/07/2017 to 02/07/2027. The start date of the crediting period is stated as 03/07/2017, which is appropriate as per §40(b) of the Project Standard version 03.1 /B01-1/. Project owner has considered the expected lifetime of the project activity as 25 years. The same has been verified against the technical specification provided by the manufacturer /6/ and confirmed on the basis of sectoral expertise. The project verification team therefore concludes that the start date, crediting period type and duration are in conformance with the requirements of §38, §39 and §40 of GCC Project Standard, version 03.1 /B01-1/ and §13 of GCC Clarification No. 1, version 1.3 /B01-6/.

D.5. Environmental impacts

Means of Project Verification	DR, I
Findings	No findings pertaining to this section.
Conclusion	The project activity refers to the guidelines on Environmental Impact Assessment published by Ministry of Environment, Forests and Climate Change (MoEF & CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006 which was further amended on 14/07/2018 /B18/. The said guidelines categorise project activities that require Environmental Impact Assessment. Mini hydel power projects are not listed in any of the categories of the schedule and hence are exempted from conducting Environmental Impact Assessment as per host country legislation.

	Additionally, as per the Karnataka State Pollution control board regulations, the project activity has obtained clearance from KSPCB /36/. The verification team therefore concludes that as per host country legislation, environmental impacts due to mini hydel power plants are not considered significant and hence Environmental Impact Assessment is not mandated.

D.6. Local stakeholder consultation

Means of Project Verification	DR, I
Findings	CAR 09 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The local stakeholder consultation was conducted for the project activity on 08/02/2022 at the plant site. The verification team confirms that the local stakeholder consultation process was performed by the project owner before the submission of the project activity for global stakeholder consultation. Invitation notice was posted on 18/01/2022 to invite relevant local stakeholders /18/. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. The verification team confirms that the communication method used to invite the stakeholders is found to be appropriate. As detailed in the PSF /1/, the representative of GCC project owner explained technical aspects and GCC mechanism & its requirement of project to stakeholders, also explained about Social, Environmental benefits and UN sustainable development goal impacts of the project. Furthermore, the stakeholders were asked to answer a questionnaire to gauge their understanding of the project activity and address their concerns if any. The summary of comments presented in the PSF has been verified with the documentation of the stakeholder consultation /18/ as well as onsite interviews with various stakeholders /28/ and has been found to be complete and appropriate. No negative feedback was received. Therefore, the verification team concludes that the local stakeholder consultation process was adequately conducted by the project participant to receive unbiased comments from the all the relevant stakeholders. The verification team confirms that the local stakeholder consultation process performed for the project activity fulfils the GCC requirements and all the LSC documents /18/ are verified and found acceptable.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	DR, I
Findings	FAR 01 has been raised in this context. Please refer to Appendix 4 for further details.
Conclusion	As per the GCC Clarification No. 1 /B01-6/ the submission of Host Country Attestation on double counting is required by CORSIA labelled project after 31/12/2020. Therefore, for carbon credits issued during the period 03/07/2017 to 31/12/2020 the host country approval is not required. The verification team confirms that Host Country Attestation will be required and provided by the project owner during the first or subsequent verification when the issuance of carbon credit is considered beyond 31/12/2020.

D.8. Project Owner- Identification and communication

Means of Project Verification	DR, I
Findings	No findings were raised pertaining to this section
Conclusion	The legal owner of the project is Perla Hydro Power Private Limited and same has been duly verified against the Letter of Authorization signed by the project owner /25/. The project verification team has also verified the company registration documents /4/, commissioning certificate /8/ as well as the PPA/14/ to ascertain the legal ownership of the project activity and found the same to be acceptable. The entities involved have chosen Perla Hydro Power Private Limited and Greenko Energies Private Limited to act as the project owners for the project and same has been duly verified against the Letter of Authorization signed by all the legal owners and accepted by the designated project owner/25/. The information and contact details of the project owner have also been appropriately incorporated in Appendix 1 of the PSF. The verification team further confirms that the information of the project owner is provided as per the template and the information regarding the project owner stated in the PSF/1/ and authorization letter/25/ were found to be consistent and acceptable. The same is also in accordance with paragraph 18 of GCC Clarification No. 1 version 1.3 /B01-6/.

D.9. Global stakeholder consultation

Means of Project Verification	DR, I
Findings	No findings pertaining to this section
Conclusion	The PSF was published for global stakeholder consultation from 16/11/2022 till 30/11/2022 (https://www.globalcarboncouncil.com/global-stakeholders-consultation/). During the said period no Global stakeholders' comments were received. The verification team therefore concludes that the process for global stakeholder consultation was conducted in accordance with the requirements paragraphs 25 and 26 of the GCC Project Standard (version 3.1) /B01-1/. The PSF was made public for receiving stakeholder feedback and no comments were raised during the GSC process.

D.10. Environmental Safeguards (E+)

Means of Project Verification	DR, I
Findings	CL07 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The Project owner has chosen to apply for the Environmental No-net-harm Label (E+). The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF. No risks to the environment were identified due to the project implementation and operation. The following have been identified as positive impacts of the project activity: Environment – Air- CO_2 emissions: Use of hydel energy for electricity production Environment – Natural Resources – Replacing fossil fuels with renewable sources of energy. Furthermore, risks are identified regarding Solid Waste Pollution from E-waste

generation during operational life of the project activity and project owner has provided appropriate mitigation plan for the same in section B.7.2 of the PSF.

An appropriate monitoring plan has been put in place to monitor the parameters scored and risks identified due to implementation of the project activity. A detailed matrix, including project verification team assessment, has been included in appendix 5 of this report.

Impact of Project Activity on Environmental Safeguards	Assessment
CO_2 emissions (EA03)	In absence of the project activity, the electricity generated from the project activity would be generated in the Indian Grid by power plants that are predominantly fossil-fuel based, thereby leading to CO_2 emissions. The generated electricity by the project activity is based on the renewable energy source, which causes no CO_2 emissions. The project will thus have a positive impact by reducing measurable amount of CO_2 emissions. The project is expected to reduce CO_2 emission throughout the crediting period. As no negative environmental impacts are anticipated, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team. This amount of emission reduction will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
Solid waste Pollution from E-wastes (EL04)	The e-waste generated by the Project activity viz. Spares of SCADA system, inverters, and other electrical and electronic parts involved in the project or post their useful life will be disposed as per prevailing laws and regulations i.e., E-Waste (Management) Rules, 2011 /B22/. Monitoring plan is provided in section B.7.2 of the PSF to ensure the compliance with the regulations in place. The same will be monitored throughout the crediting period by the project owner by means of records of e-waste re-used/recycled/refurbished or disposal from the project activity. The same was confirmed during the onsite assessment /28/ and accepted by the verification team. The monitoring plan provided in section B.7.2 is appropriate and assessment of the same is provided section D.3.7 of the Project Verification Report.
Replacing fossil fuels with renewable sources of energy	In absence of the project activity, the equivalent amount of electricity would be generated from the operation of grid-connected power plants, which is GHG intensive. The project activity generates and supplies renewable hydro-

	(ENR07)	power based electricity to the grid, where it replaces fossil fuel source-based electricity, thus the project activity is unlikely to cause any harm and is assessed as harmless. As the project activity will have a positive impact by replacing fossil fuels with renewable sources of energy, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team. This amount of emission reduction will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	The verification team confirms that the project owner has conducted assessment and reporting of the potential aspects in the PSF /1/ which are identified for each project type as per appendix 1 of the GCC Project Environmental and Social Safeguards standard version 3.0/B01-4/ and is applicable to the Project activity and the monitoring procedure of each is given in section E.1, B.7.1, and B.7.2 of the PSF. Therefore, it can be concluded that the Project Activity is not likely to cause any harm to the environment and net score for the project comes out to be +3, hence, is eligible to achieve additional E+ certification. The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to environment.	

D.11. Social Safeguards (S+)

Means of Project Verification	DR, I
Findings	CL 07 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The Project owner has chosen to apply for the Social No-net-harm Label (S+). The assessment of the impact of the project activity on the social safeguards has been carried out in section E.2 of the PSF. No risks to society were identified due to the project implementation and operation. The following have been identified as positive impacts of the project activity: Social – Jobs – Long-term jobs (> 1 year) created/ lost. New short-term jobs (< 1 year) created/ lost Social – Health & Safety – Efficiency of Health services Social – Education - Specialized training / education to local personnel Furthermore, risks are identified regarding accidents/incidents during operational life of the project activity and project owner has provided appropriate mitigation plan for the same in section B.7.2 of the PSF.

Impact of Project Activity on Social Safeguards	**Assessment**
Long-term jobs (> 1 year) created/ lost	The project activity will lead to long term employment generation during the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is

	(SJ01)	discussed in section D.3.7 of this report. The aforementioned documents can be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The creation of permanent jobs are positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Short-term jobs (< 1 year) created/ lost (SJ02)	The project activity has led to short term employment generation during the construction and the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is discussed in section D.3.7 of this report. The aforementioned documents can be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The creation of temporary job are a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Specialized training / education to local personnel (SE01)	As per the PSF/1/ and interview with the project owner/28/, the project owner would impart training to the local youth periodically so as to increase the skill set of on operation and maintenance of project; occupational safety, first aid, accident reporting etc. The monitoring approach is discussed in section D.3.7 of this report. The same could be verified from the training records and interviews with the employees to confirm the same during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Reducing / increasing accidents/Incidents/fatality (SHS03)	As per the PSF /1/, records of major accidents/incidents in a year will be monitored through EHS records. The project owner shall provide the job-related Health and safety trainings to its employees at regular interval, and the number of accidents occurred can be verified at the time on emission reduction verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The

		monitoring approach is discussed in section D.3.7 of this report. The impact created by the project is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Efficiency of health services (SHS07)	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years. The same could be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	The verification team confirms that the project owner has conducted assessment and reporting of the potential aspects in the PSF /1/ which are identified for each project type as per appendix 1 of the GCC Project Environmental and Social Safeguards standard version 3.0/B01-4/ and is applicable to the Project activity and the monitoring procedure of each is given in section E.1, B.7.1, and B.7.2 of the PSF. Therefore, it can be concluded that the Project Activity is not likely to cause any harm to society and net score for the project comes out to be +5, hence, is eligible to achieve additional S+ certification. The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.	

D.12. Sustainable development Goals (SDG+)

Means of Project Verification	DR, I
Findings	CL 08 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The project Activity demonstrates that it contributes to achieving the United Nations Sustainable Development Goals (SDGs). Of the 17 defined Goals, the project activity has no adverse effect on any and is expected to contribute to 6 SDGs. Hence the Project owner has chosen to apply for the United Nations Sustainable Development Goals (SDG+ label). The detailed assessment of the impact of the project activity on each of the targeted SDG's has been carried out in section F of the PSF by the project owner and Annexure 7 of this report. The 6 SDGs targeted for the SDG+ Label are: Goal 3: Ensure healthy lives and promote well-being for all at all ages Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 13: Take urgent action to combat climate change and its impacts.

UN-level SDGs	Assessment
Goal 3. Ensure healthy lives and promote well-being for all at all ages SDG Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and //vaccines for all Indicator 3.8.1: Coverage of essential health services	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years and should be verified during ER verification stage. PO has provided a declaration /34/ which states that some activities performed to achieve SDG 3 targets are beyond CSR, which is deemed acceptable to the project verification team. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all SDG Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship Indicator 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	The project owner will conduct training on relevant technologies to empower local stakeholders with digital literacy. Records of trainings and workshops conducted should be verified during the ER Verification stage along with the number of people trained yearly. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	The project activity is a hydro power project with an installed capacity of 10 MW and it generates electricity of 21,240 MWh per year. The start date of the project activity is 12/12/2016 and it continues to provide clean energy, thereby increasing the renewable energy share in the total

	SDG target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix Indicator 7.2.1: Renewable energy share in the total final energy consumption	final energy consumption thereby complying with the SDG target 7.2. The same was duly verified by the verification team from commissioning reports/8/ and electricity generation records /11/. The generated power is continuously monitored by the energy meters installed at the substation and details of the same are included in the PSF/1/ and found to be acceptable.	
	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all SDG Target 8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment. Indictor 8.8.1: Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status	PO will ensure to protect labour rights by implementing strict EHS policy and through safety trainings, and display of safety posters/guidelines at project sites. The number of major accidents/incidents will be monitored through EHS records which should be verified during ER Verification stage. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	
	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation SDG target 9.2: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries Indicator: 9.2.2: Manufacturing employment as a	The project will provide employment opportunities to at least 10 eligible candidates for operations of the renewable energy related project activity. This can be verified from the employment records maintained on site. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	

	proportion of total employment	
	Goal 13. Take urgent action to combat climate change and its impacts SDG target 13.2: Integrate climate change measures into national policies, strategies and planning. Indicator 13.2.2: Total greenhouse gas emissions per year.	The project is estimated to achieve GHG emission reduction of 19,302 tCO_2e/year, thereby meeting the SDG target 13.2. The generated power is continuously monitored by the energy meters installed at the substation and details of the same are included in the PSF/1/ and found to be acceptable.
	The verification team confirms that the SDGs chosen by the project owner are in compliance with the paragraph 19, 20 and 21 GCC Project sustainability standard version 3.0/B01-5/ and is applicable to the Project activity and the monitoring procedure of each SDG is given in section F and B.7.1 of the PSF. It can therefore be concluded that the Project Activity is likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional Diamond SDG+ certifications with 6 targeted SDGs.	

D.13. Authorization on Double Counting from Host Country (for CORSIA)

Means of Project Verification	DR, I
Findings	FAR 01 has been raised. Please refer to Appendix 4 for further details.
Conclusion	A declaration under section A.5 of the PSF has been included for use of the approved carbon credits (ACCs) for the entire crediting period from 03/07/2017 to 02/07/2027 to offset GHG emissions. Furthermore, the project owner has clarified the intention for use of carbon credits for CORSIA. The project owner declared that no host country attestation is required for the pilot phase of 2021-23 (accepting credits issued for monitoring periods between 2016 and 2020), which is appropriate and acceptable according to paragraph 16 of the Standard on Avoidance of Double Counting, version 1.0 /B01-7/. Assessment with regards to confirmation on the project activity not being registered under any other GHG reduction certification mechanism, thereby avoiding double counting is provided under section D.2 of this report. The host country attestation is yet to be obtained for authorization on double counting. The verification team confirms that Host Country Attestation will be required and provided by the project owner during the first verification or subsequent verification when the issuance of carbon credit is considered beyond 31/12/2020.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	DR, I
Findings	FAR 01 has been raised. Please refer to Appendix 4 for further details.
Conclusion	The project activity meets the CORSIA Eligibility criteria as the crediting period is after 01/01/2016 and the project is applying for registration under GCC, which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes.

	Furthermore, the Project Activity does not cause any net harm to the environment and/or society and therefore achieves Environmental No-net-harm Label (E+) as well as Social No-net-harm Label (S+) in accordance with the Environmental and Social Safeguards Standard, version 3.0. The project activity also contributes towards achieving United Nations Sustainability Development Goals (SDGs) by achieving 6 SDGs as per Project Sustainability Standard, version 3.0 to achieve SDG+ Label. The verification team therefore concludes that "The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v 1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project". As per Clarification No.1 version 1.3 /B01-6/, for carbon credits generated during 01/01/2016 to 31/12/2020, Host Country Attestation is not required for CORSIA labelled credits. For carbon credits generated since 01/01/2021, HCA will be submitted by PO prior to submission of requesting issuance for emission reductions to the GCC Program. Therefore, a FAR has been raised in this respect.

Section E. Internal quality control

The Verification report has undergone a technical review and quality review before being submitted to the project owner. A technical reviewer is qualified in accordance with CCIPL's qualification scheme for GCC verification performed the technical review.

Section F. Project Verification opinion

The GCC Project Verifier, Carbon Check (India) Private Ltd, verifies and certifies that the GCC Project Activity "10 MW Shanmukha Subramanya mini Hydel scheme in Karnataka, India":

(a) has correctly described the Project Activity in the Project Submission Form (version 1.2, dated 13/11/2023) including the applicability of the CDM methodology, AMS-I.D., version 18.0 and meets the methodology applicability conditions, is additional and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reduction estimates correctly and conservatively;

(b) is likely to generate GHG emission reductions amounting to the estimated 193,018 tCO_2e (for the fixed 10 years crediting period), as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules and therefore requests the GCC Program to register the Project Activity;

(c) is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, version 3.0 and therefore requests the GCC Program to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net harm Label (S+); and

(d) is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs),

comply with the Project Sustainability Standard, version 3.0 and contribute to achieving a total of 6 SDGs, which is likely to achieve the Diamond SDG certification label (SDG+).

(e) complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v 1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project.

The Verification report describes a total of 18 findings, which include:

- 01 Forward Action Request (FAR);
- 08 Clarification Requests (CLs);
- 09 Corrective Action Requests (CARs)

All findings are resolved by the project owner (except the FAR which needs to be resolved during emission reduction verification).

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
BM	Build Margin
CAR	Corrective Action Required
CER	Certified Emission Reduction credits
CERC	Central Electricity Regulatory Commission
CDM	Clean Development Mechanism
CL	Clarification Request
CM	Combined Margin
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
DNA	Designated National Authority
DPR	Detailed Project Report
DR	Document Review
E^+	Environmental No net harm Label
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GORD	Gulf Organization for Research and Development
GSC	Global Stakeholder Consultation
I	Interview
IEX	Indian Energy Exchange
IRR	Internal Return Rate
ISO	International Organization for Standardization
Kw	Kilo Watt
KWh	Kilo Watt hour
LSC	Local Stakeholder Consultation
MNRE	Ministry of New & Renewable Energy, Government of India.
MW	Mega Watt
MWh	Mega Watt hour
OM	Operating Margin
PO	Project Owner
PPA	Power Purchase Agreement
PLF	Plant load factor
PS	Project Standard
PSF	Project Submission Form
PVR	Project Verification Report
S+	Social No- net harm Label
SD	Sustainable Development
SDG+	United Nation Sustainable Development Goal Label
SERC	State Electricity Regulatory Commission
tCO_2e	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VB	Verification Body
VS	Verification Standard
w.r.t	With respect to

Appendix 2. Competence of team members and technical reviewers

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sanjay Agarwalla

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☐ CCB Expert
☒ Financial Expert	☒ Local Expert for India and Bangladesh		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☒ TA 2.1	☒ TA 3.1	☒ TA 4.1
☐ TA 4. n	☒ TA 5.1	☒ TA 5.2	☒ TA 7.1	☐ TA 8.1
☒ TA 9.1	☒ TA 9.2	☒ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date
1st January 2023

Expiry Date
31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Manas Halder

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☐ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	☐ CCB Expert
☐ Financial Expert	☒ Local Expert for India and Bangladesh		

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Kiran Nayak

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☐ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	☐ CCB Expert
☐ Financial Expert	☒ Local Expert for India		

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☐ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. S. Ranganathan

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☐ CCB Expert
☒ Financial Expert	☒ Local Expert for India		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☒ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	PO	a) PSF for GSC	version 1.0, dated, 11/10/2022	PO
		b) Intermediate PSF	version 1.1, dated, 21/09/2023	
		c) Final PSF	version 1.2, dated, 13/11/2023	
/2/	PO	a. Emission reduction calculation spread sheet including grid emission factor calculation corresponding to /1-a/	*Perla_CER_ Calculations* version 1.0, dated, 11/10/2022	PO
		b. Emission reduction calculation spread sheet including grid emission factor calculation corresponding to /1-c/	*Perla_CER_ Calculations* version 1.1, dated, 21/09/2023	
/3/	PO	a. IRR spread sheet corresponding to /1-a/	version 1.0, dated, 11/10/2022	PO
		b. IRR spread sheet corresponding to /1-c/	version 1.1, dated, 21/09/2023	
		IRR sheet with actual values used for analysis	version 1.1, dated, 21/09/2023	
/4/	Ministry of Corporate Affairs	Proof of legal ownership (Company Master data) viz: Perla Hydro Power Private Limited – Registration number - 050152 Sourced from: Home (mca.gov.in)	Date of Incorporation : 17/06/2009	PO
/5/	Perla Hydro Power Private Limited	Energy Purchase Agreement between Perla Hydro Power Private Limited and Eshwarr Steeltech Private Limited, Bhadravathi (MESCOM Jurisdiction) – Purchase of 1.80 million units per annum	Dated 09/06/2018	PO
		Energy Purchase Agreement between Perla Hydro Power Private Limited and Malnad Alloys & Castings Private Limited, Bhadravathi (MESCOM Jurisdiction) – Purchase of 3.5 million units per annum	Dated 09/06/2018	
		Energy Purchase Agreement between Perla Hydro Power Private Limited and Vijay Technocrats Private Limited, Bhadravathi (MESCOM Jurisdiction) – Purchase of 2.40 million units per annum	Dated 09/06/2018	
		Energy Purchase Agreement between Perla Hydro Power Private Limited and NaetekFerrocastings Private Limited, Shimoga	Dated 24/05/2017	

		(MESCOM Jurisdiction) – Purchase of 2.5 million units per annum		
		Energy Purchase Agreement between Perla Hydro Power Private Limited and Lamina Foundaries Limited – Purchase of 9.4 million units per annum	Dated 31/05/2017	
		Energy Purchase Agreement between Perla Hydro Power Private Limited and Prragathi Steel Castings Private Limited – Purchase of 3.5 million units per annum	Dated 17/08/2017	
		Energy Purchase Agreement between Perla Hydro Power Private Limited and Shanthala Spherocast Private Limited – Purchase of 6.8 million units per annum	Dated 27/07/0217	
/6/	PO	Evidence for the project location including photographs, nameplates of the installed units, and technical specifications of key project equipment installed at site	-	PO
/7/	Design Group Project Consultants Pvt. Ltd.	Detailed Project Report (DPR)	Dated April 2005	PO
/8/	Karnataka Power Transmission Corporation Limited	Commissioning certificates	Dated 12/12/2016 (1 unit x 5 MW) Dated 07/07/2017 (1 unit x 5 MW)	PO
/9/	Mangalore electricity supply company limited	Calibration Certificates: S.No – 16196549 S.No. – 16196568	Dated 24/07/2023 Valid till 23/07/2023	PO
/10/	Karnataka Power Transmission Corporation Limited	JMR Records	From start of operations 2016 - 2023	PO
/11/	Perla Hydro Power Private Limited	Monthly Generation and auxiliary consumption records for the project activity	From start of operations	PO
/12/	PO	Single line diagram for the project activity, from electricity generation to the electricity feed point at grid interconnection	-	PO
/13/	Perla Hydro Power Private Limited	Sample Electricity Invoices	Dated 03/01/2022 04/07/2022 12/07/2022	PO
/14/	Kumar & Giri Chartered Accountants Ramana Reddy	Independent Auditor's reports with respect to balance sheet as ont 31/03/2017, 31/03/2018, 31/03/2019, 31/03/2020, 31/03/2021, 31/03/2022, 31/03/2023	Dated 11/08/2017 26/07/2018 29/08/2019 24/08/2020	PO

	& Associates		02/09/2021 02/09/2022	
/15/	Government of Karnataka	Evidence for investment decision date: Government order for the implementation of the project activity	Dated 21/05/2013	PO
/16/	PO	Sample solid waste records and waste oil sale forms	FY 2021-2022	PO
/17/	CEA	India's National Electricity Network Emission Factor (Grid EF calculations) - Central Electricity Authority (CEA) database https://cea.nic.in/cdm-co2-baseline-database/?lang=en	Version 17, October 2021	PO
/18/	Perla Hydro Power Private Limited	All evidence related to Local Stakeholders Consultation process: Invitation notice dated 18/01/2022 Photos Attendance sheet dated 08/02/2022 Minutes of meeting	LSC Dated 08/02/2022	PO
/19/	Perla Hydro Power Private Limited	ODA Declaration	-	PO
/20/	Perla Hydro Power Private Limited	Sample Training Records for work at height, operation and maintenance of Gantry crane, types of cable and conductors, and turbine oil pumping	Dated 13/10/2022 04/11/2022 11/01/2023 22/01/2023	PO
/21/	Perla Hydro Power Private Limited	Sample Accident and Incident Records	April 2021 – March 2022	PO
/22/	Greenko	Greenko Corporate Social Responsibility Policy	Dated 18/01/2022	PO
/23/	Greenko	Greenko Sustainability Policy	Dated 19/04/2022	PO
/24/	Greenko	Greenko Integrated Management System (GIMS) Policy	Dated 03/03/2020	
/25/	Perla Hydro Power Private Limited	Letter of Authorization issued by Perla Hydro Power Private Limited to authorize Perla Hydro Power Private Limited and Greenko Energies Private Limited as the Project Owners.	Dated 03/10/2023	PO
/26/	PO	Sample welfare records	FY 2016 – 2023	PO
/27/	PO	Sample employee health coverage records	FY 2016 - 2023	PO
/28/	CCIPL	Audit notes and photographs	Dated 06/02/2023	CCIPL
/29/	SAI CHAITHANYA & CO CHARTERED ACCOUNTANTS	CA Certificate for M/s. Perla Hydro Power Private Limited to certify project cost as on 31/03/2021	Dated 05/03/2022	PO
/30/	Reserve Bank of India	Results of the Survey of Professional Forecasters on Macroeconomic Indicators – 23rd Round (Q4:2012-13)	Dated 02/05/2013	Others

		https://rbi.org.in/Scripts/PublicationsView.aspx?id=14971		
/31/	UNFCCC	Project 2112: 24 MW Perla Mini Hydel Project, Karnataka, India (https://cdm.unfccc.int/Projects/DB/DNV-CUK1218551904.34/view) Project 2736: 24 MW Shamburi Mini Hydel Project, Karnataka, India (https://cdm.unfccc.int/Projects/DB/DNV-CUK1246872134.97/view)	Registered on 12/05/2009 16/11/2009	PO
/32/	Press Information Bureau Government of India Ministry of Environment, Forest and Climate Change.	Re-Categorisation of Industries a landmark decision, new category of white industries will not require environmental clearance	Dated 05/03/2016	PO
/33/	PO	- Long term and short term employment records - Sample Attendance sheets and employee details	From start of operations	PO
/34/	Perla Hydro Power Private Limited	Declaration for SDG 3 activities performed beyond CSR	Dated 13/10/2023	PO
/35/	Karnataka State Pollution Control Board	Notification on Modified list of Re-categorization of industry/organization/activity as per the directions of CPCB and addition of new sectors	Dated 14/07/2016	PO
/36/		Consent for Establishment and clearance from Water and Air Pollution Control point of view for setting up of a mini hydel power plant across mudi mogeru of capacity 10MW in the name and style of M/s Perla Hydro Power Pvt. Ltd at Sy No. 149, 150, 151 & 152, Shanmukhasubrahmanya MHS, Near Perla Shamburi Village, Bantwal Taluk, D.K District	Dated 09/01/2014	PO
/B01/	GCC	1. GCC Project Standard, version 3.1 2. GCC Verification Standard, version 3.1 3. GCC Program Manual, version 3.1 4. Environment-and-Social-Safeguards-Standard, version 3.0 5. Project-Sustainability-Standard, version 3.0 6. GCC Clarification No. 1, version 1.3 7. GCC Standard on Avoidance of Double Counting, version 1.0 8. GCC Clarification No. 3, version 1.0 9. GCC Program Processes, version 4.0	-	Others
/B02/	UNFCCC	AMS-I.D.: Grid connected renewable electricity	version 18.0	Others
/B03/	GCC	PSF template	-	Others
/B04/	UNFCCC	Tool 01: Tool for demonstration and assessment of additionality	Version 7.0.0	Others

/B05/	UNFCCC	Tool 07: Tool to calculate the emission factor for an electricity system	Version 7.0	Others
/B06/	CENTRAL ELECTRICITY REGULATORY COMMISSION	CERC Tariff Order 2013: Determination of generic levellised generation tariff for the FY2013-14 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012. https://cercind.gov.in/2013/orders/SO243.pdf	Dated 28/02/2013	Others
/B07/	UNFCCC	Tool 27: Investment analysis	Version 11.0	Others
/B08/	CDM	https://cdm.unfccc.int/Projects/proj search.html	-	Others
/B09/	VERRA	https://registry.verra.org/app/search/VCS/All%20Projects	-	Others
/B10/	Gold Standard	GSF Registry (goldstandard.org)	-	Others
/B11/	Indian REC Standard	Renewable Energy Certificate Registry https://www.recregistryindia.nic.in/index.php/publics/registered_regens	-	Others
/B12/	I.REC Standard	International REC Standard (I-REC) https://www.irecstandard.org/regist ries/	-	Others
/B13/	Govt. of India	Electricity Act 2003, dated 26/05/2003	-	Others
/B14/	Govt. of India	National Electricity Policy 2005, dated 12/02/2005		
/B15/	Govt. of India	Integrated Energy Policy, 2006	-	Others
/B16/	Govt. of India	National Action Plan on Climate Change (NAPCC), 2008	-	Others
/B17/	Govt. of India	Renewable Energy Certificates (RECs), 2011	-	Others
/B18/	Ministry of Environment, Forest and Climate Change Govt. of India	Environmental Impact Assessment notification 1_SO1533E_14092006.pdf (environmentclearance.nic.in) Environmental Impact Assessment Notification Amendment	Dated 14/09/2006 Dated 14/07/2018	Others
/B19/	Govt. of India	Companies Act 2013	-	Others
/B20/	CCIPL	Contract signed between Perla Hydro Power Private Limited and Carbon Check India Private Limited	Dated 21/06/2022	CCIPL
/B21/	Govt. of India	THE FINANCE ACT	For FY 2013-2014	Others
/B22/	Central Pollution Control Board (CPCB)	E-Waste (Management) Rules, 2011	Dated May 2011	Others

Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this project verification

CL ID	01	**Section no.**	-	**Date:** 17/02/2023
Description of CL				
PO is requested to provide the following supporting documents: 1. Proof of Legal Ownership 2. Power Purchase Agreement 3. Commissioning Certificate 4. Technical specification document of installed Turbines, Generators etc. 5. Joint Meter Reading Records (since the commissioning of project till date) 6. Relevant extracts of Internal Audit Report 7. Sample Invoices raised for FY 2021-2022 8. Generation Records (since the commissioning of project till date) 9. On site electricity consumption records 10. Evidence for Investment decision date 11. Detailed Project Report 12. O&M Agreement 13. Common Practice Analysis data 14. Contracts with PCB certified vendors and sample records of end of life waste, solid waste generation and disposal and 15. Details of workers employed / contracts signed for long term during construction and operational stages 16. Details of workers employed / contracts signed for short term during construction and operational stages 17. Health coverage records 18. Community and rural welfare contribution records 19. Relevant extracts of HR policy/ EHS policy/ CSR policy 20. Accident / Incident Records 21. Sample Training records 22. Acknowledgement from PCB for White Category Industry 23. Approval from Karnataka State Pollution Control Board 24. No ODA Undertaking/ declaration from the project owner 25. Local Stakeholder Meeting Photographs, Attendance sheet and Minutes of Meeting. 26. Declaration of intended use of Approved Carbon Credits (ACCs) 27. *Since is project activity is operational since 2016, Sample Records, covering the period from Start date to till date, for parameters mentioned under E+/S+/SGD+ to be provided.				
Project Owner's response				**Date:** 11/10/2023
13. The project falls under small scale category under AMS 1 D methodology, Common Practice Analysis is not applicable. All the documents mentioned above are sent through mail, except for point no: 12, as it is not applicable. For point 5: sample JMR documents attached, Recorded JMR values from COD to Jan-2023 is attached. For point 26: Already mentioned in sec A5 of PSF. All the documents mentioned above are sent through mail,				
Documentation provided by Project Owner				
The above documents are sent through mail				
Project verifier assessment				**Date:** 08/11/2023

The justification provided by the PO and the provided supporting documents are acceptable to the assessment team and hence, this CL is closed.

Table 2.

CL ID	02	**Section no.**	D.3.6	**Date:** 17/02/2023
Description of CL				
Section B.6.3. of the PSF refers to project emissions from diesel consumption on site. However, PO has not considered the same as project activity emission referring to it as a "Minor source of emission" in section B.3 of the PSF. PO is required to justify the same.				
Project Owner's response				**Date:** 11/10/2023
PO has considered the project emissions from diesel consumption as project activity emission in section B.3 of the PSF				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
In accordance with paragraph 40 of AMS I.D. version 18.0, PO has considered project emissions from fossil fuel combustion on-site which is deemed acceptable to the assessment team. Therefore, this CL is closed.				

Table 3.

CL ID	03	**Section no.**	D.3.6, D.3.7	**Date:** 17/02/2023
Description of CL				
In section B.6.1 of the PSF: i. As per the applied methodology paragraph 42(a), Simple OM emission factor is to be calculated ex-ante using "a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation". However, the data used for the same in the PSF pertains to the years 2015-16, 2016-17 and 2017-18 which is not in accordance with the applied methodology. ii. Similarly, the data used in the PSF for Build Margin(BM) emission factor pertains to 2017-18. However, as per the applied methodology paragraph 72, BM is to be calculated ex-ante using "most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation". Hence, the same is not in accordance with the applied methodology.				
Project Owner's response				**Date:** 11/10/2023
I. As per the applied methodology paragraph 42(a), Simple OM emission factor is calculated ex-ante using "a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation" for which Version 17.0 of CEA data is considered and changed accordingly. II. Similarly, the data used for Build Margin (BM) emission factor pertains to the latest data i.e., 2020-21. Thus BM is calculated ex-ante using "most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation". Hence, the same is made in accordance with the applied methodology.				
Documentation provided by Project Owner				
Revised ER sheet *Revised PSF*				
Project verifier assessment				**Date:** 08/11/2023
Section B.6.1 of the revised PSF now include the most recent available data for the determination of Simple OM emission factor and Build Margin (BM) emission factor. The same is based on "CO_2 Emission Database" Version 17.0, published by CEA. The data used has been found to be appropriate by the verification team and hence CL 03 is closed.				

Table 4.

CL ID	04	**Section no.**	D.3.7	**Date:** 17/02/2023
Description of CL				

In Section B.7.1 of the PSF: i. For the parameter $EG_{PJ,Y}$, / $EG_{PJ,facility,y}$ as the project activity is already operational, please provide the specific energy meter type installed, their accuracy, serial numbers, calibration status etc. Furthermore, while section B.6.3 mentions import of electricity during calculation of Net Generation, the monitoring plan does not cover the same in section B.7.1. PO to justify the same. ii. For the parameters $FCi,,y$, NCVi,y and EFCO2,i,y, PO to be project activity specific.
Project Owner's response **Date:** 11/10/2023
i. For the parameter EGPJ,Y, as the project activity is already operational, the specific energy meter type installed, their accuracy, serial numbers, calibration status etc. import of electricity during calculation of Net Generation is mentioned in B.71 ii. parameters FCi,j,y, NCVi,y and EFCO2,i,y, are corrected according to project activity specific.
Documentation provided by Project Owner
Revised PSF
Project verifier assessment **Date:** 08/11/2023
i. PO has revised section B.7.1 of the PSF to include details on the specific energy meter type installed, their accuracy, serial numbers, and calibration status along with procedure on calculation of net generation. This is deemed acceptable to the assessment team and therefore, this finding is closed. ii. PO has revised section B.7.1 of the PSF to provide project activity specific details on the parameters $FC_{i,j,y}$, $NCV_{i,y}$ and $EF_{CO2,i,y}$. Therefore, this finding is closed.

Table 5.

CL ID	05	**Section no.**	D.3.7	**Date:** 17/02/2023
Description of CL				
In section B.7.1 of the PSF, parameters to be monitored for E+/S+ and SDGs: i. The parameters, monitored with reference to scoring in Section E and F, are required to be specific and clear on the frequency of monitoring, the legal requirements in place, QA/QC in line with the PSF completing guidelines. ii. For the parameter "Solid Waste" please correlate with the information provided in section E.1 and be more specific to the project activity as the same is operational since 2016. Monitoring needs to be specific to each type of solid waste category generated. iii. Though the parameter "Community and rural welfare (indigenous people and communities) etc." is scored in section E.2, the same does not find a mention under section B.7.1 Section B.7.2 In Section E.1 some of the parameters which are scored if not managed properly can create harmful impact on environment and hence risk mitigation plan needs to be defined for those for e.g. solid waste from hazardous waste.				
Project Owner's response				**Date:** 11/10/2023

In section B.7.1 of the PSF, parameters to be monitored for E+/S+ and SDGs: i. The parameters, monitored with reference to scoring in Section E and F, are made specific and clear on the frequency of monitoring, the legal requirements in place, QA/QC as per the PSF completing guidelines. ii. The PO has already indicated in the PSF in section E.1 that the monitoring is specific to solid waste quantity per year iii. The parameter "Community and rural welfare (indigenous people and communities) etc." is not scored any more. In Section E.1 some of the parameters which are scored if not managed properly can create harmful impact on environment and hence risk mitigation plan is defined for those in section B.7.2
Documentation provided by Project Owner
Project verifier assessment **Date:** 08/11/2023
The revisions made in section B.7.1 and B.7.2 of the PSF, by the PO are deemed acceptable to the assessment team and therefore, this CL is closed.

Table 6.

CL ID	06	**Section no.**	D.3.5	**Date:** 17/02/2023
Description of CL				
With respect to investment analysis, the following findings are raised: i. PO needs to confirm (with credible evidence) on the compliance of paragraph 10 of CDM Tool 27, version 11 which states "*Input values used in all investment analysis shall be valid and applicable at the time of the investment decision taken by the project participant*." ii. In accordance with paragraph 34 of the PSF completion guidelines, PO needs to specify the project milestones including the investment decision date under step 2 of investment analysis, in section B.5 of the PSF, and further needs to check and confirm that the listed input values have been consistently applied in all calculations. iii. Under Sensitivity analysis, the breaching values for each of the factors need to be mentioned along with justification as to why is it not possible. Furthermore, As the project is already generating, the sensitivity analysis to be based on actual values.				
Project Owner's response				**Date:** 11/10/2023

i. PO confirms that the project activity complies with paragraph 10 of CDM tool 27, version 11 and all the input values used in the investment analysis are valid and applicable at the time of taking investment decision by the project participant.
ii. The following milestones are considered for determining the investment decision date under step-2 of investment analysis in section B.5 of the PSF and listed input values have been consistently applied in all calculations.

Government order for implementation of the project	21/05/2013
COD – unit 1 (5MW)	12/12/2016
NFPL-PPA	24-05-2017
Pragati PPA	24-05-2017
COD – unit 2 (5MW)	03/07/2017
Shanthala PPA	27-07-2017
EPA-Esswar	09-06-2018
EPA-Malnad	09-06-2018
EPA-Vijay	09-06-2018

iii. Under Sensitivity analysis, the breaching values for each of the factors is mentioned along with justification as to why is it not possible.

Documentation provided by Project Owner

Revised PSF & IRR sheet

Project verifier assessment **Date:** 08/11/2023

i. PO has revised the PSF to indicate the basis of investment decision date i.e., 21/05/2013. The input parameters considered for investment analysis are taken from DPR which was available at the time of investment decision. This is deemed acceptable to the assessment team and therefore, this finding is closed.
ii. PO has revised section B.5 of the PSF to specify the project milestones including the investment decision date which is deemed acceptable to the project verification team. Therefore, this finding is closed.
iii. PO updated the PSF to show the breaching values for every factor, along with a rationale for why it isn't feasible and a comparison with the actual values. This is deemed acceptable to the assessment team and therefore, this finding is closed.

Table 7.

CL ID	07	**Section no.**	D.10, D.11	**Date:** 17/02/2023
Description of CL				

In section E: Environmental and Social Safeguards of the PSF:

i. Please complete the table uniformly with appropriate use of “Not Applicable”, “No Action Required” etc. and accordingly fix appropriate KPI for each of the identified harmless and harmful Environmental and Social Safeguards along with proper reference for relevant applicable legislation.
ii. Monitoring approach and parameter as well as the basis of the conclusion ‘as to why the parameter will be scored’ to be elaborated upon using specific targets and performance indicators such as targeted CO_2 emission reductions, minimum number of people targeted for imparting training etc. The chosen parameters should be quantified for the baseline scenario and the project scenario.
iii. With reference to solid waste from Plastic, Hazardous waste, E-waste, End of Life Products as the project activity is operational since 2016, please be very specific as to what is being classified here and accordingly frame the detailed monitoring approach with reference disposal in line with applicable regulations viz. SPCB authorized vendor as well as quantity of waste generated/ disposed.
iv. While the parameter 'Protecting / Enhancing Species Diversity’ mentions “Fish ladders are provided at the project activity site” to ensure there is no harm to aquatic fish passage, the said measure was not observed to be implemented during the site visit. PO to justify the same.
v. Scored parameters such as “Occupational health hazards”/ “Improving/ deteriorating working conditions” / etc.” make generic statements such as “reduces the chance to happen accidents ….”, “the people from local communities would have to work somewhere with fatiguing work conditions” etc. – please be project activity specific with respect to description of impact, the monitoring approach and parameters as well as conclusion leading to the parameter being scored.
vi. The following parameters:
    1. “Replacing fossil fuels with renewable sources of energy” and “CO2 emissions”;
    2. “specialized training / education to local personnel” and “Project related knowledge dissemination effective or not”;
    3. “Occupational health hazards” and “Reducing / increasing accidents /Incident s/fatality”

    are scored +1 based on the same theory / justification. PO to justify the scoring the said parameters.

vii. PO is requested to justify as to how the trainings conducted for parameters “specialized trainings/ education to local personnel” and “Project related knowledge dissemination effective or not” are different from those mandated under legal/regulatory requirements for the sector.
viii. Child Labour prohibition and Minimum Wage are governed by their respective acts in place in India and have a compliance obligation. PO to justify the basis for scoring the aforementioned parameters in the PSF.
ix. In accordance with paragraph 22(b) of Project Sustainability Standard version 3.0, PO to ensure that all linkages between chosen SDGs and E+/S+ parameters are reflected for e.g. Goal 1.1 and parameter “poverty elevation SW03”.

Project Owner’s response	**Date:** 11/10/2023

i. The appropriate use of “Not Applicable”, “No Action Required” etc. and accordingly appropriate KPI for each of the identified harmless and harmful Environmental and Social Safeguards along with proper reference for relevant applicable legislation has been made clear. ii. The fact that projects are already established and in operation, the parameters scored like targeted CO2 emission reductions, minimum number of people employed targeted for imparting training are quantified below for the project scenario. iii. With reference to solid waste, only solid waste from E-waste is considered in the project scenario. The E-waste (for e.g. Solar PV modules, inverter, cables, electronic cards etc.) is classified here as Solid waste and the detailed monitoring approach along with KPI is clearly defined. iv. The parameter 'Protecting / Enhancing Species Diversity’ mentioned under E1 is corrected v. PO feels that scored parameters such as “Occupational health hazards”/ “Improving/ deteriorating working conditions” / etc.” are not project activity specific with respect to description of impact, the monitoring approach is not appropriate and hence those are not considered for scoring vi. Parameters scored +1 with same theory with respect to others parameters that are scored are been ignored. Only one parameter for a theory is considered. vii. PO has considered extra trainings conducted for parameters “specialized trainings/ education to local personnel” and “Project related knowledge dissemination effective or not” that are different from those mandated under legal/regulatory requirements for the sector. viii. Child Labour prohibition and Minimum Wage are governed by their respective acts in place in India and have a compliance obligation. So PO will not take score for the aforementioned parameters in the PSF. ix. In accordance with paragraph 22(b) of Project Sustainability Standard version 3.0, PO ensures that all linkages between chosen SDGs and E+/S+ parameters are reflected in the PSF.
Documentation provided by Project Owner
The above documents are attached through mail
Project verifier assessment **Date:** 08/11/2023
i. Section E of the PSF has been revised to complete the table uniformly with appropriate use of “Not Applicable”, “No Action Required” etc. and appropriate KPI has been fixed for each of the identified harmless and harmful Environmental and Social Safeguards along with proper reference for relevant applicable legislation. Therefore, this finding is closed. ii. Section E of the PSF has been revised to elaborate on the monitoring approach and the basis of the conclusion ‘as to why the parameter will be scored’ which is deemed acceptable to the assessment team. Therefore, this finding is closed. iii. PO has elaborated in the revised PSF what is being classified as e-waste, end-of-life products, and hazardous waste and accordingly framed the detailed monitoring approach with reference disposal in line with all applicable regulations. Therefore, this finding is closed. iv. PO has revised section E.1 to state impacts related to 'Protecting / Enhancing Species Diversity’ which is deemed acceptable and therefore, this finding is closed. v. Section E of the PSF has been revised to state the description of impact, the monitoring approach and parameters as well as conclusion leading to the parameter being scored / not scored which is project activity specific. This is deemed acceptable to the assessment team and hence, this finding is closed. vi. The justification provided by the PO w.r.t. only one parameter being scored for each theory is deemed acceptable to the verification team and therefore, this finding is closed. vii. PO has elaborated on the extra trainings conducted for parameter “specialized trainings/ education to local personnel” which is deemed acceptable. The parameter “Project-related knowledge dissemination effective or not” has been revised in the PSF and is acceptable. Therefore, this finding is closed. viii. The PO has not raised claims against the parameters “Exploitation of Child labour” and “Minimum wage protection” in section E.2 of the revised PSF. The same is acceptable to the verification team and therefore, the finding is closed. ix. Linkages has been established between all SDGs and E+/S+ parameters in sections B.7.1 and B.7.2. Therefore, this finding is closed.

Table 8.

CL ID	08	**Section no.**	D.12	**Date:** 17/02/2023
Description of CL				
In section F: Sustainable Development Goals of the PSF: i. For SDG Goals that are scored, indicators, project activity specific description, specific targets, justification for positive effect as well as specific monitoring approach and parameters need to be mentioned. As the project activity is operational since 2016, the indicators and monitoring needs to be substantiated with actual credible evidence. ii. Goal 1.1 states “Eradicate extreme poverty for all locally employed people”. Please justify the same. How does the PO ensure locally employed are extremely poor, is there a baseline being referred to, does the PO have specific hiring guidelines etc. iii. PO is required to justify the suitability of the following indicators scored considering Nature of Project activity and Baseline indicator: a. Indicator 3.8.1 “Coverage of essential health services” Also, Goal 3.8 states “ensure financial risk protection”, how does the PO define this and what measures are taken to ensure fulfilment. Financial Risk protection is covered under UN SDG indicator 3.8.2. b. Indicator 4.4.1 “Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill” c. Indicator 8.8.1 “Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status” iv. PO needs to justify the suitability of Goal 9 target and performance indicator chosen for the project activity considering: a. Nature of project activity b. Baseline indicator for target c. Impact of parameter considered for this indicator is already covered under goal 7 & 13				
Project Owner’s response				**Date:** 11/10/2023

i. For SDG Goals that are scored, indicators, project activity specific description, specific targets, justification for positive effect as well as specific monitoring approach and parameters are substantiated with actual credible evidence. ii. PO finds that Goal 1.1 cannot be monitored as stated and don't wish to claim it. iii. Indicator 3.8.1 "Coverage of essential health services" is applicable to this project activity as the PO provides the same to their employees within the project activity. Relevant record are being enclosed PO considers indicator 3.8.1, while indicator 3.8.2 "ensure financial risk protection" is not considered For SDG 4, the Indicator 4.4.1 "Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill" is modified to "Number of persons trained" who are locals and contribute to skill development. Indicator 8.8.1 "Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status" is applicable as the project is a solar generation plant there are chances of minor and major injuries/accidents to occur and the same are recorded and maintained in the EHS formats iv. For Goal 9 PO would like to change the target and performance indicator and same is elaborated.
Documentation provided by Project Owner
Project verifier assessment **Date:** 08/11/2023
i. All claimed SDGs are not done under legal requirements and are additional which are other than business as usual. Even in the absence of activities claimed under SDGs, the plant will be operational. In the absence of PA or baseline scenario these activities claimed under SDGs couldn't have taken place as there is no incentive for implementation of such activities. ii. The PO has withdrawn its claim against UN SGD Goal 1. The same is acceptable to the verification team and therefore the finding is closed. iii. PO has demonstrated additionality for all claimed SDGs and most of the SDGs claimed are linked to E+/S+. Their monitoring is demonstrated. Claim for few SDGs are to be shown as they are yet to take place and can be demonstrated during issuance like SDG 4. iv. For SDG 9, the project level SDG is defined as per UN SDG and KPI is defined as per Project level SDG. Therefore, this CL is closed.

Table 2. CARs from this project verification

CAR ID	01	**Section no.**	-	**Date:** 17/02/2023
Description of CAR				

Cover Page: Basic Information i. PO shall clarify if the project activity has been issued with carbon credits or environmental attributes of compensating nature by any other GHG/ non-GHG program, either for compliance or voluntary purposes. Accordingly, PO is requested to select only the applicable option under **'Generic Requirements applicable to all Project Types'** under "Declaration by the Authorized Project Owner and focal point". ii. With reference to CORSIA Specific Requirements, kindly confirm whether and not the project activity is a "Bundle" and check the box appropriately.
Project Owner's response **Date:** 11/10/2023
i. On the cover page, PO has selected only the applicable option "No outcomes (e.g. emission reductions, environmental attributes) generated by the Project Activity under GCC will be claimed as carbon credits or environmental attributes under any other GHG/non-GHG8 program, either for compliance or voluntary purposes, during the entire GCC crediting period " under **'Generic Requirements applicable to all Project Types'** under "Declaration by the Authorized Project Owner and focal point". ii. With reference to CORSIA Specific Requirements, kindly confirm whether and not the project activity is a "Bundle" and check the box appropriately.
Documentation provided by Project Owner
Revised PSF
Project verifier assessment **Date:** 08/11/2023
The revisions on the cover page of the PSF are deemed acceptable to the project verifier and hence this finding is closed.

CAR ID	02	**Section no.**	D.2	**Date:** 17/02/2023
Description of CAR				
The following was not captured in section A of the PSF as per the 'Instructions for completing the PSF': i. Summary of Project boundary in section A.1. ii. Contribution of the project activity to sustainable development of host country in section A.1 iii. Detailed physical address of the project activity in section A.2 iv. Details and Arrangement of Metering/ monitoring equipment in section A.3. v. Average lifetime of the project activity equipment in section A.3. vi. Description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station in section A.3.				
Project Owner's response				**Date:** 11/10/2023
The above points are included in PSF				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
Section A of the PSF has been revised to capture the afore mentioned information and deemed acceptable to the project verifier. Hence, this finding is closed.				

CAR ID	03	**Section no.**	D.3.1	**Date:** 17/02/2023
Description of CAR				
The PO is required to indicate the exact reference to the tools to which the selected methodology refers and the project activity applies as well as GCC Clarification No.1 under section B.1.				
Project Owner's response				**Date:** 11/10/2023
The PO indicated the exact reference to the tools to which the selected methodology refers and the project activity applies as well as GCC Clarification No.1 under section B.1				

[8] Non-GHG program could be such as I-REC facilitating reliable energy claims with Renewable Energy Certificate (REC) schemes

Documentation provided by Project Owner	
Revised PSF	
Project verifier assessment	**Date:** 08/11/2023
PO has revised section B.1 of the PSF to indicate the exact reference to the applied tools as well as GCC Clarification No.1 along with web links. Therefore, this finding is closed.	

CAR ID	04	**Section no.**	D.3.1	**Date:** 17/02/2023
Description of CAR				
i. Applicability conditions of all the Tools applied have not been included for justification in section B.2. ii. De-bundling criteria to be discussed in accordance with "Tool 20: Assessment of de-bundling for small-scale project activities".				
Project Owner's response				**Date:** 11/10/2023
i. Justification for all tools applied are included under section B.2. ii. De-bundling criteria is discussed in accordance with "Tool 20: Assessment of de-bundling for small-scale project activities" and Tool 20 is included in revised PSF.				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
i. PO has revised section B.2 of the PSF to refer to the applicability conditions of all the Tools applied. Therefore, this finding is closed. ii. PO has discussed De-bundling criteria in accordance with CDM TOOL 20 which is deemed acceptable to the assessment team and therefore, this finding is closed				

CAR ID	05	**Section no.**	D.3.3	**Date:** 17/02/2023
Description of CAR				
PO is required to describe the project boundary, including physical delineation of the Project Activity, in section B.3. along with a pictorial depiction of the same.				
Project Owner's response				**Date:** 11/10/2023
PO described the project boundary, including physical delineation of the Project Activity, in section B.3. along with a pictorial depiction of the same.				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
PO has revised section B.3 of the PSF to describe the project boundary, including physical delineation of the Project Activity, along with a pictorial depiction of the same. Therefore, this finding is closed.				

CAR ID	06	**Section no.**	D.3.4	**Date:** 17/02/2023
Description of CAR				
i. PO is required to provide and explain all data used to establish the baseline scenario viz. parameters, data sources along with relevant references in section B.4 ii. PO to also describe how the relevant national and/or sectoral policies, regulations and circumstances are taken into account.				
Project Owner's response				**Date:** 11/10/2023
i. All data used to establish the baseline scenario viz. parameters, data sources along with relevant references are provided ii. PO described how the relevant national and/or sectoral policies, regulations and circumstances are taken into account.				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023

The revisions in section B.4 of the PSF to reflect the aforementioned requirements are deemed acceptable to the project verifier and hence this finding is closed.

CAR ID	07	**Section no.**	D.3.5	**Date:** 17/02/2023
Description of CAR				
Under Section B.5 of the PSF, the Legal Requirement Test to demonstrate additionality is required to be elaborated upon supported with details and documentary evidence.				
Project Owner's response				**Date:** 11/10/2023
Under Section B.5 of the PSF, the Legal Requirement Test to demonstrate additionality is elaborated.				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
Section B.5 of the PSF has been revised to elaborate on legal requirement test in accordance with the applicable laws of the host country. Therefore, this finding is closed.				

CAR ID	08	**Section no.**	D.3.6	**Date:** 17/02/2023
Description of CAR				
Under Section B.6 of the PSF: i. The equation mentioned for the calculation of $EG_{PJ,y}$ for greenfield power plants is not consistent with the applied methodology under section B.6. ii. The calculation method mentioned for parameter "$EF_{grid,CM,y}$" is incorrect under section B.6.2.				
Project Owner's response				**Date:** 11/10/2023
i. The equation mentioned for the calculation of $EG_{PJ,y}$ for greenfield power plants is made consistent with the applied methodology under section B.6. *ii.* The calculation method mentioned for parameter "$EF_{grid,CM,y}$" is corrected under section B.6.2				
Documentation provided by Project Owner				
Revised PSF				
Project verifier assessment				**Date:** 08/11/2023
i. The equation mentioned for the calculation of $EG_{PJ,y}$ for greenfield power plants is now consistent with the applied methodology in section B.6. Hence, this finding is closed. ii. In section B.6.2, the calculation method mentioned for parameter "$EF_{grid,CM,y}$" is corrected by the PO. Hence, this finding is closed.				

CAR ID	09	**Section no.**	D.6	**Date:** 17/02/2023
Description of CAR				
In section G of the PSF, it is not clear whether the E+/S+/SDG impacts of project were discussed during LSC meeting.				
Project Owner's response				**Date:** 11/10/2023
SDG impacts of project were discussed during LSC meeting and the same is added in PSF				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 08/11/2023
PO had also explained the advantages of the project during local stakeholder consultation including economic development (job opportunities), welfare, clean energy (electricity generation through renewable source), and emission reductions which were discussed with the stakeholders, and this covers No net Harm to Environment/Society and SDG impacts. Therefore, this finding is closed.				

Table 3. FARs from this project verification

FAR ID	01	**Section no.**	D.7, D.13, D.14	**Date:** 17/02/2023
Description of FAR				

Project Owners shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity.	
Project Owner's response	**Date:** DD/MM/YYYY
-	
Documentation provided by Project Owner	
-	
Project verifier assessment	**Date:** DD/MM/YYYY
-	

Appendix 5.Environmental safeguard assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**							**Project Owner's Conclusion**		**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only)**
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of monitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)**	**Ex- Ante description and justification/explanation of the scoring of the environmental impact**	**Verification Process**
Environmental Aspects on the identified categories[9] indicated below.	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist, but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design and*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the*	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as '**Harmfu'l** at least to a level that is in compliance with applicable legal/regulator requirement*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.*	*-1* *0* *+1*	*Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.*	*Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.* .

[9] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

					operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has an positive impact on the environment mark it as "harmless" as well.*	*Project Activity is likely to cause harm (may be un-safe) and shall be indicated as* ***Harmful***	*s or industry best practice or stricter voluntary corporate requirements*					
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	The project activity does not cause SOx emissions. The project activity avoids SOx emissions that would have generated from the similar activity in the baseline, where the fuel used are fossil fuels.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable	-	-	Not applicable.	Not applicable.	No action required	0	The Project proponent confirms that the project activity will not cause SOx emissions.	No risk identified
	NO_x emissions (EA02)	The project activity does not cause NOx emissions. The project activity avoids NOx emissions that would have generated from the similar activity in the baseline, where the fuel used are fossil fuels.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable	-	-	Not applicable.	Not applicable.	No action required	0	The Project proponent confirms that the project activity will not cause NOx emissions.	No risk identified
	CO_2 emissions (EA03)	Project Activity generates Electricity from renewable source.	National Ambient Air Quality	-	Harmless	-	Not applicable	Not applicable-	Emission reductions in tCO_2e per year	+1	Project owner concludes that, the project has is	In absence of the project activity, the

		Hence no CO_2 emissions from the project activity. In the absence of present scenario, fossil fuel based power plants produce more Co_2 emissions to generate electricity.	Standards as notified by CPCB.						monitored through ER sheet on a monthly basis using the emission factor		being executed with the aim to produce electricity from renewable source. Hence, there are no CO_2 emissions from the project CO_2Emission reduction will be measured based on the electricity generated using the emission reduction factor	electricity generated from the project activity would be generated in the Indian Grid by power plants that are predominantly fossil-fuel based, thereby leading to CO_2 emissions. The generated electricity by the project activity is based on the renewable energy source, which causes no CO_2 emissions. The project will thus have a positive impact by reducing measurable amount of CO_2 emissions. The project is expected to reduce CO_2 emission throughout the crediting period. As no negative environmental impacts are anticipated, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team. This amount of emission reduction will be

												monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	CO emissions (EA04)	The project activity does not produce any CO emissions within or outside the project boundary. In the absence of project activity, there is a possibility to produce CO emissions.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable	-	-	No action required	Not applicable	No action required	0	PP concludes that, no CO emissions are observed during operation of plant.	No risk identified
	Suspended particulate matter (SPM) emissions (EA05)	Executed Project activity does not produce any SPM emissions except during construction.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable	-	-	No action required	Not applicable	No action required	0	PP concludes that, no SPM emissions are produced from the Project activity during Operational phase. Negligible amount of emissions are produced during construction.	No risk identified
	Fly ash generation (EA06)	Fly ash emissions are not produced from this project activity either within or outside the project boundary. In the absence of project activity, conventional power plant may produce Fly ash emissions	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable	-	-	No action required	Not applicable	No action required	0	PP confirms that, in the baseline scenario (grid) some of the fossil fuel power plants may produce Fly ash emissions, on which data is not available.	No risk identified
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	The hydro power project does not cause any NMVOC emission	National Ambient Air Quality Standards as notified by CPCB	Not applicable	-	-	Not applicable	Not applicable	No action required	0	PP confirms that the project activity does not emit any NMVOCs	No risk identified

	Odor (EA08)	The project does not emit any odor.	National Ambient Air Quality Standards as notified by CPCB	Not applicable	-	-	Not applicable	Not applicable	No action required		PP confirms that the project activity does not emit any odor.	No risk identified
	Noise Pollution (EA09)	Noise Will be generated at the time of construction phase for limited period	Noise (Regulation and control Rules 2000 amended in 2010)	Not Applicable	-	-	Not applicable	Not applicable	No action required		PP concludes that the is no noise pollution from the project activity operations.	No risk identified
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	No plastic waste is generated by project activity	Plastic Waste (Management and Handling) Rules, 2016	Not applicable	-	-	Not applicable	Not applicable	No action required		The project does not generate any plastic waste. Thus PP concludes that there is no solid waste pollution from plastics.	No risk identified
	Solid waste Pollution from Hazardous wastes(EL 02)	Hydro power project generate solid waste pollution from hazardous waste like Transformer oils, lubricating oil, paints, cleaning solvents and cotton waste, etc.). In the baseline scenario, the solid waste pollution from hazardous wastes is very high.	Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016	-	Harmless	-	It will be collected and disposed to authorized vendors for scientific treatment	-Not applicable	Solid waste (Hazardous) quantity (in kgs/ltrs) disposed per year. Monitored through form 3 of waste management.	+1	PP Concludes that, hazardous waste will be collected and disposed properly. Hence, it will not cause any harm to the environment	The hazardous waste generated by the Project activity refers to the Transformer oils, cotton waste, etc., which is disposed of as per Central Pollution Control Board standards and as per prevailing laws and regulations of the host country i.e., Hazardous and Other Wates (Management and Transboundary Movement) Rules, 2016. Monitoring plan is provided in section B.7.2 of the PSF to ensure the compliance with the regulations in place. The same will be monitored

												throughout the crediting period by the project owner by means of records of hazardous waste disposal from the project activity. The same was confirmed during the onsite assessment /28/ and accepted by the verification team. The monitoring plan provided is provided in section B.7.2 is appropriate and assessment of the same is provided section D.3.7 of the Project Verification Report.
	Solid waste Pollution from Bio-medical wastes (EL03)	The project activity does not generate any bio medical waste	Biomedical Waste Management Rules, 2016	Not Applicable	-	-	Not applicable	Not applicable	No action required	-	Project proponent confirms that the project activity does not generate any biomedical waste. Thus there is no solid waste pollution from Bio-medical wastes.	No risk identified
	Solid waste Pollution from E-wastes (EL04)	There is a probability of of project generating E-wastes (spares of SCADA system and HT Panel, etc).	E-waste (Management and Handling) Rules 2011		Harmless	-	It will be Collected,segregated and reused/recycled/refurbished or disposed properly through authorized vendors and comply with the rules of E Waste disposal guidelines	Not applicable	Solid waste(E waste) quantity (in kgs/tons/numbers) reused/recycled/refurbished or disposed per year. Monitored through records maintained or form 2 of waste management.	+1	PP concludes that, the solid waste from E-wastes will be collected segregated and reused/recycled/refurbished/ disposed properly. Hence, E-waste will not cause any harm to environment	The e-waste generated by the Project activity viz. Spares of SCADA system, inverters, and other electrical and electronic parts involved in the project or post their useful life will be disposed as per prevailing laws and regulations i.e., E-Waste (Management) Rules, 2011. Monitoring plan is provided in section B.7.2 of the PSF to ensure the compliance

												with the regulations in place. The same will be monitored throughout the crediting period by the project owner by means of records of e-waste re-used/recycled/refurbished or disposal from the project activity. The same was confirmed during the onsite assessment /28/ and accepted by the verification team. The monitoring plan provided is provided in section B.7.2 is appropriate and assessment of the same is provided section D.3.7 of the Project Verification Report.
	Solid waste Pollution from Batteries (EL05)	The project activity will generate solid waste from batteries, at the end of life of batteries.	Battery Waste Management rules-2016	Not Applicable	-	-	Used batteries will be returned to the battery manufacturers, who will recycle them-	Not applicable	No action required		PP concludes that the batteries will be returned to the manufactures as a part of Battery Management Rules.	No risk identified
	Solid waste Pollution from end of life	There is no possibility of waste generation from end of life products on year to year. Even otherwise if any waste is	Solid Waste Management Rules, 2016	Not Applicable	-	-	Not applicable	Not applicable	No action required		PP concludes that the project will not generate any solid waste from end of life	No risk identified

	products/ equipment (EL06)	generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off through approved PCB vendors. Therefore, project activity will not cause pollution from this waste,									products / equipment during operational phase on year to year basis. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off through approved PCB vendors. Thus there is no solid waste pollution from end of life products.	
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	The project doesn't use any chemicals (including Pesticides, heavy metals, lead, mercury)	Not Applicable	Not applicable	-	-	Not applicable	Not applicable	No action required		PP confirms that the project will not generate any soil pollutant chemicals, including pesticides, heavy metals, lead and mercury	No risk identified
	land use change (change from cropland /forest land to project land) (EL08)	Project activity is established in non crop land and some forest land, for which compensation plan is made approved by ministry and authority.	-	Not Applicable	-	-	Not applicable-	Not applicable-	No action required		Project activity is in non crop area. Some forest area is converted with compensation plan approved by concern authority.	No risk identified
	Construction waste(Muck disposal) (EL09)	Project activity during construction phase had generated muck and disposed/dumped amicably at fully planned and designed dump yards.	Not applicable -	Not Applicable	-	-	Not applicable	Not applicable	No action required		Project proponent concludes that muck generated was disposed at fully planned and designed dumping yards.	No risk identified

Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	Not Applicable	Not applicable -	Not Applicable	-	-	Not applicable	Not applicable	No action required		Project activity does not require water except for drinking and sanitary purposes	No risk identified
	Water Consumption from ground and other sources (EW02)	The water used for electricity generation will be released back without any chemical change with same amount and same quality.	Not applicable -	Not Applicable	-	-	Not applicable	Not applicable	No action required		PP confirms that there is no major impact from the project activity, by water consumption from river.	No risk identified
	Generation of wastewater (EW03)	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not applicable	-	-	Not applicable	Not applicable	No action required		The project activity does not generate any wastewater, except water used for sanitary purposes, which is harmless.	No risk identified
	Wastewater discharge without/with insufficient treatment (EW04)	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not applicable	-	-	Not applicable	Not applicable	No action required		The project activity does not discharge any wastewater other than water used for sanitary purposes, which is harmless.	No risk identified
	Pollution of Surface, Ground and/or Bodies of water (EW05)	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not applicable	-	-	Not applicable	Not applicable	No action required		The project activity does not pollute surface/ground and/or bodies of water.	No risk identified
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not applicable	-	-	Not applicable	Not applicable	No action required		The project activity does not discharge any harmful chemicals or toxic waste	No risk identified
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	The project activity generates electricity from renewable source i.e., using hydro, so we conserve natural resources as, in the baseline scenario,	There are no regulations	Not Applicable	-	-	Not applicable	Not applicable	No action required	0	PP concludes that, project activity will conserve mineral resources, as the electricity generated from	No risk identified

		electricity is generated by using fossil fuels.									the project activity is based on renewable sources	
	Protecting/ enhancing plant life (ENR02)	Not Applicable	There are no regulations	Not Applicable	-	-	Not applicable	Not applicable	No action required		Project activity is implemented in barren land. There were no trees at the time of implementation.	No risk identified
	Protecting/ enhancing species diversity (ENR03)	By pass channels are provided at the project site and hence, no negative impact on the aquatic life.	Environment Protection Act	Not Applicable	-	-	Not applicable	Not applicable	No action required		Project Proponent has concluded that, there is no harm to aquatic fish passage due to provision of separate flow.	No risk identified
	Protecting/ enhancing forests (ENR04)	Not applicable	The Forest (Conservation) Act, 1980 & 1981	Not applicable	-	-	Not applicable	Not applicable	No action required		The project proponent confirms that the project is located in a barren land,	No risk identified
	Protecting/ enhancing other depletable natural resources (ENR05)	Not applicable	Mines and Minerals (Development and regulation) Act, 1957	Not applicable	-	-	Not applicable	Not applicable	No action required		Project proponent confirms that the project will not use any natural resources in the project activity	No risk identified
	Conserving energy (ENR06)	Not applicable	Energy Conservation Act, 2001	Not applicable	-	-	Not applicable	Not applicable	No action required		As the project is a renewable energy project, it is already conserving energy, as in the absence of the project, energy would have been generated using fossil fuel.	No risk identified
	Replacing fossil fuels with renewable sources of energy (ENR07)	This project activity replaces fossil fuels with hydel energy, which is a renewable energy source, for the generation of electricity	There are no Regulations	-	Harmless	-	Not applicable-	Not applicable	Quantity of net electricity generated per year replacing fossils fuel., evidenced by Joint Meter Reading	+1	Project proponent concludes that the Project activity will Supply Energy to the grid using Renewable Source of energy.	In absence of the project activity, the equivalent amount of electricity would be generated from the operation of grid-connected

												power plants, which is GHG intensive. The project activity generates and supplies renewable solar sourced based electricity to the grid, where it replaces fossil fuel source-based electricity, thus the project activity is unlikely to cause any harm and is assessed as harmless. As the project activity will have a positive impact by replacing fossil fuels with renewable sources of energy, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team. This amount of emission reduction will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.

	Replacing ODS with non-ODS refrigerants (ENR08)	Not Applicable	There are no regulation at present	Not applicable	-	-	Not applicable	Not applicable-	No action required		As this is a renewable energy project replacement of ODS with non-ODS refrigerants does not arise	No risk identified
Net Score:					**+5**							
Project Owner's Conclusion in PSF:					The Project Owner confirms that the Project Activity will not cause any net harm to Environment.							
GCC Project Verifier's Opinion:					The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to the environment..							

Appendix 6. Social safeguard assessment

Impact of Project Activity on	**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**							**Project Owner's Conclusion**		**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only)**
	Description of Impact (*positive or negative*)	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment** **(choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
			Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex-Ante scoring of social impact of the project**	**Ex- Ante description and justification/explanation of the scoring of social impact of**	**Verification Process**

										the project	
Social Aspects on the identified categories[10] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all source during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If social impacts exist, but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless****), project having positive impact on society wrt. To the BAU / baseline scenario must also mark their aspect as* ***"harmless"***	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirement s or are likely to exceed legal limits then the Project Activity is likely to cause harm and shall be indicated as* ***Harmful***	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regula tory limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.* .
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragra ph 23*		*Paragraph 24 and Paragraph 26 (a) (i)*
Social - *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	There is a positive impact of the project activity on the creation of long-term jobs during its operational time.	There are no Regulations at present	-	Harmless	-	No action required	Number of personsemploye d(> 1 year) and monitored per year through employment records	+1	Though there is no mandator y law, PP has an internal goal of improving the local economy by providing	The project activity will lead to long term employment generation during the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is discussed in

[10] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

										direct and indirect employment opportunities and Economic value addition.	section D.3.7 of this report. The aforementioned documents can be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The creation of permanent jobs is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	New short-term jobs (< 1 year) created/ lost (SJ02)	There is a positive impact of the project activity on the creation of short-term jobs for local worker during its construction phase and operational phase.	There are no Regulations at present	-	Harmless	-	No action required	Number of persons employed(< 1 year) monitored per year through records	+1	Though thee is no mandatory law, PP has an internal goal of improving the local economy by providing short term employment and Economic value addition.	The project activity has led to short term employment generation during the construction and the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is discussed in section D.3.7 of this report. The aforementioned documents can be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The creation of temporary jobs is a

											positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Sources of income generation increased / reduced (SJ03)	The project activity creates employment for people and also infrastructure development nearby project area. The project activity will also help in increased income of the old and new small enterprises established in the neighborhood of the project due to increased economic activity in the area.	There are no regulations at present	Not Applicable	-	-	No action required	-Not applicable	0	PP confirms that, the project activity will create jobs for people, through infrastructure development, which will increase in source of income.	No risk identified
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04)	The project will provide employment to all without discrimination based on gender, ethnicity, religion, etc.	Article 16 of Constitution of India	Not applicable	-	-	No action required	Not applicable	0	As the constitution provides for equal opportunity to all in employment, PP confirms that the project will provide employment without discrimination.	No risk identified

	(human rights)										
Social - *Health & Safety*	*Disease prevention (SHS01)*	There is no disease prevention through the project activity	The Factories Act, 1948	Not applicable	-	-	No action required	Not applicable		PP confirms that the project will maintain proper hygienic condition to protect the employees.	No risk identified
	Occupational health hazards (SHS02)	The project activity doesn't contribute to any occupational health hazards.	The Factories Act, 1948	Not applicable	-	-	No action required	Not applicable		PP confirms that the project will provide good working environment to employees so that they are not exposed to any occupational health hazards.	No risk identified
	Reducing / increasing accidents/Incidents/fatality (SHS03)	In project activity reduces the chance to happen accidents during construction and operational phase by its EHS policy.	There are no specific Regulations	-	Harmless	-	As per the Factories Act, a written notice should be given to the Factories Inspector within 72 hours of the occurrence of accident and acknowledgement taken	Record of major Accidents/incidents rate in the year monitored through EHS records For this parameter trainings are also provide for which Training records are maintained.	+1	PP has an EHS policy which aims to reduce accidents and ensure employee 'health and safety, Employees will be trained in operation and maintena	As per the PSF /1/, records of major accidents/incidents in a year will be monitored through EHS records. The project owner shall provide the job-related Health and safety trainings to its employees on regular interval, and the number of accidents occurred can be verified at the time on emission reduction verification in accordance with

										nce aspects of WTGs and will be provided with necessary safety equipment to avoid accidents. ,	the monitoring plan in the PSF section B.7.1. and E.2. The monitoring approach is discussed in section D.3.7 of this report. The impact created by the project is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Reducing / increasing crime (SHS04)	The project doesn't reduce or increase the crime.	Indian Penal Code deals with crime and punishment	Not applicable	-	-	No action required	Not applicable		Since the project activity is an energy generation plant, the PP concludes that the project activity doesn't increase or reduce crime.	No risk identified
	Reducing / increasing food wastage (SHS05)	The project activity doesn't involve in reducing/ increasing food wastage	Food Waste (Reduction) Act, 2018	Not applicable	-	-	No action required	Not applicable		The project will provide suitable place for employees to store the lunch and dine to avoid any contamination and wastage. Food wastage is not	No risk identified

										anticipated.	
	Reducing / increasing indoor air pollution (SHS06)	The project activity doesn't involve in reducing/increasing indoor air pollution	The Air (Prevention & Control of Pollution) Act, 1981	Not applicable	-	-	No action required	Not applicable		Project proponent confirms that the Wind energy projects are installed in open and do not cause any air pollution.	No risk identified
	Efficiency of health services (SHS07)	The project activity conducts medical camps, distribution of medicines and vaccines for the stakeholders which will contributes to rural or community welfare in terms of efficiency of health services.	There are no statutory regulations on efficiency of health services in India at present	-	Harmless	-	No action required	Number of health related activities conducted like medical camps, Vaccines distributed Medicine distributed to stakeholders. These will be monitored once in three years	+1	Project proponent will conduct health camps for people in the nearby villages and around the project area, periodically	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years. The same could be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.

	Sanitation and waste management (SHS08)	Not Applicable	Hazardous and other Wastes (Management and Trans boundary movement) Amendment Rules, 2016	Not applicable	-	-	No action required	Not applicable		The project proponent confirms that the project will ensure proper disposal of wastes as per Central Pollution Control Board guidelines ;Septic tank will be provided with onsite treatment before disposal. Toilets, septic tanks and waste collection areas will be located away from natural drainage channels.	No risk identified
Social - *Education*	*specialized training / education to local personnel (SE01)*	Project provides job-related training and thereby impart knowledge to existing employees and new recruits	There are no regulations at present	-	Harmless	-	Training operation & maintenance of WEGs, occupational safety, like fire safety, first aid, emergency procedures, risk assessment, accident reporting procedure welfare activities like, safe use of workplace tools,	Number of persons trained over entire crediting period Training attendance sheet	+1	Project proponent confirms that job-related training will be provided to existing employees and new recruits to improve their knowledge base	As per the PSF/1/ and interview with the project owner/30/, the project owner would impart training to the local youth periodically so as to increase the skill set of on operation and maintenance of project; occupational safety, first aid, accident reporting etc. The monitoring approach is discussed in section D.3.7 of this report.

							machinery, equipment etc.				The same could be verified from the training records and interviews with the employees to confirm the same during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Educational services improved or not (SE02)	The project activity under CSR program improves educational services as the requirement of nearby communities and fund availability	CSR policy of the company	Not Applicable	-	-	No action required	Not applicable	0	Project proponent will take initiative under CSR to improve educational services. to the local communities.	No risk identified
	Project-related knowledge dissemination effective or not (SE03)	Project provides job-related training and thereby impart knowledge to existing employees and new recruits	HR policy of the company	Not applicable	-	-	Training on operation & maintenance, occupational safety, like fire safety, first aid, emergency procedures, risk assessment, accident reporting procedure			Project proponent confirms that job-related training will be provided to existing employees and new recruits to improve	No risk identified

							welfare activities like, safe use of workplace tools, machinery, equipment etc.			their knowledge base	
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	Not Applicable	EHS and HR policy of the company	Not applicable	-	-	No action required	Not applicable		Since the project has a good EHS and HR policy and offers good working environment, there will be no deterioration in working condition.	No risk identified
	Community and rural welfare (indigenous people and communities) *(SW02)*	By initiating various CSR programs, the project activity enables welfare of the rural community.	CSR policy of the company	Not applicable	-	-	No action required	Not applicable	0	PP confirms that, the project contribute towards welfare of the rural community welfare activities will be organized as per requirement of the community	No risk identified
	Poverty alleviation (more people above poverty level) (SW03)	By generating direct and indirect employment opportunities, the project activity contributes to the efforts of poverty alleviation.	There are no Regulations at present No Regulations	Not Applicable	-	-	No action required	Not applicable	0	PP concludes that, the Poverty alleviation occurs due to providing direct and indirect employment	No risk identified

										opportunities.	
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	Not Applicable as the project activity only increases the income sources but cannot predict improving/deteriorating wealth distribution/generation of income and assets.	There are no regulations at present	Not applicable	-	-	No action required	Not applicable	0	Since the project is an equal opportunity employer, it will provide employment to all based on the need and suitability. This action will result in generation of income sources	No risk identified
	Increased or / deteriorating municipal revenues (SW05)	Taxes payable by the company and the Professional Taxes payable by employees improves the municipal revenue.	There is no regulation	Not applicable	-	-	Not applicable	Not applicable	0	Project proponent confirms that the company has to pay tax to concern local body and the employees have to pay professional tax, which will improve the revenue of municipal corporation. Moreover, the small shops coming up in nearby areas due to this project will	No risk identified

										also contribute to the municipal revenue	
	Women's empowerment (SW06) *(human rights)*	Women are not been employed at the project activity as is in far remote location.	There is no specific regulation requiring employment of women even in remote location at present	Not Applicable	-	-	Not applicable	Not applicable -		PP concludes that women are not employed as the project as project is in a remote location.	No risk identified
	Reduced / increased traffic congestion (SW07)	Not Applicable	There is no regulation	Not applicable	-	-	Not applicable	Not applicable		Due to project activity traffic may increase in the area. However, since the project is located in a remote area, it will not create traffic congestion.	No risk identified
	Exploitation of Child labour *(human rights)* *(SW08)*	project does not employ child labour as it is prohibited by law	The Child Labour (Prohibition and Regulation) Act, 1986	Not applicable	-	-	Not applicable	Not applicable		PP confirms that the project will not employ child labour in any of the project activity	No risk identified
	Minimum wage protection	Employees are paid wages confirming to the Minimum Wages Act.	The Minimum Wages Act, 1948	Not applicable	-	-	Not applicable	Not applicable		Project proponent confirms that all the employees will be paid	

	(human rights) (SW09)									wages and salaries confirming to the rates stipulated for that category by the Act	
	Abuse at work place.(with specific reference to women and people with special disabilities / challenges) *(human rights) (SW10)*	The extant laws prevent, prohibit and in case of occurrence redressal of any abuse of women, scheduled caste and tribe and differently abled employees at work	Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 The Rights of Persons with Disability Act, 2016	Not applicable	-	-	Not applicable	Not applicable		Project proponent confirms that while women are not employed in the project location, employees belonging to SC and ST and differently abled employees will be treated like any other employees.	No risk identified
	Other social welfare issues (SW11)	Not applicable	Not applicable	Not applicable	-	-	Not applicable	Not applicable		Not applicable	No risk identified
	Avoidance of human traffickin g and forced labour *(human rights)* *(SW12)*	IPC prohibits recruiting, transporting, harboring, transferring a person for exploitation and slavery,	Indian Penal Code, 1860	Not applicable	-	-	Not applicable	Not applicable		Project proponent confirms that the project does not employ or keep any person in employment against their will	No risk identified

	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(human rights)* *(CW13)*	Project activity is located in a non-forest, non-agricultural and non-human settlement area.	The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013	Not applicable	-	-	Not applicable	Not applicable		The project is located in non-forest, non-agricultural and non-human settlement area and hence the question of forced eviction or displacement of people does not arise	
	Provisions of resettlement and human settlement displacement *(human rights)* *(CW14)*	Project activity is located in a non-human settlement area without necessitating any displacement.	The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013	Not applicable	-	-	Not applicable	Not applicable		As the project is located in a non-human settlement area, the question of resettlement of people does not arise	No risk identified
	Add more rows if required										
Net Score:			+5								
Project Owner's Conclusion in PSF:			The Project Owner confirms that the Project Activity will not cause any net harm to society.								

GCC Project Verifier's Opinion:	The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.	

Appendix 7. United Nations Sustainable Development Goals (SDG)

UN-level SDGs	**UN-level Target**	**Declared Country-level SDG**	**Defining Project-level SDGs**				**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only)**	
			Project-level SDGs	**Project-level Targets/Actions**	**Contribution of Project-level Actions to SDG Targets**	**Monitoring**	**Verification Process**	**Are Goal/ Targets Likely to be Achieved ?**
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and correspo-nding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column ofr guidance.*	*Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).*	*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source*	*Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)*

Goal 1: End poverty in all its forms everywhere	NA	NA	NA	NA	NA	NA	NA	NA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	NA	NA	NA	NA	NA	NA	NA	NA
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and //vaccines for all Indicators: 3.8.1	Yes	Achieve health coverage, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for the local stakeholders and employees.	Ensure health care services to the local stakeholders and employees by organising/conducting health related activities like medical camp. Clinical camp, distribution of medicines and vaccines, etc. Target is to organise/conduct atleast one health related activity in three years	Organizing Health camps, other health related activities periodically for stakeholders to increase efficiency of health services or Providing group health insurance to the employees Above actions result in a direct positive effect that contributes to achieving the defined project-level SDG targets.	Monitored through welfare activity records Number of health related activities conducted for stakeholders per three years Records of group health insurance, health camps conducted and EHS training programs	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years and should be verified during ER verification stage. PO has provided a declaration /37/ which states that some activities performed to achieve SDG 3 targets are beyond CSR, which is deemed acceptable to the project verification team. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	Yes

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship Indicators: 4.4.1	Yes	Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship , from local stakeholders	To train the, employed local youth and adults with relevant skills through trainings during the installation and operational phases of the project for getting decent jobs and provide entrepreneurship opportunities. Target is to provide training to atleast five individuals over the crediting period.	Empowered local stakeholders with digital literacy and training on relevant technologies This action contributes to achieving the defined project level SDG targets	Records of trainings and workshops conducted, Number of persons trained over the crediting period	The project owner will conduct training on relevant technologies to empower local stakeholders with digital literacy. Records of trainings and workshops conducted should be verified during the ER Verification stage along with the number of people trained over the crediting period. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	Yes
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	NA	NA
Goal 6. Ensure availability and sustainable management of water and sanitation for all	NA	NA	NA	NA	NA	NA	NA	NA
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 “By 2030, Increase substantially the share of renewable energy in the global energy mix” Indicator 7.2.1.	Yes	To increase the share of renewable energy in the National energy mix.	Net electricity of 21,240 MWh supplied to the grid by project activity in a year throughout the crediting period.	The Hydro Power plant Contributes directly to achieve the SDG target because the project activity delivers renewable energy, which would otherwise generate by fossil fuel dominated grid connect power plants.	The net electricity supplied to the grid by the project activity is continuously monitored through energy meter and recorded in Log books on cumulated monthly basis. Amount of energy supplied to Grid per year	The project activity is a hydro power project with an installed capacity of 10 MW and it generates electricity of 21,240 MWh per year. The start date of the project activity is 01/10/2021 and it continues to provide clean energy, thereby increasing the renewable energy share in the total final energy consumption thereby complying	Yes

							with the SDG target 7.2. The same was duly verified by the verification team from commissioning reports/8/ and electricity generation records /11/. The generated power is continuously monitored by the energy meters installed at the substation and details of the same are included in the PSF/1/ and found to be acceptable.	
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment Indicators: 8.8.1	Yes	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, and those in precarious employment in the project activity.	Ensure to protect labour rights and have no occupational injuries. To achieve “0” (zero) major injuries.	By implementing strict EHS policy to protect labour rights and through safety trainings, and display of safety posters/guidelines at project sites. The above actions result in direct positive effects that contribute to project-level SDG. .	EHS records maintained Number of major accidents\incidents per year or Fatal and non-fatal occupational injuries per year	PO will ensure to protect labour rights by implementing strict EHS policy and through safety trainings, and display of safety posters/guidelines at project sites. The number of major accidents/incidents will be monitored through EHS records which should be verified during ER Verification stage. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	Yes

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries Indicators: 9.2.2	Yes	Promote inclusive and sustainable industrialization and significantly raise industry's share of employment by the project activity	Establishment of Project activity promotes sustainability (use of renewable energy) and also creates employment opportunities with target of 10 persons employed per year.	By providing employment opportunities to the eligible candidates for operations of the renewable energy related project activity. The above actions result in direct positive effects that contribute to project-level SDG.	Monitored through employment records maintained Number of persons employed per year.	The project will provide employment opportunities to at least 10 eligible candidates for operations of the renewable energy related project activity. This can be verified from the employment records maintained on site. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.	Yes
Goal 10. Reduce inequality within and among countries	NA	NA	NA	NA	NA	NA	NA	NA
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	NA	NA	NA	NA	NA	NA	NA	NA
Goal 12. Ensure sustainable consumption and production patterns	NA	NA	NA	NA	NA	NA	NA	NA
Goal 13. Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measures into national policies, strategies and planning	Yes	To reduce GHG emissions	Reduce 19,302 (tCo_2/year) per annum through electricity generation from renewable energy	The project activity utilises the renewable source of energy to produce electricity that would be produced fossil-fuel based plants, thus the project leads to reduction in GHG emissions will combat climate change and contribute to positive effect on the project-level SDG.	Electricity produced by the renewable generating unit in records multiplied by an emission factor or this PSF Number of emission reductions per year	The project is estimated to achieve GHG emission reduction of 19,302 tCO2e/year, thereby meeting the SDG target 13.2. The generated power is continuously monitored by the energy meters installed at the	Yes

							substation and details of the same are included in the PSF/1/ and found to be acceptable.	
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	NA	NA	NA	NA	NA	NA	NA	NA
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	NA	NA	NA	NA	NA	NA	NA	NA
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	NA	NA	NA	NA	NA	NA	NA	NA
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs	**+6**	**+6**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Diamond**	**Diamond**

DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/08/2020	▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[11];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ This version contains details and information to be provided, consequent to the latest worldwide developments (e.g., CORSIA EUC).
v1.0	01/11/2016	▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

[11]See ICAO recommendation for conditional approval of GCC at https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf

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