**Design Certification Renewal (Validation) report form for Gold Standard for The Global Goals (GS4GG) Project activity**

| BASIC INFORMATION | |
|---|---|
| **Title of the Project Activity (PA)** | Çataloluk HEPP |
| **GS ID of Project** | GS872 |
| **Report ID** | CCIPL1080/GS/RCP/CHP/20211217 |
| **Version number of the validation report** | 3.0 |
| **Completion date of the validation report** | 21/08/2023 |
| **Version number and Date of PDD to which this validation report applies** | 09 Dated 21/08/2023 |
| **Start Date of PA** | 10/07/2009 |
| **First Crediting Period** | 01/04/2010-31/03/2017 |
| **Second Crediting Period** | 01/04/2017 (will replace with date of date of renewal) to 31/03/2024[1] |
| **Project Participant** | Elestaş Elektrik Üretim A.Ş (private entity)<br>GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ (private entity) |
| **Host Party** | Turkey |
| **SDG Targeted:** | 1–SDG 7: Affordable and Clean Energy<br>2– SDG 8: Decent work and Economic Growth<br>3– SDG 13: Climate Action |
| **Applied methodologies and standardized baselines** | AMS-I.D. Grid connected renewable electricity generation - Version 18.0 |
| **Mandatory sectoral scopes** | 01: Energy industries (renewable/non-renewable sources) |
| Activity Requirements applied | Renewable Energy Activity Requirements |
| Product Requirements applied | GHG Emissions Reduction & Sequestration Product Requirements |
| **Name and UNFCCC reference number of the VVB** | E-0052: Carbon Check (India) Private Limited |
| **Name, position and signature of the approver of the validation report** |  <br>Vikash Kumar Singh, Compliance Officer |

[1] Para 5.1.45, https://globalgoals.goldstandard.org/101-par-principles-requirements/

## SECTION A.Executive summary

>>

Purpose and general description

Elestaş Elektrik Üretim A.Ş (the PP) has appointed the VVB, Carbon Check (India) Private Ltd. to perform an independent Design Certification Renewal (validation) of the Gold Standard PA "Çataloluk HEPP" in Turkey (hereafter referred to as "PA"). The other project participant "GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ" (GTE) is responsible for emission reduction calculations, preparing PDD and periodical verification processes. This report summarises the findings of Design Certification Renewal (validation) of the project, performed on the basis of Gold Standard criteria Gold standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting. This report contains the findings and resolutions from the validation and a validation opinion.

The proposed PA aims to generate clean energy by harnessing the hydro power and providing the energy to the Turkish national grid in Turkey.

The PA aims to reduce dependency to the fossil fuels thereby reducing the sources of environmental pollution. In order to achieve the highest possible power output and the emission reductions associated with it; the project owner invested in state-of-the-art turbines and all the necessary assessments were carried out before the implementation. Greenhouse gas (GHG) emission reductions achieved through implementing this PA, will result in carbon credits following GS certification rules and procedures.

The purpose of validation is to have a thorough and independent assessment of the proposed PA against the applicable GS requirements, in particular, the project's baseline, monitoring plan and the PA's compliance with relevant Gold standard criteria and host Party criteria. These are validated to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all Gold Voluntary projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of voluntary emission reductions (VERs).

Location

The proposed project is located Avanos district of Nevşehir province in Turkey.

Scope of the validation

The validation scope is defined as the independent and objective review of the project design document (PDD /01/). The PDD /01/ is reviewed against the relevant criteria (see above) and decisions by the Gold standard, including the approved baseline and monitoring methodology.

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

While carrying out the Design Certification renewal (validation), CCIPL determines if the PA complies with the requirements of the paragraph 37 of the CDM Modalities & Procedures, the applicability conditions of the selected methodology /B06/, para 5.1.47 (a)-(e) of GS4GG PRINCIPLES & REQUIREMENTS Version 1.2 /B01/, guidance issued by the Gold Standard and also assess the claims and assumptions made in the PDD /01/ without limitation on the information provided by the project participants.

Validation Process

The validation consists of the following four phases:

i.A desk review of the project design documents

- A review of the data and information;

- Cross checks between information provided in the PDD /01/ and information from sources with all necessary means without limitations to the information provided by the project proponent;
- Submission of Validation work plan to the PP

ii. Follow-up interviews with project stakeholders

- Interviews with relevant stakeholders in host country with personnel having knowledge of the project development via telephone, email, online etc;
- Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;

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

iv. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The report is based on the assessment of the PDD /01/ 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 findings and resolutions from the validation and a validation opinion on the proposed PA thus confirming the Project design in the documents is sound and reasonable and meets the stated requirements and identified criteria. No FARs from the previous verification including its GS performance review stage found during this RCP.

Conclusion

The selected baseline and monitoring methodology (/B02/) is applicable to the project and correctly applied. Carbon Check (India) Private Ltd. therefore recommends the project to the Gold Standard for registration.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the GS PA "Çataloluk HEPP", as described in the PDD /01/, meets all applicable GS requirements, including those specified in the CDM Project Standard for PA /B06/, GS4GG Principles and requirements version 1.2, GS4GG activity requirements version 1.2, GHG Emissions Reduction & Sequestration Product Requirements Version 1.4, relevant methodologies, tools and guidelines and article 12 of the Kyoto Protocol, paragraph 37 of CDM modalities and procedures, subsequent decisions by the COP/MOP and CDM Executive Board.

## SECTION B.Validation team, technical reviewer and approver

### B.1.Validation team members

| No. | Role | Type of resource | Last name | First name | Affiliation | Involvement in | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Desk review | Off-site inspection | Interview(s) | Validation findings |
| 1. | Team Leader / Technical Expert | IR | Mane | Dinesh | CCIPL | X | X | X | X |
| 2. | Local Expert | ER | Erduran | Muhammet Ali | CCIPL | | X | X | |

## B.2.Technical reviewer and approver of the validation report

| No. | Role | Type of resource | Last name | First name | Affiliation |
|---|---|---|---|---|---|
| 1. | Technical reviewer | IR | C | Indumathi | CCIPL |

## Audit Team Experience:

**Dinesh Mane:** He is an appointed Team Leader and Technical Expert for technical area 1.2. He is local expert also for He is having more than 18 years of experience, which involves experience in the environmental services industry. Certification Bodies, Chemical Industries, Project management and technical skills in areas viz., Environment, Energy, Occupational Health and Safety, GHG offset projects Validation and Verification, ISO Audits (IMS) Renewable Energy and waste management. He worked in various capacities at TUV Rhineland India Pvt. Ltd.

**Indumathi C.:** Qualified lead assessor and internal technical reviewer for offset projects validations and verifications under CDM, VCS and Gold Standard (GS) and actively been involved in the validation and verification or internal technical review of more than 250 GHG offset projects. She is qualified as technical expert for TA 1.1, 1.2, 3.1 ,13.1 and 13.2 under CDM SS categorisation. She has undergone extensive training in the validation and verification of carbon offset projects. Currently, she is employed with Carbon Check in the capacity of Technical Reviewer.

**Muhammet Ali Erduran**: He is a local expert for Turkey and speaks English and Turkish.

He is engaged as individual external individual for remote assessment following the requirements outlined in section 7.5.2 of VVB requirements.

CCIPL ensured that Mr. Muhammet has
a. no financial interest or any other conflict of interest concerning the Project
b. a non-disclosure agreement covering the project audited
c. access to infrastructure to safeguard the confidentiality and security of the data gathered
d. sufficient briefing from the Team leader has given to him on the following aspects of the GS project:
i. relevant Gold Standard rules, requirements, procedures, templates
ii. objectives
iii. tasks
iv. procedures
v. timelines and audit plan
vi. logistical arrangements
vii. access to/use of interpreters, where required

CCIPL ensured that the Mr. Muhammet has as a minimum the following competencies:
a. Basic knowledge of the local context
b. Basic auditing techniques
c. Knowledge and well versed with the electronic modes selected for remote assessment
d. Interview techniques
e. Speak the language of the interviewees (Turkish)
f. Sufficiently speak a language spoken by the Team Leader (English)

In remote audit he has been used as a facilitator so that he:
a. Only enables the (part of the) audit to happen remotely such as for data collection, interpreting/translation
b. Works entirely under the explicit directions of the Team Leader
c. Does not participate in forming a validation/verification opinion, even on specific topics
d. Does not participate in the writing of the validation/verification report

The Team Leader provided him training on:
a. Project-specific and relevant standard-specific requirements,
b. Interview techniques
c. The information to be collected on-site,
d. The reporting format
e. The channel of communication through which information shall be transferred from remote audit and during the future course of exchanges.

He has prepared his report and submitted to CCIPL.

## SECTION C.Means of validation

### C.1.Desk/document review

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

### C.2.On-site inspection

N/A, since no onsite inspection has been conducted for the validation of the PA.

| **Duration of on-site inspection:** DD/MM/YYYY to DD/MM/YYYY | | | | |
|---|---|---|---|---|
| **No.** | **Activity performed on-site** | **Site location** | **Date** | **Team member** |
| 1. | - | - | - | - |
| … | - | - | -- | - |

Onsite inspection has not been conducted for the validation of the PA due to travel restrictions imposed due to COVID-19 pandemic and as per rule update provided in Applicability of Minimum Site Visit Requirements by VVB dated 16/08/2021 and Rule update on COVID 19 Interim Measures dated version 5 dated 21/12/2021 /B08/, /B09/. However, as per latest GS4GG Rule update COVID 19 interim measures V6 dated 14/06/2022 stated that, interim measures have been extended from 30/06/2022 to 31/12/2022 for only those projects which are located at a place where COVID-19 related restrictions still exist. Though, the remote site visit was carried out on 17/05/2022, when previous version of rule update i.e., V5 was available. Used following validation techniques and advanced communication during the audit technology solutions to validate/verify information and compliance with applicable requirements to the extent possible, to ensure the completeness and credibility of the audit. The below used validation audit techniques are in line with Audit techniques template version 1 dated 17/11/2021 for this Design Certification /B04/.

The list the auditing technique(s) used for the assessment of this validation in assessing the information, CCIPL applied the means of validation, including, but not limited to are as below:

i. Cross checks between information provided in the PDD and information from third-party or publicly available sources other than those used; if necessary, independent background investigations.

ii. Telephone, video interviews with relevant stakeholders in the host country, such as personnel with knowledge of the Project design and implementation;

iii. Cross checks between the information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted;

iv. Reference to available information relating validation techniques to assess project technologies similar to the proposed Project under validation;

v. Review, based on the selected methodologies, the selected standardised baselines and other applied methodological regulatory documents, of the appropriateness of formulae and accuracy of calculations;

vi. Where no means of validation is specified, the VVB applied the standard auditing techniques.

viiThe VVB also used other standard auditing techniques for validation, as referred to in sections 7.1.3 and 9.1.3 of the CDM VVS-PA .

viii. Reference to recently released ISO and ISEAL guidance documents for carrying out remote audits without compromising the reliability and effectiveness of the certification process.

Regarding Gold standard requirements and in the view of current situations where travel restrictions have been put in place for domestic as well as international travel around the world due to COVID-19 pandemic, the VVB has decided to conduct the validation remotely as per above mentioned guidelines and rule updates, which states:

*“If site visit cannot be postponed due to significant impact of delaying the site visit on VVB and/or project developer due to timeline/commitment as per validation/verification or GS-VERs delivery agreement, VVB may replace mandatory on-site visits with remote audits. The audit may include but not limited to validation, verification, the inclusion of PA, design change review etc.”*

The alternative means used for the validation is remote interviews as well as document reviews. In opinion of CCIPL, the alternative means used are justified and they are sufficient for the purpose of validation.

In line with above mentioned paragraph 4.1.1 (b) of COVID 19 Interim Measures dated version 5 dated 21/12/2021 /B08/. The site visit cannot be postponed due to timeline provided as per validation contract /29/ with GTE, hence VVB replaced mandatory on-site visits with remote audits.

The alternative means used for the purpose of validation are demonstrated as follows:

The validation team has carried out remote interviews (by audio / video calls) in order to assess the information included in the PDD and monitoring plan procedures adopted during the previous crediting period. During the desk review, the relevant project records were checked. Photographs of the project design used, soft copy of generation records were used to cross check consistency of information.

The alternative means used for the purpose of validation as per the Paragraph 7.1.3 of VVS for PAs version 3.0 /B03/ are demonstrated as follow:

Validation team has carried out remote interviews (through google) in order to assess the information included in the PA PDD. During the desk review, the relevant records in consistent with the PA PDD were checked, comparing the relevant evidence and interview with the PP representative through remote interviews. Validation team based on above justification confirms that the validation based on desk review are sufficient for the purpose of validation.

## C.3. Interviews

| No. | Interviewee | | | Date | Subject | Team member |
|---|---|---|---|---|---|---|
| | Last name | First name | Affiliation | | | |
| 1. | Horasan | Hakan | Site Manager-Elestaş Elektrik Üretim A.Ş | 17/05/2022 | •Discussion on Project Design and eligibility criteria<br>•Any design or Technology change to be used in the PA<br>•OFN<br>•Project start date and Project Location<br>•Project boundary<br>•Baseline Scenario<br>•Baseline Identification<br>•PP Management System Manual<br>• Discussion on project additional funding and involvement of any ODA<br>•Discussion on the PA PDD and ER sheet<br>•Discussion on the GS preliminary review comments<br>•Sustainability aspects of the PA<br>SDG impacts | Dinesh Mane and Muhammet Ali Erduran |
| 2. | Aygenc | Merve | GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ | 17/05/2022 | •PDD design<br>•OFN<br>•ER spreadsheet | Dinesh Mane and Muhammet Ali Erduran |
| 3. | Fetullah | Sisman | Fisherman-Sahinkayasi Village | 17/05/2022 | •Sustainability aspects of the PA<br>•SDG impacts<br>•Safeguarding principles | Dinesh Mane and Muhammet Ali Erduran |
| 4 | Hasan | Sisman | Head of Village-Sahinkayasi Village | 24/05/2023 | •Sustainability aspects of the PA<br>•SDG impacts<br>•Safeguarding<br>•principles | Dinesh Mane and Muhammet Ali Erduran |
| 5 | Muammer | Yaznur Aza | Assistant head of Village-Sahinkayasi Village | 24/05/2023 | •Sustainability aspects of the PA<br>•SDG impacts<br>•Safeguarding<br>•principles | Dinesh Mane and Muhammet Ali Erduran |
| 6 | Mehmet | Sisman Ciftci | Farmer-Sahinkayasi Village | 24/05/2023 | •Sustainability aspects of the PA<br>•SDG impacts<br>•Safeguarding<br>•principles | Dinesh Mane and Muhammet Ali Erduran |
| 7 | Hakan | Yuksel | Site Manager-Elestaş Elektrik Üretim A.Ş | 24/05/2023 | •Implementation of project activity<br>•Any design change | Dinesh Mane and Muhammet Ali Erduran |

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| | | | | | •Sustainability aspects of the PA | |

### C.4.Sampling approach

>> Not applied sampling plan.

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

| Areas of validation of compliance | No. of CL | No. of CAR | No. of FAR |
|---|---|---|---|
| **Project of activities** | | | |
| Identification of project type | -- | -- | -- |
| Description of PA | -- | 03 | -- |
| Management system | -- | -- | -- |
| Demonstration of additionality (OFN) of PA | -- | 01 | -- |
| Start date and duration of PA | -- | -- | -- |
| Environmental impacts | -- | -- | -- |
| Application of methodologies and standardized baselines | -- | -- | -- |
| •General | -- | 01 | -- |
| •Baseline scenario | -- | 01 | -- |
| •Estimation of emission reductions or net anthropogenic removals | -- | 01 | -- |
| •Monitoring plan | -- | 01 | -- |
| Crediting period type and duration | -- | 01 | -- |
| Eligibility criteria for inclusion of PA | -- | -- | -- |
| Section D (Other) | -- | 01 | -- |
| **Total** | -- | 10 | -- |

## SECTION D.Validation findings

### D.1.Project Activity

#### D.1.1. Identification of project type

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| **Means of validation** | DR,I |
| **Findings** | -- |
| **Conclusion** | CCIPL based on review of PDD and interviews confirms that the proposed GS PA complies with Renewable Energy Activity Requirements V1.4 and it is not A/R PA. The assessment in compliance with § 37 CDM VVS for PAs (version 03.0) /B03/ and GS4GG requirements. |

#### D.1.2. Description of PA

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| **Means of validation** | DR,I |
| **Findings** | CAR 01, CAR 07 , CAR 09 and CAR 10 had been raised and closed in this regard. Please refer appendix 4 for details. |
| **Conclusion** | The description of the project activity contained in the PDD /01/ is transparent, detailed and provides a clear overview of the project. Its content was confirmed by means of document review /01/ and interviews to validate the accuracy and completeness of the project description.<br><br>The purpose of this Project Activity- "ÇATALOLUK HEPP" (henceforth referred as PA) through implementation of the project activity which primarily aims at reducing Green House Gas (GHG) emissions through utilization of renewable energy technology for generation of electrical energy. The electricity generated from the project activity (approximately 31,990 MWh annually) will displace equivalent electricity generation in grid connected power plants. The project activity will reduce the anthropogenic GHG emissions (approximately 14,766 $tCO_2$ or GS VERs annually) associated with the |

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| | equivalent amount of electricity generation from Turkish grid connected power plants predominantly fossil fuel based.<br><br>Elestaş Elektrik Üretim A.Ş has installed and commissioned a 9.54 MWe run-of-river reservoir hydropower plant on Göksun District of Kahramanmaras Province in Turkey. Project got registered in name of PP as per registered PDD was " BEYTEK Elektrik Üretim AŞ" which was purchased a complete ownership of project activity by "Elestaş Elektrik Üretim A.Ş " in 2018 /08/. The name of other PP got changed from "Global Tan Energy Ltd." to "GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ". Both this name change is communicated to Sustain Cert by PP /26/. The EMRA Electricity production license is also in name of "Elestaş Elektrik Üretim A.Ş" The same is confirmed with PP during offsite visit interview and document review. This project is composed of two turbines of 4.77 MWe and supply of this the generated electricity to the Turkish National Electricity Grid. During remote interview it has been confirmed from Site Manager of the Hydro Power Plant (HPP), that the electricity produced by HPPs is transmitted to TEİAŞ Transmission line of 8 km. The project is located on Tekir Creek at about 55 km north of Kahramanmaras Province and 40 km south of Göksun District of Turkey. Project consists of a hard-fill weir located at 823.5 m altitude and 17m height from the thalweg level whereas the powerhouse is located at about 724.5 m altitude. Other Project elements includes conveying channel (1447.6m) and tunnel (1252.4 m), forebay and penstock, which provides a gross elevation difference of about 114.5m, powerhouse and two horizontal Francis type turbines. The Substation belongs to TEIAS. The meters of the power plants are located in the HPPs. The meters are read by AEDAŞ with the Remote Reading System OSOS and reported to the EPİAŞ institution. AEDAŞ is a private energy distribution company working under authorisation of TEIAS. The SCADA system of power plant can be controlled from the Monitoring Room. Transformer of 6 MVA capacity installed in Hydro Power Plant field to step up Power Generation from 6.3 V to 34.5 kV. The validation team is assessed that the technical lifetime of turbines is stated as 150,000 hours in the relevant methodology. Lifetime of turbine is 150,000 hours which is 6250 days or 17 years which is enough time for the renewal of crediting period of the project. Though the total crediting period of GS project activity is 21 (7*3) years. Nonetheless, new turbines will be installed after end of life of old turbines, hence the project activity will remain continues till end of GS crediting period of project activity.<br>The crediting period start date of the project is 01/04/2017 which is expected date which will be the replaced with renewal date of this CP i.e. first day after the end date of the first certification cycle. as per para 5.1.45 of GS4GG PRINCIPLES & REQUIREMENTS Version 1.2, as renewal of CP is completing after the last date of first crediting period. Tangible total length of CP is 07 years, however as per para 5.1.46 of GS4GG PRINCIPLES & REQUIREMENTS Version 1.2, delay in the completion of re-validation beyond the last date of current certification cycle (30/04/2017) shall result in a reduction of any issuance of Certified Products and/or Impact Statements available during following certification cycle (a delay of > 5 years beyond the first cycle). Hence no Certified Impact Statements shall be issued for the period of delay. Hence, from 01/04/2017 to 24/11/2022 no carbon credit issuance during 2nd crediting period will be claimed by PP. As 24/11/2022, is a renewal date or first day on which RCP validation opinion submitted by VVB i.e. the first day after the end date of the current certification cycle in line with paragraph 5.1.45 of GS4GG Principle and Requirements V1.2. The end date of crediting period is 31/03/2024 with choice of renewable crediting period. Start date of project activity is determined as 10/07/2009, which is date of share transfer of the project. The project activity is in line with the sustainable development priority of the country. The electricity generated from the hydro Power plant is sold to national grid (Turkish grid).<br>The meters of the power plants are located in the Substation Center of HPP. The meters are read by AEDAŞ with the Remote Reading System OSOS and reported to the EPİAŞ institution. The SCADA system of CATALOLUK Power Plant can be controlled from the Monitoring Room.<br><br>The Monitoring and Controlling Process are managed by Monitoring Room with Technical Staff in HPP. There are 2 energy meters which is provided in CATALOLUK HPP in the Sub- Station Centre. One is main energy meter and other one is back-up energy meter. Back up energy meter is being used for cross check of generated electricity purpose. |

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| | The AEDAŞ provided remote access to the meters and monitors generated energy in MWh every 15 minutes from both meters. The amount of energy generated is also comparing the values with the back-up energy meter.<br><br>AEDAŞ remote reading system receives data from electricity meters which are controlled by AEDAŞ in continue basis each after15 minutes. The data read in the meters were simultaneously also received by TEIAS as well. Hourly production data of the PP are entered on the website of AEDAŞ. In addition, these data are processed into Excel forms called daily electricity production logbooks by PP staff. The same logbook is being used for comparison of meters electricity generated data consistently. The hourly energy production data gets from the SCADA system for each unit is also recorded in the " daily electricity production logbooks " and the same as well using for electricity generation through meters data, crosscheck purpose. Electricity supplied to grid and imported from grid is accessible through EPIAS website. The same screenshot will be used for crosscheck of energy generation and further emission reduction calculations, by calculation net electricity through difference in exported and imported electricity. The metering records are recorded in OSF/Meter reading Document form which is daily generated from main meter are considered as a primary source of data for emission reduction calculations.<br>Elestaş Elektrik Üretim A.Ş is the Project Participant (PP) of this PA.<br><br>Besides reducing GHG emission in line with the United Nations Sustainable Development Goal (SDG) number 13 'Climate Action, the project activity will also seek to increase other long-term sustainability benefits for local villages as well as the local environment. Depending on the specific technology to be implemented by this PA, the contribution on sustainable development may include:<br>•Increasing the number and percentage of renewable energy power plants such as hydro power plants that will provide substantial increase in the share of renewable energy in the global energy mix and ensure universal access to affordable, reliable, and modern energy services. The average annual clean energy generation is expected to be 31,990 MWh. (In line with SDG 7 'Affordable and Clean Energy')<br>•The project will generate employment and income. All employees will be provided with the required HSE trainings and certification depending on the duties of their own. The project is expected to create job opportunity for 07 people. (In line with SDG 8 'Decent Work and Economic Growth')<br><br>Validation team based on review of PDD /01/ and interview confirms that:<br><br>1.The PDD provides the framework developed for the implementation of the proposed PA;<br>2.The PDD provides the policy/measure or stated goal that the PA seeks to promote;<br>3.The PA is a voluntary action by the PP as confirmed by the validation team upon review of the PDD /01/.<br><br>This is in conformance with §38 of CDM VVS for PAs (version 03.0) /B03/.<br><br>In accordance with § 39 of CDM VVS for PAs (version 03.0) /B01/ and § 2.1.1 of the GS4GG PA requirements the validation team has assessed the geographical boundary of the PA. This was as checked and confirmed by reviewing the PDD /01/ and interviews with representatives of PP. Review of PDD reveals the definition of the boundary for the PA in terms of a geographical area has been transparently defined, and used in establishing the boundary of the PA.<br><br>The PP has taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary. This conforms to the requirement of CDM VVS for PAs (version 03.0) /B03/. and GS4GG PA requirements. /B05/<br><br>PA using methodology AMS.I. D, Ver 18 /B02/ will replace energy generated due to fossil fuel-fired power plants that are displaced due to the project activity. This conforms to the requirement of §41 of CDM VVS for PAs (version 03.0) /B03/.<br><br>From the desk review of PDD /01/ and interviews of the PP representatives, it is |

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| | revealed that this Project does not involve any ODA funding. Thus, the validation team considers no ODA funding has been involved under this Project. This is further confirmed by the undertaking provided by the PP.<br><br>The length of the PA is taken as 46 years as per license issued by EPDK /04/.<br><br>Based on assessment above, CCIPL confirms that the description of the proposed CDM PA in the PDD is accurate and complete and it provides an understanding of the PA, and the project is in line with the applied methodology /B02/ and GS4GG requirements. |

### D.1.3. Management system

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|---|---|
| **Means of validation** | DR,I |
| **Findings** | -- |
| **Conclusion** | Validation team reviewed the PDD /01/ confirms that clear and transparent information about responsibilities, records handling, training, technical review procedures, record keeping, documentation control and measures for continual improvements. The same has been confirmed during the interviews with representatives of PP and document review /01/. The validation team concludes that the operational and management plan described in the PDD /01/ is complete. This is deemed appropriate by the validation team. Elestaş Elektrik Üretim A.Ş is Project Participant (PP) and GTE Karbon Sürdürülebilir Enerji Eğitim Danışmanlık ve Tic. A.Ş. is the entities of this PA. GTE also communicates with the Gold Standard/SustainCert as a Project Representative. PP Roles & Responsibilities/ Competencies have been provided in the GS PDD.<br><br>Validation team confirms the compliance of the requirements of CDM PS for PA (version 03.0) /B06/ and CDM VVS for PA (version 03.0) /B03/. |

### D.1.4. Demonstration of Ongoing Financial Need (OFN)

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| **Means of validation** | DR,I |
| **Findings** | CAR 05 had been raised in this regard and closed. Please refer appendix 4 for details. |
| **Conclusion** | It is checked that as per para 4.1.52 of Gold Standard for the Global Goals, Principles and Requirements – Version 1.2, Ongoing financial need shall be demonstrated at design certification renewal. The validation team checked demonstration provided by PP in section B.5.2 of PDD and confirms that the IRR with the carbon credits revenue also required in 2nd crediting period to sustain the project activity. The validation team also checked the carbon credits revenue in the 1st and 2nd monitoring period against the invoice raised by the seller to the purchaser. The same was found to be appropriate. Therefore, the ongoing financial need derived from GS certification is necessary to reduce unattractiveness of the project and enhance the project's operation in the 2nd crediting period. This GS finance helps to maintain project activity contributing to the development of local communities in terms of income and employment creation, worker quality increase and emission reduction.<br>The ongoing financial need derived from GS certification is necessary to reduce unattractiveness of the project and enhance the project's operation in the second crediting period. As stated in B.5 of PDD, the ongoing financial need derived from GS is still valid considering that the financial model validated in first crediting period projects 20 years of operation of the project. The same is verified by validation team by checking registered IRR sheet. Hence, the model is still valid for the current crediting period. This GS VERs helps to maintain project activity contributing to the development of local communities in terms of income and employment creation, worker quality increase and emission reductions.<br>During the first crediting period, the following VERs has been issued in the monitoring periods as follows:<br>1st monitoring period:<br>Apr 01, 2010 — May 30, 2012: 8,012 GS VERs (issued)<br>Apr 01, 2010 — May 30, 2012: 16,955 GS VERs (issued)<br>Apr 01, 2010 — May 30, 2012: 11,808 GS VERs (issued)<br><br>2nd Monitoring Period:<br>Jun 01, 2012 — Sep 30, 2015: 5,590 GS VERs (issued) |

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| | Jun 01, 2012 — Sep 30, 2015: 15,917 GS VERs (issued)<br>Jun 01, 2012 — Sep 30, 2015: 7,232 GS VERs (issued)<br>Jun 01, 2012 — Sep 30, 2015: 17,430 GS VERs (issued). The benchmark of PA selected during initial validation period is 16.14%. the same benchmark is still not crossed by project activity after even obtaining carbon revenue. Hence project is still required carbon revenue.<br>Currently, there are no change of policy/market which may impact on the project finance. Thus, the validation team is of the opinion that the ongoing financial need is necessary for operation and maintenance of the project throughout the crediting period. Hence the finance derived Gold Standard Certification is material to the ongoing sustainability of the Project. Validation team has assessed the ongoing financial need of the project in line with GS4GG Principles and Requirements para 4.1.51 and concluded that the finance derived from GS certification is used and material to the project. Also, as per Principles & Requirements document paragraph 4.1.52, VVB checked and included the previous monitoring data and numbers as above to show the contribution of GS revenues. To conclude the same validation team has checked VERPA agreement /28/ dated 23/08/2021 provided by PP. |

### D.1.5. Start date and duration of PA

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| **Means of validation** | DR, I |
| **Findings** | No findings |
| **Conclusion** | Start date of project activity is determined as 10/07/2009, date of share transfer of the project. The validation team also reviewed the PDD /01/ and found that the duration of the PA is 46 years from project EPDK license.<br><br>Based on the above assessment, the validation team concludes that the description and determination of the start date of the proposed PA is in conformance with the requirements of paragraph 3.1.1 of GS4GG Project of Activity requirements version 1.2./B05/ |

### D.1.6. Environmental impacts

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| **Means of validation** | DR, I |
| **Findings** | -- |
| **Conclusion** | The EIA exemption letter dated 30/12/2009 provided by Ministry of Environment and Urbanization. The project participants conducted an analysis of the environmental impacts of the proposed project activity, including trans-boundary impacts as a part of the national EIA procedures. EIA Application File confirmed EIA application. Aspects of the project's possible environmental impacts were also assessed by GS procedures as detailed in the GS- PDD for the project as per EIA emption letter. Due to project size and location almost, no impact is expected which is found acceptable by CCIPL after on-site remote visit observations and assessment of the project characteristics. Validation team hereby confirms that the project participants have undertaken an analysis of environmental impacts. The same was validated during previous validation of project activity. |

### D.1.7. Local stakeholder consultation

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| **Means of validation** | DR,I. |
| **Findings** | CAR 07 had been raised in this regard and closed. Please refer appendix 4. for details |
| **Conclusion** | The local stakeholder consultation meeting for the project activity was conducted on 03/08/2010 project site and the process was validated during the registration of project activity. The GS Stakeholder feedback round for the project was held on 03/08/2010 at Çataloluk powerhouse. GS validation report was verified to confirm the same. The PP had invited identified stakeholders well in advance through announcement in newspapers to citizens of nearby settlements, NGO's, relevant governmental institutions with details of venue and time of meeting.<br>PP has also maintained established mechanism for ongoing communication with local stakeholders, to allow stakeholders to raise concerns about potential negative impacts during project operation stage. They have provided and communicated about Continuous Input / Grievance Expression Process Book kept in Sahinkayasi village and grievance redressal box kept in Çataloluk Village, which developed as a |

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| | grievance redress procedure, to address disputes with local stakeholders that may arise during project operation phase in this crediting period, including with regard to benefit sharing. The procedure includes processes for receiving, hearing, responding, and attempting to resolve grievances within a reasonable time period. Both mukhtars (village head) in Şahinkayası Neighborhood and Çataloluk Village are responsible to receive and collect the grievances from the local stakeholders. The mukhtar's regularly visit the logbook & complaint box locations along with the Plant manager or operator of PP and look for the grievances. Project proponent acts on the grievances and informs the stakeholder about the resolution action taken by PP. A grievance box and a logbook serves the same purpose. The box is placed in the village while the adjacent neighborhood has the logbook. In both mechanism, the grievances are regularly checked by the mukhtar and consultation mechanism is being kept operational. The same understand by validation team during remote onsite interview carried out with stakeholder i.e., during discussion with Mr. Suleyman and PP.<br>There is no stakeholder grievance/complaint from the local stakeholders in the beginning of the second crediting period i.e. during 1st CP. The only comments received during the first crediting period, which were all about the construction phase were taken into account and responded accordingly during both project operation and verification periods. The issues were handled during the first crediting period. The same was confirmed through the remote audit conducted during the RCP validation and review of readdress grievance register. During remote interview (refer C.3 of this report) with local stakeholder validation team has discussed about the topics of employment, gender equality issues, benefits from project, fish business related issues, logbook kept in head of Sahinkayasi village office and issues noted in logbook if any in previous crediting period, interaction of PP with local peoples, flood related issues if any, claimed SDG benefits, related safeguarding principles topics.<br>Since the project is a retroactive project (Start date of the project is 10/07/2009), PP has conducted integrated stakeholder consultation and stakeholder feedback round as per the requirement of previous GS requirements and para 6.1.4 of GS4GG STAKEHOLDER CONSULTATION AND ENGAGEMENT REQUIREMENTS Version 1.2 at the time of registration of project activity, which is found acceptable. |

### D.1.8. Application of methodologies and standardized baselines

| **Means of Project Verification** | **AMS-I.D. Version 18** | |
|---|---|---|
| | **Applicability criterion** | **Assessment** |
| | **1. Para 4 of the applied methodology:**<br>This methodology is applicable to project activities that:<br><br>**(a)** Install a Greenfield power plant;<br>**(b)** Involve a capacity addition to (an) existing plant(s);<br>**(c)** Involve a retrofit of (an) existing operating plants/units;<br>**(d)** Involve a rehabilitation of (an) existing plant(s)/unit(s); or<br>**(e)** Involve a replacement of (an) existing plant(s)/unit(s). | The project activity is a green field hydro power plant, the applicability criterion is met. Document review including feasibility report and acceptance certificate of project activity was checked to confirm that the project is a greenfield project. |
| | **2. Para 5 of the applied methodology:**<br>**Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:**<br>(a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir.<br><br>(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 | The project compiles by criteria (c) of the applicability criterion as the project activity results in new reservoirs. The power density has been calculated in line with equation 7 of ACM0002 Ver 20.0 which was found acceptable. The applied methodology refers ACM0002 for project emission calculation from 'Emissions from water reservoirs of hydro power plants.'<br>The power density for the reservoir based on the formulae is 41 W/m2. The installed capacity and area of the reservoir used for the calculation of |

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| | W/m2.<br><br>**(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/m2. | power density have been verified from the plant layout diagram index and the feasibility report.<br>Hence the project was found fulfilling the criteria. |
| | **3. Para 6 of the applied methodology:**<br>**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.**<br>**If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.** | The criterion is not applicable as it only has renewable component, and it does not have any non- renewable component. |
| | **4. Para 7 of the applied methodology:**<br>**Combined heat and power (co-generation) systems are not eligible under this category.** | The criterion is not applicable as the proposed project activity is a green field project which involves only the renewable component and not co-generation system. |
| | **5. Para 8 of the applied methodology:**<br>**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 distinct1 from the existing units.** | The criterion is not applicable as the proposed project activity is a green field project which involves electricity generation through the hydropower plant.<br>Document review including feasibility report and acceptance certificate of project activity was checked to confirm that the project is greenfield project |
| | **6. Para 9 of the applied methodology:**<br>**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.** | Since the project is a greenfield project the applicability criterion is not applicable/<br>Document review including feasibility report and acceptance certificate of project activity was checked to confirm that the project is a greenfield project. |
| | **7. Para 10 of the applied methodology:**<br>**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 criterion is not applicable as the proposed project activity is a green field project which involves electricity generation through the hydropower plant.<br>Document review including feasibility report and acceptance certificate of project activity was checked to confirm that the project is a greenfield project. |

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| | **8. Para 11 of the applied methodology: In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.** | The criterion is not applicable as the proposed project activity is a green field project which involves electricity generation through the hydropower plant. Document review including feasibility report and acceptance certificate of project activity was checked to confirm that the project is greenfield Project. |
| | **9. This methodology also refers to the latest approved versions of the following approved methodologies and tools:**<br>**(a) "Project emissions from cultivation of biomass";**<br><br>**(b) "ACM0002: Grid-connected electricity generation from renewable source";**<br><br>**(c) "AMS-I.A.: Electricity generation by the user";**<br><br>**(d) "AMS-I.C.: Thermal energy production with or without electricity";**<br><br>**(e) "AMS-I.F.: Renewable electricity generation for captive use and mini-grid";**<br><br>**(f) "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion";**<br><br>**(g) "Tool to calculate the emission factor for an electricity system";**<br><br>**(h) "Tool to determine the remaining lifetime of equipment";**<br><br>**(i) "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period".** | **Following tools are applicable to the PA:**<br><br>**(g) "Tool to calculate the emission factor for an electricity system";**<br><br>**(i) "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period".** |
| | **Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period, Version 3.0.1** | |
| | **Step 1.1 : If the current baseline complies with all relevant mandatory national and/or sectoral policies which have come into effect after the submission of the project activity for validation or the submission of the previous request for renewal of the crediting period and are applicable at the time of requesting renewal of the crediting period, go to Step 1.2.**<br><br>**If the current baseline does not comply with relevant mandatory national and/or sectoral policies, then assess based on the examination of current practice in the country or region in which the policies apply, whether those policies are systematically not enforced and that non-compliance with those requirements is widespread in the country or region.** | There is no change in national/sectoral policies affecting project implementation. The same is verified by validation team by reviewing following regulations related to PA in Turkey:<br>•Electricity Market Law number 4628<br>•Law on utilization of renewable Energy resources for the purpose of Generating electricity Energy, Law number 5346<br>•Energy efficiency Law number 5627<br>•Forest Law number 6831<br>•Environment Law number 2872<br><br>Hence the Step 1.2. can be evaluated. |
| | **Step 1.2: Assess the impact of circumstances existing at the time of requesting renewal of the crediting period on the current baseline** | The combined margin is updated as per published OM & BM by Ministry of Energy and Resources based on 2021 |

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| | **emissions, without reassessing the baseline scenario. In the situation where the baseline scenario identified at the validation of the project activity was the continuation of the current practice without any investment, an assessment of the changes in market characteristics is required for the renewal of the crediting period. Evaluate whether the conditions used to determine the baseline emissions in the previous crediting period are still valid. Assess the availability of new fuels or raw materials and the impact of electricity or fuel prices in the identification of the current practice for the baseline emissions.** | latest database on 20.09.2022 /27/. |
| | **Step 1.3: This sub-step should only be applied if the baseline scenario identified at the validation of the project activity was the continuation of use of the current equipment(s) without any investment and, the projects proponents or third party (or parties) would undertake an investment later due, for example, to the end of the technical lifetime of the equipment(s) before the end of the crediting period or the availability of a new technology. Assess whether the remaining technical lifetime of the equipment that would have continued to be used in the absence of the project activity, as determined in the CDM-PDD or CDM-PDD-REN, exceeds the crediting period for which renewal is requested. Take into consideration the market penetration of different technologies. Evaluate the penetration rate of different technologies that are available in the market and evaluate how they could affect the baseline.** | There is no overdue technology in the project as the lifetime of the technologies used was defined as 20 years as equity IRR was also calculated during project registration. As the lifetime of equipment is checked as 20 years from the purchase order. Hence, baseline scenario is still valid for the current crediting period. |
| | **Step 1.4: Assess whether data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid or whether they should be updated. Updates should be undertaken in the following cases:**<br>**• Where IPCC default values are used, the values should be updated if any new default values have been adopted and published by the IPCC, for example, in guidelines for national GHG inventories, IPCC assessment report or special reports by the IPCC;**<br>**• Where emission factors, values or emission benchmarks are used and determined only once for** | The combined margin is updated as per OM & BM calculations by Ministry of Energy and Resources [2]. Hence the assessment should proceed to Step 2. |

[2] https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf

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| | **the crediting period, they should be updated, except if the emission factors, values, or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity.**<br>***If the application of Steps 1.1, 1.2, 1.3 and 1.4 confirmed that the current baseline as well as data and parameters are still valid for the subsequent crediting period, then this baseline, data and parameters can be used for the renewed crediting period. Otherwise, proceed to Step 2.*** | |
| | **Step 2: Update the current baseline and the data parameters.** | The data and the parameters are updated for the second crediting period in PDD. The above steps concludes that the baseline is still valid for current crediting period. |
| | **Tool 07: Tool to calculate the emission factor for an electricity system, version 07.0** | |
| | **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).** | The project activity supplies electricity to a grid. The same is verified from System usage Agreement with AEDAŞ /08/. Hence, this condition is met. |
| | **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** | $CO_2$ emission factor for the displacement of electricity generated by power plants in an electricity system is determined by calculating the "combined margin" emission factor (CM) of the electricity system /27/. Off-grid plants are not included in the calculation of EF by Ministry of Energy and Resources as the data set is provided by TEİAŞ which is the governmental body for the distribution of grid-connected output[3]. |

[3] https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf

| | | |
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| | **generation and not to other aspects such as transmission capacity.** | |
| | **In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.** | The project is not CDM project, it is a voluntary GS project. Hence, this condition is N/A. |
| | **Under this tool, the value applied to the $CO_2$ emission factor of biofuels is zero.** | The project does not involve biofuels in any way. |
| | **Tool 20: Assessment of debundling for small-scale project activities, Ver 04** | |
| | The project activity is not a debundled component of a larger project activity as explained below.<br><br>a) A proposed small-scale project activity shall be deemed to be a debundled component of a large project activity if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:<br><br>There are three projects registered to VCS program with the same participants (Elestaş as project owner):<br><br>•MURAT HYDROELECTRIC POWER PLANT: Small-scale<br><br>•YAZI 1.13 MW HEPP: Small-scale<br><br>•YAYLABEL 5.2 MW HYDRO POWER PLANT: Small-scale<br><br>b)The projects are hydro-electricity power plant.<br><br>c)The three projects registered in a VCS GHG mechanism within the previous 2 years[4], [5], [6].<br><br>d)Three projects are in different provinces; hence the boundaries are not within 1 km of each other's. The same is verified by validation team by checking google earth.<br><br>Therefore PA is eligible to use the simplified modalities and procedures for SSC PAs. | |
| | If a proposed small-scale project activity is deemed to be a debundled component in accordance with paragraph 2 above, but total size of such an activity combined with the previous registered small-scale CDM project activity does not exceed the limits for small scale CDM project activities as set in paragraph 6 (c) of the decision 17/CP.7,1 the project activity can qualify to use simplified modalities and procedures for small-scale CDM project activities. | As per above explanation scenario d is not matching hence proposed small-scale project activity is a not a debundled component of large PA. Hence this condition is NA. |
| | In cases where a DOE has, in assessing the possibility that a small-scale project is a debundled component of a large-scale project activity, determined that two or more project activities are taking place within one kilometre of each other and with the same project participants:<br>(a)The DOE shall ensure that these projects are described in the PDD and that the | As per above explanation scenario d is not matching hence proposed small-scale project activity is a not a debundled component of large PA. Hence this condition is NA.<br><br>Therefore PA is eligible to use the simplified modalities and procedures for SSC PAs. |

[4] https://registry.verra.org/app/projectDetail/VCS/1193
[5] https://registry.verra.org/app/projectDetail/VCS/583
[6] https://registry.verra.org/app/projectDetail/VCS/582

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| | validation report contains specific details on how it has been determined that the project activities are not a debundled component of a large scale project activity;<br>The DOE shall consider the project activities to be a debundled component of a large-scale project activity even in cases where they are taking place in different project categories, if the project activities are Type 1 project activities providing energy to the same user and are registered, or submitted for registration, with 2 years of each other. | |
| **Findings** | No findings | |
| **Conclusion** | The validation team confirms that; It has critically assessed each applicability condition listed in the selected methodology and the relevant tools; information contained in the PDD against these criteria. The selected CDM methodology and tools for the project activity is applicable. The selected version of the methodology is valid at the time of submission of the proposed GS project activity for registration. | |

### D.1.9. Project boundary, sources and GHGs

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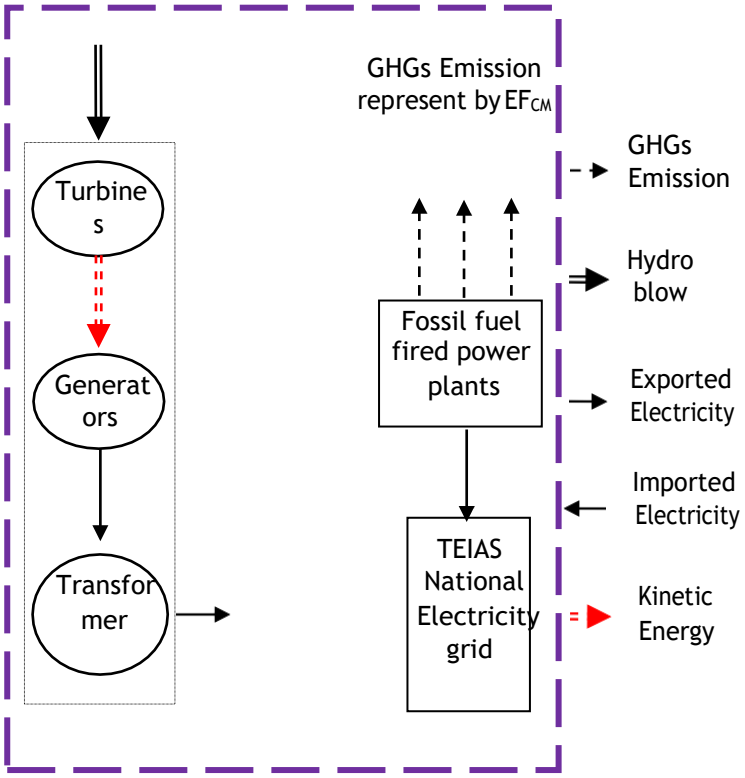
| **Means of validation** | According to AMS.I.D. Ver 18, the spatial extent of the project boundary includes this Hydro Power Plant and all power plants connected physically to the national electricity grid to which the proposed project is also connected.<br><br>The flow diagram of the project boundary is shown in Figure below. |




**Project boundary**

The GHGs and emission sources included in the project boundary are shown in the table below:

**Sources and gases included in or excluded from the project boundary**

| Source | | GHGs | Included? | Justification/Explanation |
|---|---|---|---|---|
| Baseline scenario | CO2 emission from electricity generation in fossil fuel fired power plants that is displaced due to the project activity | $CO_2$ | Yes | Main emission source |
| | | $CH_4$ | No | Minor emission source |
| | | $N_2O$ | No | Minor emission source |
| Project scenario | Proposed project | $CO_2$ | No | According to ACM0002, the project emission of hydro energy project activity is zero. |
| | | $CH_4$ | No | |
| | | $N_2O$ | No | |

The information was validated during the remote auditing conducted by the validation team and same has been demonstrated in section B.3 of the PDD.

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| **Findings** | No findings |
| **Conclusion** | The project boundary confirmed during the remote auditing along with the documentary evidence was found in conformance with the applied baseline methodology. All sources of GHG emissions required by the methodology have been included in the project boundary and are justified in reference to the project activity. There are no project emissions/leakage emissions of any sort which are not |

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| | addressed by the applied methodology occurring because of the project activity. |

### D.1.10 Baseline scenario

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| **Means of validation** | DR, I |
| **Findings** | -- |
| **Conclusion** | The paragraph 19 of the applied methodology (AMS.I.D Version 18.0) /B07/ prescribes a standardized baseline scenario for all greenfield projects “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin calculations described in the “Tool to calculate the emission factor for an electricity system”.<br>The last crediting period baseline scenario is still applicable to this crediting period also, as explained with the help of tool 11 in above section D.1.8 of this report.<br>The project activity hydro power plant involves the installation and operation of a Greenfield hydro power plant to generate and supply electricity to the national grid which has been verified from Project License /07/, Power Purchase Agreement /04/ and Photo/video of site /06/. The Turkish national electricity grid is operated is the unique transmission and distribution line, to which all power plants in Turkey are physically connected to and the proposed project activity is not outside that system. Therefore, the baseline scenario of the project is to provide an equal amount of electricity provided by the national grid where the proposed project is also connected.<br><br>The combined margin emission factor of the national grid ($EF_{grid,,y}$) is calculated according to Tool 07 - "Tool to calculate the emission factor for an electricity system", version 07.0, will be used to calculate baseline emissions from the project activity. Data to calculate $EF_{grid,,y}$ is published by Republic of Turkey Ministry of Energy and Natural Resources released them on 20/09/2022 /27/ (https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klim/%C4%B0klimDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/Bform2020.pdf ) .<br>Validation team has checked the grid emission factor calculation from Appendix 5 of the PDD and found to be correct. The same is also justified in PDD. This is in conformance with §12.1.5 (b) of GS4GG Project of Activity requirements version 1.2. |

### D.1.10 Estimation of emission reductions or net anthropogenic removals and its related SDG goals

**Means of validation**

The project contributes directly in achieving the SDG 7, 8 & 13 as required by Principle-1 of GS4GG.

| Sustainable Development Goals Targeted | Most relevant SDG Target | SDG Impact Indicator (Proposed or SDG Indicator) |
|---|---|---|
| 13 Climate Action (mandatory) | Target 13.2: Integrate climate change measures into national policies, strategies and planning. | 13.2.3 : Total greenhouse gas emissions per year |
| 8 Decent Work and Economic Growth | Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value | Indicator 8.5.1 – Average hourly earnings of female and male employees, by occupation, age and persons with disabilities |

| | | |
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| 7 Affordable and Clean Energy | 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 (MWh of renewable energy generated) |

The SDG Impact Tool Excel Template is verified by validation team and the same is found to be appropriate to validation team in line with requirements of GS.

**Explanation of methodological choices/approaches for estimating the SDG Impact:**

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

This SDG outcome is measured in accordance with applied methodology AMS.I.D, Ver 18.0 for the net electricity supplied to the national grid by the project,

$EG_{PJ,facility,y}$ (MWh). $EG_{PJ,facility,y}$ is determined as follows:

$EG_{PJ,facility,y} = EG_{export,y} - EG_{import,y}$

Where:

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

$EG_{export,y}$= Quantity of electricity exported to the national grid by the project activity in year y (MWh/yr)

$EG_{import,y}$= Quantity of electricity imported from the national grid by the project activity in year y (MWh/yr)

Baseline:

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

Project's outcome:

This project annually supplements 31,990 MWh of clean and sustainable electricity to the national grid, thereby contributing to the Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.

The average annual clean energy generation is expected to be 31,990 MWh. Balance of payment is sustained by the replaced NG which corresponds to approximately consumption of 6,868,141 million m3 of natural gas and avoided corresponding consumption of 19,162,114 million TL annually.

Air quality will be sustained by SO2 emission reduction which is calculated as 256.06 tons per year and NOx emission reduction as 81.25 tons per year.

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

Baseline:

The project activity is located in Göksun District in Turkey. The same location is having illiterate , non-quality employment and no Employment situation is there. The same is conformed during offsite remote interview with local stakeholders.

Project's outcome:

The project leads to employment opportunities for the local community with an expected average monthly salary as per government rules, which would not have been possible in the baseline scenario. PP ensuring that the staff receives their full salaries on time for all including number of locally recruited staff as per their social security records. The project provides sustainable energy resources contributing to the economic development of the region.

The project contributes to the Target 8.5:

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

| | |
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| | The project leads to employment opportunities for the local community with an Quality of Employment. Contribution to quality of employment by ensuring that the staff is trained and certified for the required positions to avoid injuries. Number of personnel certified/trained during operation phase and the number of injuries during both construction and operation will monitor for the same.<br><br>The project contributes to the Target 8.8:<br>- 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"<br><br>**SDG 13: Take urgent action to combat climate change and its impacts**<br>For the climate combat action, this project directly reduces 14,766 tons of CO2 equivalent/year, thereby the project contributes to the National SDG 13 - Target 13.2: Integrate climate change measures into national policies, strategies and planning.<br>This SDG outcome is measured in accordance with AMS.I.D "Grid-connected electricity generation from renewable sources" version 18 for the emission reductions generated by the project, $ER_y$ (tCO2e). SDG 13 - Emission Reductions are calculated using the following equations:<br>Baseline emissions ($BE_y$)<br>Baseline emissions include only CO2 emissions from electricity generation from fossil fuel fired power plants that are displaced due to the project activity, calculated as follows (as per the applied methodology):<br>$BE_y = EG_{PJ,facility,y} \times EF_{grid,,y}$<br>Where:<br>$BE_y$ Baseline emissions in year y (tCO2/yr).<br>$EG_{PJ,facility,y}$ 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)<br>$EF_{grid,,y}$ Combined margin $CO_2$ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system."<br>**Calculation of $EG_{PJ}$**<br>Because the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, then:<br>$EG_{PJ,y} = EG_{PJ,facility,y}$ (as per the applied methodology)<br>Where:<br>$EG_{PJ,y}$= 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)<br>$EG_{PJ,facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)<br>Therefore, the baseline emissions are calculated as follows:<br>$BE_y = EG_{PJ,facility,y} \times EF_{grid,,y}$<br><br>**Project emission ($PE_y$)**<br>According to para 31 of ACM0002 (referred by AMS.I.D Ver 18), Version 20.0, the project emissions are calculated using the following equation:<br>$PEy = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$<br>Where:<br>$PE_y$ Project emissions in year y (tCO2e/yr)<br>$PE_{FF,y}$ Project emissions from fossil fuel consumption in year y (tCO2/yr)<br>$PE_{GP,y}$ Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO2e/yr)<br>$PE_{HP,y}$ Project emissions from water reservoirs of hydro power plants in year y (tCO2e/yr)<br>The proposed project is a hydro power plant that neither uses fossil fuel nor operates geothermal power plants but having water reservoir (i.e. $PE_{FF,y} = 0$; $PE_{GP,y} = 0$)<br><br>The project activity is a newly built hydropower project activity with a reservoir.<br>The emission of the reservoir area is calculated as given below: |

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

PD = Power density of the project activity ($W/m^2$)

$Cap_{PJ}$ = Installed capacity of the hydro power plant after the implementation of the project activity (W)

$Cap_{BL}$ = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero

$A_{PJ}$ = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full ($m^2$)

$A_{BL}$ = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full ($m^2$). For new reservoirs, this value is zero.

$A_{pj}$ = 233,567.93($m^2$) [7]

$A_{bl}$ = 0 $m^2$

$Cap_{pj}$ = 9,540 000 W

$Cap_{bl}$= 0 W

Therefore, the Project Emission of the project activity is:

9,540 000 W/ 233,567.93 $m^2$ = 41 $W/m^2$

The project activity has a power density of 41 $W/m^2$, which is larger than 10 $W/m^2$. As per the applied methodology , the project emissions are Zero. ($PE_{HP,y}$ = 0); therefore, the project emission is zero:

$PE_y$ = 0

**Leakage ($L_y$)**

According to para 53 of AMS.I.D, Ver 18 (referred by AMS.I.D Ver 18), no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emissions sources are neglected.

**Emission reductions ($ER_y$)**

Emission reductions are calculated as follows:

$ER_y = BE_y - PE_y$

Where:

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

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

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

Validation team confirm that the methodological choices/approaches for estimating the SDG Impact have been clearly explained and found OK.

**Ex ante estimation of SDG Impact:**

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

**Project emissions ($PE_y$)**

The emissions of this hydro power project $PE_y$ = 0. This is accepted to the validation team as the proposed project is a hydro power plant that neither uses fossil fuel nor operates geothermal power plants or having water reservoirs.

**Baseline emissions ($BE_y$)**

Baseline emissions include only $CO_2$ emissions from electricity generation by fossil fuel fired power plants that are displaced due to the project activity. It is calculated as follows:

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

Where:

[7] Reservoir Area: Google Earth Measurement

$BE_y$ Baseline emissions in year y (t CO2e/yr).
$EG_{PJ,facility,y}$ Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GS project activity in year y (MWh/yr), and equal to 31,990 MWh/yr. The electricity generation is based on the "Technical Design Report (TDR) / feasibility report of this Hydro Power Plant" /12/ which was made by third party and was approved by Ministry of Electricity & Renewable Energy Authority, hence accepted to the validation team.
$EF_{grid,,y}$= 0.4616tCO2/MWh. Validation team has checked the Emission factor calculation and found correct.
Therefore:
**$BE_y$ = 31,990 × 0.4616 = 14,766 $tCO2_e$/yr**

**Leakage ($LE_y$)**
As it is stated in AMS.I.D, Ver 18.0, no leakage emission is considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport). These emission sources are neglected.

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

| Year | Baseline estimate ($tCO_2$) | Project estimate ($tCO_2$) | Net benefit ($tCO_2$) |
|---|---|---|---|
| 2022 (01/04/2017 (replace with current date of renewal) - 31/12/2022) (31 Days) | 1,258 | 0 | 1,258 |
| 2023 | 14,766 | 0 | 14,766 |
| 01/01/2024-31/03/2024 (121 Days) | 4,895 | 0 | 4,895 |
| **Total** | **20,919** | **0** | **20,919** |

The detail ER calculation is demonstrated in the separate ER spreadsheet /02/ by the PP and validated by the validation team with respect to correctness of all parameters and their sources.

Emission Reductions ($ER_y$)
Emission reductions are calculated as follows:
$ER_y = BE_y - PE_y = 14,766\ tCO_2/yr$
Summary of ex ante estimates of each SDG Impact:

**SDG 7 – Ensure access to affordable, reliable, sustainable and modern energy for all Net electricity supplied to national grid**

| Year | Baseline estimate | Project estimate (MWh) | Net benefit (MWh) |
|---|---|---|---|
| 2022 (01/04/2017 (replace with current date of renewal) - 31/12/2022) (31 Days) | 0 | 2,724 | 2,724 |
| 2023 | 0 | 31,990 | 31,990 |

| | | | | |
|---|---|---|---|---|
| 01/01/2024-31/03/2024 (121 Days) | 0 | 10,605 | 10,605 |
| **Total number of crediting years** | **1.4** | | |
| **Total** | **0** | **45,319** | **45,319** |

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

The project leads to employment opportunities which would not have been possible in the baseline scenario. The project is expected to provide permanent employment to 07 people.

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

At least 7 people to be employed by PP during lifetime of project activity.

### D.1.10 Monitoring plan

**Means of validation**

The monitoring plan for the project activity is provided in Section B.7 of the PDD /01/, based on the approved monitoring methodology. The monitoring plan is being correctly applied to the project activity and is in compliance with the requirements of the applied methodology.

Parameters available at the time of validation (ex-ante) (Mention under section B.6.2 of the GS PDD /01/) are:

| Relevant SDG Indicator/ Safeguarding Principle | Parameter | Description | Unit | Value | Justification for the applied value |
|---|---|---|---|---|---|
| 13 | $EF_{grid,y}$ | Combined margin $CO_2$ emission factor for grid connected power generation | $tCO_2/MWh$ | 0.4616 | Validation team has Checked the Calculation for combined margin $CO_2$ emission factor and found correct. The emission factor is calculated as per |

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| | | | in year y | | | the latest version of the tool "Tool to calculate the emission factor for an electricity system" Version 7. Calculated ex-ante based on 75% of BM and 25% of OM values approach.<br><br>The Operating margin and Build margin grid emission factor have been calculated by the Ministry and is the latest available data in year 2021 and is designed in compliance with the tool "Tool to calculate the emission factor for an electricity system" Version 7.<br><br>Validation team has checked the calculation and found correct. |

Parameters that will be monitored (ex-post) (Mention under section B.7.1 and D.1 of the GS PDD /01/) are:

| Relevant SDG Indicator/Safe guarding principle | Parameter | Description | Unit | Monitoring |
|---|---|---|---|---|
| **SDG 7 - Indicator 7.2.1: Renewable energy share in the total final energy consumption** | $EG_{PJ,facility,y}$ - Access to affordable and clean energy services | Quantity of electricity generated and supplied by the project power plant to the grid in year y | MWh/year | The electricity will be continuous measured at the connection point by power meters and monthly recorded. EPIAS records will be used for calculations of emission reductions and these records will be crosschecked with meter reading records. Hence primary data for ER calculations is EPIAS records to calculate net electricity |

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| | | | | | generated by project activity.<br>The net electricity supplied to the grid will be calculated by subtracting $EG_{y,import}$ from $EG_{y,export}$. Two-way power meters installed atthe grid-connected point to Measure the Amount of electricity supplied and consumed by the project by the reverse direction. The recorded data will be confirmed by the electricity protocol . Calibration of the meters are valid for 10 years based on related regulation /18/, /09/, /12/. The meters should also comply with EPDK regulations /18/ which define the accuracy class of the meters as 0.2 or 0.5 depending on the capacity of the circuit. In line with review of Connection Agreement /08/ Two calibrated meters act as backup for each other. Maintenance and calibration of the metering devices will be made by AEDAŞ periodically. If the difference |

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| | | | | | between the readings of two devices exceeds 0.5%, maintenance will be done before waiting for periodical maintenance. AEDAŞ does not perform “test” for energy meters unless the PP requires to do so. There is two different examination to be performed by the electricity distribution company. The “calibration”, which is mandatory will be performed by authorized distribution company, is realized every 10 years, since there is a seal of the company and it is fixed by the law. However, the other examination which is called “test” is different than calibration and it is only performed on the basis of the need. Electronic data will be archived within the crediting period and 2 years after the end of the crediting period. |

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| | | | | | The power meters should be calibrated and checked every 10 year according to the related national regulations. EPIAS Electricity screenshot shall be crosschecked with electricity meters data. Validation team has Found the monitoring parameter in accordance with the applied methodology. |
| | **SDG 7 and** Principle 3 & 6.1. | Balance of Payments | Currency saving due to avoided fuel import | Currency saving due to avoided fuel import | The monitoring parameter will be checked by calculating NG and currency saving due to avoided NG import corresponding to electricity generation by project. Validation team has Checked the monitoring parameter and found correct. |
| | **SDG 13: Climate Action** | Emissions Reductions in tCO2 | Reduction of CO2 emissions due to implementation of project activity | $tCO_2e$/year | The monitoring parameter would be calculated once in a monitoring period. Cross-checking with electricity data. Validation team has Found the monitoring parameter |

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| | | | | | correct. |
| | **SDG 8 - Indicator 8.5.1 – Average hourly earnings of female and male employees, by occupation, age and persons with disabilities/Safeguarding Principle 1 & 2** | Quantitative employment and income generation | Ensuring staff recruitments and that the staff receives their full salaries on time. | Number of locally recruited staff and their social security records | Project owner recruits women employees as required and their earnings as per required regulations and monitor the same through social security records .All employees will be recruited as per required regulation requirements. workers/employees can join labour organisations, as there are no restrictions from Project owner as per Project owner internal procedures. working agreements with workers/employees specifying working hrs., job responsibilities, details of overtime compensations, health insurance details, leaves aspect, termination of contract rules. The project owner is committed to ensuring that the staff receives their full salaries on time. Number of employees and the evidence for their wages being paid will be checked from the social security |

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| | | | | | | records, which will be provided by the Project Owner. Working hours of the employee will also be checked in order to see whether they are appropriate or not. The same can be verified from Social Security Records of employees. All the above mentioned can be verified from social security records and contract agreement with employees/workers. No child labour will be recruited in PA, the same can be verified from social security register of PA. The monitoring parameter will be checked from labour contracts, salary records Once per monitoring period and also Cross-checking by interviews. Validation team has checked the monitoring parameter and found correct. |

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| | **7.2.1 "Renewable energy share in the total final energy consumption ". 13.2.2 Total greenhouse gas emissions per year"** | $Cap_{PJ}$ | Installed capacity of the hydro power plant after the implementation of the project activity | Name plate capacity, Generation license, EPDK license | The monitoring parameter will be checked from Name plate capacity, Generation license, EPDK license Cross-checking by interviews. Validation team has checked the monitoring parameter and found correct. |
| | **7.2.1 "Renewable energy share in the total final energy consumption ". 13.2.2 Total greenhouse gas emissions per year"** | $A_{PJ}$ | Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full | Project site & maps & satellite data | The monitoring parameter will be checked from Project site & maps & satellite data Cross-checking by interviews. Validation team has checked the monitoring parameter and found correct. |
| | **7.2.1 "Renewable energy share in the total final energy consumption " and following target: 7.2 ''By 2030, increase substantially the share of renewable energy in the global energy mix".** | Air Quality | Reduction of SO2 and NOx emissions due to implementation of project activity that would otherwise be emitted by thermal power plants | Electricity generated by Cataloluk HEPP and NOX and SO2 emission data from GHG inventory of Turkey will be used as reference in calculation of the emission reduction. | The monitoring parameter will be checked from Electricity generated by Cataloluk HEPP and NOX and SO2 emission data from latest GHG inventory of Turkey Cross-checking by interviews. Validation team has checked the monitoring parameter and found correct. |
| | **Safeguarding principle 6.1 & 3** | Quality of Employment | HSE trainings | Training attendance list and/or certificates | PO will ensure to follow human rights violations through complaint mechanism procedures and allow |

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| | | | | | participation and inclusion to all employees in all activities. The accident/incident records will also maintain by PP. Occupational injury will be monitored by PP in same parameter. HSE records will be kept in case of any injury happened on-site by PP. Emergency response procure defined by PP and training related to it will be provided to workers/employees at regular frequency by PP. The monitoring parameter will be checked from Training records. Validation team has checked the monitoring parameter and found correct. |

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| **SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all** | Balance of Payments | Currency saving due to avoided fuel import | Calculating NG and currency saving due to avoided NG import corresponding to electricity generation by project | The monitoring parameter would be checked by calculating NG and currency saving due to avoided NG import corresponding to electricity generation by project.<br>Validation team has Checked the monitoring parameter and found correct. |
| **Safeguarding Principle Assessment; Principle 9.4: Release of Pollutants** | Water Quality and Quantity | Appropriate disposal of wastewater as required by the Law on Water Pollution Control | Assessing collection methods during site visits and checking waste disposal records. | The monitoring parameter would be Checked by site observation and checking documents Cross-checking by interviews.<br>Validation team has Checked the monitoring parameter and found correct. |
| **Safeguarding Principle Assessment Principle 9.5: Hazardous and Non-hazardous Waste** | Hazardous waste (waste oil); and | Hazardous wastes are collected and disposed in accordance with local laws and related regulations | Proper management of waste oil | The monitoring parameter would be Checked by site observation and checking documents Cross-checking by interviews.<br>Validation team has checked the monitoring parameter and found correct. |

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| **Principle 8.1: Impact on Natural Water Patterns/Flows and**<br><br>**Principle 9.10 High Conservation Value Areas and Critical Habitats** | Minimum flow of water | Release of minimum flow to protect aquatic life | Flow of Water set and monitored by DSI | The monitoring parameter would be Checked by Flow of Water set and monitored by DSI.<br><br>Validation team has checked the monitoring parameter and found correct. |
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The $A_{PJ}$ value is 233,567.93(m2) in this CP Renewal period, calculated through google earth image via detected area measurement. In the first CP this value was 256,555.96 (m2). Which is approximately 20,000 m2 area difference. This difference is due to drought problem in Kahramanmaras developed in recent years (Drought references: https://mgm.gov.tr/veridegerlendirme/kuraklik-analizi.aspx?d=yillik
"General directorate of Meteorology"). The stated difference said website checked proof for the drought conditions in Kahramanmaras which is the Turkey's one of the most drought area is verified by validation team. This lead to a decrease in reservoir area.

Validation team has also checked the other elements of the monitoring plan mentioned under section B.7.1 and D.1 of the GS PDD /01/ and found OK.
It can be concluded that the monitoring plan has provisions for the real measurement of the parameter to reach to the achieved emission reductions.
After an intensive document review of the PDD and remote audit assessment by interviews with representatives about the monitoring procedures and structure, the validation team confirms that verification of emission reductions would be feasible. Also quality assurance and quality control procedures identified in the PDD will lead to accuracy and lesser uncertainty.

The quality control and quality assurance procedures are in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters are used by the technical staff of the HPP. In line with interview carried out with the Chief of HPP , the monthly meter values read by TEİAS are generated from hourly data received from remote reading system and the same is also getting to the plant operation manager via e-mail. The hourly values previously received by the Control Operator of the Power Plant are comparing with the counter values sent by TEİAŞ. The difference between the two values is checked for measurement accuracy. The values are also cross checked from main meter readings and back-up meter readings. The values from "generation log" of SCADA and hourly meter readings is also using to cross check the data of main meter. If there is any data error found, AEDAŞ officers and HPP Officers meet at HPP site and resolve the issue. After the correcting the error process, AEDAŞ send this information to the EPİAS to correct the data of the previous production values. If an such error occurs, AEDAŞ and PP notifies EPİAŞ on the erroneous data received from the Power Plant.

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| | **Positions and responsibilities of the VER monitoring team members.**<br>**Position** / **Responsibility**<br>Plant Manager: •Day to day operation of the HPP, •Compliance of the project activity with the host country rules and regulations •Coordination of the data collection and recording for the monitoring report.<br>Accounts Manager: •Data maintaining for power sales receipt (Invoice) •Extracting the main meter readings from the EPİAŞ screenshot with the help of the account credentials assigned to the project owner.<br>GTE: •Emission reduction calculations •Scripting of the periodic monitoring report •Follow up of the verification process<br>**Sampling Plan:**<br>No sampling is applicable in the monitoring. |
| **Findings** | CAR 04 and CAR 08 is raised and closed. Refer Appendix 4 of this report for more details. |
| **Conclusion** | The assessment team confirms that the monitoring plan:<br>a) Is in compliance with the requirements stated in the applied approved monitoring methodology.<br>b) Is feasible and can be implemented in the case of the project activity.<br>c) Can be implemented by the project participant. |

### D.1. Start date, crediting period type and duration

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| **Means of validation** | The start date of the project activity has been considered as 10/07/2009, date of share transfer of the project. Validation team has checked the share transfer contract and found the mentioned start date correct. The selected date is the earliest date on which the Project Developer has committed to expenditures related to the implementation of the Project and hence in accordance with para 4.1.39 of GS4GG Principles and Requirements, version 1.2.<br>PP has chosen a renewable crediting period of 1.4 years which is renewable once after completion of this current CP. Refer above section D.1.2 for details. The expected second crediting period start date of the project activity has been considered as 01/04/2017 or date of renewal of this crediting period, which is found acceptable to validation team. The start date of crediting period has been verified and found to be in line with para 5.1.45 of PRINCIPLES & REQUIREMENTS Version 1.2. |
| **Findings** | No findings |
| **Conclusion** | Validation team confirm that start date and crediting period start date have been chosen correctly according to the GS4GG requirements. Also the chosen crediting period is as per the GS4GG requirements. |

### D.2. Technologies/measures and eligibility under Gold Standard & Project Eligibility criteria

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| **Means of validation** | This hydro power project activity involves the construction of a hydro power plant in Göksun District of Kahramanmaras Province, Turkey with a total capacity of 9.54 MWe . The project consist of 2 turbines of 4.77 Mwe capacity, a powerhouse, underground cable line, a link bridge, transformer station and transmission line.<br>The above details of the project have been verified from remote audit and technical design EIA letter, Project license, Power Purchase Agreement and Photos/video of site etc. |

The purpose of the project activity is to generate power using renewable energy source and export to the national grid by utilizing hydro energy. The electricity generated with an annual volume of 31.99 GWh will be supplied to the national grid via transmission line from the plant to a transformer station. PPA has been signed between PP and AEDAŞ which has been checked by the validation team. License is valid for 46 years from the commercial operation dates. Complete Project is commissioned on 07/04/2010. The project will reduce the emission of greenhouse gases by replacing electricity generated from fossil fuel-fired power plants with zero emissions electricity from a hydro power plant.

The hydro power plant is located in Turkey as verified from EIA letter , Project License, Power Purchase Agreement /04/ and Photos/video of site /06/. The geo-coordinates of the powerhouse and turbines are given under section A.2 of the GS PDD /01/ which have been verified by the validation team and found OK.

The project involves the construction of a 9.54 MWe grid-connected hydro power plant with 2 hydro turbines and generators to convert kinetic power of the hydro to electrical energy, which will be supplied to the national grid at the connection point through the transmission line. At the connection point, the electricity meter systems will be installed as discussed during remote audit. They are digital and bi-directional type to measure the export and import of electricity of this Hydro Power Plant.

The project falls under GS4GG Renewable Energy Activities Requirements. Validation confirm that project activity has met the eligibility criteria of section 3.1.1 of GS4GG Principles & Requirements.

| **GENERAL ELIGIBILITY CRITERIA** | **VVB Justification** |
|---|---|
| (a) Types of Project | The project activity includes construction and operation of a hydro power plant to generate renewable electricity to supply to the national grid. The hydro power project activity is an eligible project type according to section 2 of GS4GG Renewable energy activity requirements, version 1.4.<br>Project eligibility as per GS4GG Renewable energy activity requirements, version 1.4 is justified below.<br>1. Projects generate and deliver energy services (electricity) from non-fossil and renewable energy sources. (Para 2.1.2 (a))<br>2. Projects comprise of renewable energy generation units i.e. hydro that are Supplying energy to a national grid. (Para 2.1.2 (b))<br>3. This project activity is a grid-connected hydro power plant.<br><br>Hence the project activity is eligible under GS4GG. |
| (b) Location of Project | The project is located in Project is located within the boundaries of Kahramanmaras Province of Turkey. Project site located between 37º48''- 37º50'' North latitudes and 36º38'' - 36º40'' East longitude. Mediterranean Region/Kahramanmaras Province Göksun District of Kahramanmaras Province, Turkey, as confirmed from EIA letter, Project License /07/, Power Purchase Agreement /04/ and Photos/video of site /06/. |

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| | (c) Project Area, Project Boundary and Scale | The project area is 9.81 hectares as checked from Electricity production/generation license /08/. According to the applied CDM methodology AMS.I.D, Ver 18, the spatial extent of the project boundary includes this hydro power plant and all power plants connected physically to the national electricity grid which the proposed project is also connected. The detailed on the project boundary is defined under Section B.3 of this PDD which is found OK.<br><br>The installed capacity of the project activity is 9.54 MWe as verified from EIA letter, Project License /08/, Power Purchase Agreement /04/ and Photos/video of site /06/, so it is large scale project.<br><br>This hydro power project is seeking registration only in GS4GG program. The proposed project activity is not participated to other emissions trading programs, other binding limits, other forms of environmental credits or other GHG programs. This project is not rejected by any other GHG programs. Therefore, no double counting of impacts is potentially in this project activity.<br>CCIPL validation team verified the information provided in the PDD, by reviewing all the relevant standards/programs to confirm that the GS project is appearing in any other registries/websites of programs/standards. In doing this, the CCIPL verification team crosschecked the information regarding the consistency of the title of the projects and GPS coordinates. Validation team has checked GCC registry, (https://projects.globalcarboncouncil.com/pages/submitted_projects). Similarly, VCS project database (http://vcsprojectdatabase.org/#/home ) was also checked and found that this project isn't available in VCS and GCC project database. Given that CDM projects are not applicable in Turkey, no domestic REC scheme is implemented yet. Validation team included other both compliance and voluntary programs in search, which can cover both GHG as well as non-GHG including German Emission Trading Authority (DEHSt); other voluntary GHG Programs including Chinese carbon reduction standard (CCER), etc. This information is confirmed in the no-double counting declaration by the project owner. |
| | (d) Host Country Requirements | The project activity is in compliance with applicable Turkey laws and environmental, ecological and society regulations including the law on investment, the law on environmental protection, the electricity law, the labour code, the law on gender equality, the land law which is documented in the project license issued by Government authorised body /07/, the exemption letter of environmental impact assessment report issued by authorised body /08/, the approval of project technical feasibility design report issued by Ministry of Industry /12/, the power purchase agreement /04/ and electricity connection agreement signed with AEDAŞ /08/ etc. |
| | (e) Contact Details | The project participant includes Elestaş Elektrik Üretim A.Ş |

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|---|---|---|
| | | Project participants are in good standing with no evidence of insolvency or legal/criminal notices placed against it. Contact details of all the Project Participants are presented in Appendix 2 of this GS PDD /01/. |
| | (f) Legal Ownership and (g) Other Rights | The project owner – Elestaş Elektrik Üretim A.Ş . has full legal right to control and operate the project activity. They have got all the required permits granted by the government like Approval of EIA letter, Project License /07/, Power Purchase Agreement /04/ etc.<br>The project owner – Elestaş Elektrik Üretim A.Ş . has the legal rights concerning changes in the use of resources required to service the project for land use, construction, selling electricity license and so on, which is documented in generation License, Power Purchase Agreement.<br>GTE Karbon Sürdürülebilir Enerji Eğitim Danışmanlık ve Tic. A.Ş. (GTE) is the other PP to develop and register the proposed project activity according to GS4GG. |
| | (h) Official Development Assistance (ODA) Declaration | The project is not using any ODA funding. The same has been checked from the signed declaration. |
| | Under section D.2 of the GS PDD /01/, PP has provided the assessment that project complies with 'gender sensitive' requirements which is found correct and acceptable. The same was also verified during the stakeholder interview.<br>Project activity power plant is in full operation, will result in a reduction of 14,766 $tCO_2$ on average per year and 20,919 $tCO_2$ over the second crediting period of 1.4 years along with direct environmental, social, and economic benefits. | |
| **Findings** | _ | |
| **Conclusion** | The assessment team confirms that GS PDD contains a transparent and accurate description of the project activity and provides reader a clear understanding of the project activity | |

### D.3. Safeguarding Principles Assessment

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| **Means of validation** | PP has done the safeguarding principles assessment analysis and presented assessment in the GS PDD /01/. The assessment has been performed in accordance with requirements prescribed in the GS4GG Principles & Requirements, Version 1.2 & Safeguarding Principles & Requirements, Version 1.2.<br>The detailed assessment of safeguarding principle is provided below: | | | | |
| | **Assessment Questions/ Requirements** | **Justification of Relevance (Yes/potentially/ no)** | **How Project will achieve Requirements through design, management, or risk mitigation.** | **Mitigation Measures added to the Monitoring Plan (if required)** | **VVB Assessment** |
| | **Principle 1. Human Right** | | | | |

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| | 1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights<br>2. The Project shall not discriminate with regards to participation and inclusion | 1. Yes<br>2. Yes | 1. Turkey has ratified European Convention on Human Right on 10/03/1954 . Therefore, the project is not expected to violate the rules regarding human rights.<br>2. Participation and inclusion of all employees will be ensured by PO. | 1. Project Owner respects and follows human rights and will never be complicit in violence or human rights abuses. If any complaint is received by the Project Owner, they will act on the issue right away throughout the lifetime of project activity.<br>2. Participation and inclusion of all employees will be ensured by PO, thought the lifetime of the project activity. | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 2. Gender Equality** | | | | |
| | 1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women<br>2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work<br>3. The Project shall | 1. Yes<br>2. Yes<br>3. Yes<br>4. Yes | 1. Project will not discriminate employment for women and men and will provide the same opportunities and rights to both gender.<br>2. Project will pay equal treatment, and proper pay to women also as per national wages act.<br>3. Project shall follow to the country's national gender strategy and ILO | 1. Project Owner prioritizes inclusion and participation of both men and women. In case of employment, women will have the same opportunities and rights as men do, their employment will be done according to national laws and regulations on employment[8] and equal opportunities for men and | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |

[8] Employment Law (22/07/2003) (no. 4857) https://www.mevzuat.gov.tr/mevzuatmetin/1.5.4857.pdf

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| | refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks<br>4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s) | | convention 100, 111, 122 and 142 which Turkey has ratified.<br><br>4. Expert Stakeholder opinion is not required | women.<br><br>2.The working conditions as well as the wages of women will be the same as men and will be according to national laws and regulations, as described. Project will pay equal treatment, and proper pay to women also as per national wages act.<br><br>3. Country's national gender strategy or equivalent national commitment to aid in assessing gender risks will be considered. Project shall follow to the country's national gender strategy and ILO convention 100, 111, 122 and 142. It also shows parallelity with national strategies prepared for women employment by creating opportunities for all.<br><br>4.Expert Stakeholder opinion is not required. | |

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| | **Principle 3. Community Health, Safety and Working Conditions** | | | | |
| | The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community | Yes | Turkey has ratified ILO convention 155 and about work safety and precautions No dust or noise pollution is expected during operation period since the project is a hydroelectricity power plant. However, for safety and risk elimination in the operation, the plant staff will be trained. | Staff receive relevant trainings. They also were trained during construction | The justification provided by PP was found adequate based on the sectoral expertise of Validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 4.1 Sites of Cultural and Historical Heritage** | | | | |
| | Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture? | No | No sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture were observed in the project area. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of Validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 4.2 Forced Eviction and Displacement** | | | | |
| | Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)? | No | No relocation needed for the project implementation. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 4.3 Land Tenure and Other Rights and Principle 4.4 - Indigenous people** | | | | |

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| | Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?<br><br>Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples? | No<br><br>Not relevant | The project Does not require land tenure.<br><br>No indigenous people were identified. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 5. Corruption** | | | | |
| | The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects | No | Turkey has ratified several conventions on bribery and corruption including OECD and UN conventions. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 6.1 Labour Rights** | | | | |

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| | | 1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions<br>2. Workers shall be able to establish and join labour organisations<br>3. Working agreements with all individual workers shall be documented and implemented and include:<br>a) Working hours (must not exceed 48 hours per week on a regular basis), AND<br>b) Duties and tasks, AND<br>c) Remuneration (must | 1.Yes<br>2.Yes<br>3.Yes<br>4.No<br>5.Yes | 1.Project owner ensures that all employment and HSE activities will be done according to the Law of Health And Safety.<br>2. Workers/employees can join labour organisations.<br>3.All employee will be recruited according to the national legislations and with Working agreements with workers/employees .<br>4.No Child labour will be recruited.<br>5. Employees will be trained for emergency response and other trainings. | 1.Social security records will be checked for employment as per law.<br>2.Workers/employees can join labour organisations, as there are no restrictions from the Project Owner and as per Project Owner's internal procedures.<br>3.Working agreements with workers/employees specifying working hours, job responsibilities, details of overtime compensations, health insurance details, leave aspects, termination of contract rules.<br>4.Social security records can be checked for employment of any child labour in site.<br>5. Staff will be trained during construction and operation phases, such as | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. | |

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| | | | | | general HSE, risk, first aid etc. Accident/incident records, emergency response procures, and trainings given related to it, that are provided to workers/employees. | |
| | include provision for payment of overtime), AND<br>d) Modalities on health insurance, AND<br>e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND<br>f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave.<br>4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert | | | | | |

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| | Stakeholder opinion)<br>5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, | | | | |
| | and emergency preparedness and response measures | | | | |
| | **Principle 6.2 Negative Economic Consequences** | | | | |
| | Does the project cause negative economic consequences during and after project implementation ? | No | The project does not cause any negative consequences after implementation. On the contrary, it will create job opportunities for locals as a positive economic impact. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 7.1 Emissions** | | | | |
| | Will the Project increase greenhouse gas emissions over the Baseline Scenario? | No | As a renewable energy power plant, the project contributes to "Emissions Reductions or Removals and/or Adaptation to Climate Change" by reducing CO2 emissions caused by fossil fuel-fired power plants that are displaced due to the project activity, in line with GS4GG principles with the mitigation of | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |

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| | | | an expected amount of 14,766 annually tonnes of $CO_2e$. | | |
| | **Principle 7.2 Energy Supply** | | | | |
| | Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users? | No | Project does not use any local fuel resource. It is connected to the national grid and supply 31,990 MWh additional energy to the grid. Internal consumption which indicates the usage in the project site will be read from monthly records taken from the meters. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 8.1 Impact on Natural Water Patterns/Flows** | | | | |
| | Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity? | No | Since the Project is run-of-river type without a storage capacity, quality and the quantity of water is not affected by the project activity compared to the baseline scenario. Project use excess water from the channel and releasing flow from the channel is within the responsibility of the project owner signed a water usage agreement with DSI. | Monitoring is done by Flow Monitoring Stations of DSI. Required actions will be taken according to the monitoring data collected by the stations. | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 8.2 Erosion and/or Water Body Instability** | | | | |
| | Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the | No | Project does not have any impact on erosion. The main construction activities are powerhouse, weir and fish passage constructions. Excavation aggregate is | In order to prevent erosion, existing roads will be used as much as possible. The | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders |

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| | | natural pattern of erosion? | | formed at all three sites and excavated soil is disposed appropriately and used for landscaping. | project will avoid constructing new roads for access. Secondly, all staff will be informed via trainings, posters and other elements to determine the borders of limited working area and not to cause any disturbance out of this land. Thirdly, topsoil will be properly managed and re-used for afforestation. Other preventive measures will be:<br>1.Material cumulants will be left in order to prevent bottom scouring.<br>2.Surface of the soil will be covered with erosion blankets, if needed.<br>3.Local and adaptive trees will be used in afforestation.<br>4. Continuous monitoring<br><br>Since possible erosion in specific | were interviewed during the remote audit to confirm the same. | |

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| | | | | | zones on the river bed may cause water turbidity in surrounded water sources, there are several measures taken in order to prevent sedimented water entrance. These measures are sediment preventer, silt fences and hay bales. In addition, temporary structures such as cofferdams will be constructed in order to minimize turbidity. | |
| | **Principle 9.1 Landscape Modification and Soil** | | | | | |
| | Does the Project involve the use of land and soil for production of crops or other products? | No | Not relevant. The project area consists of pastureland and forests. However, construction will be done on only the area of turbines and the roads. | Not relevant. The project area consists of pastureland and forests. However, construction will be done on only the area of turbines and the roads. | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. | |
| | **Principle 9.2 Vulnerability to Natural Disaster** | | | | | |
| | Will the Project be susceptible to or lead to increased vulnerability to hydro, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions? | Possible | The project is classified under 4th group (out of 5) according to earthquake zone classification. | All the design and construction works were performed in accordance with relevant regulation. Regulation for the Structures to be Built in Disaster Areas). Circulars: -Dated 17/08/1987 | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. | |

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| | | | #1634<br><br>- Dated 31/05/1989 #4343 | |
| **Principle 9.3 Genetic Resources** | | | | |
| Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)? | No | The project activity is not relevant to the use of genetically modified organisms or GMOs since it is a renewable energy power plant. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| **Principle 9.4 Release of pollutants** | | | | |

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| | Could the Project potentially result in the release of pollutants to the environment? | Yes | Project will not create any noise or solid & liquid pollutants considering this indicator (except domestic wastes which will be collected appropriately). Some dust may appear during construction. | Wastewater will be collected in a septic tank and then transported to a treatment plant where it will be treated to meet standards in accordance with guidelines and national regulations. Waste collection methods during site visits will be assessed and waste disposal records will be checked. Verification of these parameters will be carried out once in every monitoring period. | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 9.5 Hazardous and Non-hazardous Waste** | | | | |
| | Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? | Yes | Hazardous wastes are expected such as waste oils in the operation period. | Waste oil will be managed properly. Disposal methods will be assessed during site visits and waste oil disposal records will be checked. Waste oil from equipment will be | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |

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| | | | | collected properly in line with the relevant regulation and disposed via accredited abatement companies.<br><br>Waste oil will be disposed in line with regulation # 26952 on control of waste oils. Verification of these parameters will be carried out once in every monitoring period. Handling, storage and disposal of these wastes will be done according to the Turkish regulations. | |
| | **Principle 9.6 Pesticides & Fertilisers** | | | | |
| | Will the Project involve the application of pesticides and/or fertilisers? | No | The project is not relevant since it is a renewable energy project. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the |
| | **Principle 9.7 Harvesting of Forests** | | | | |

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| | Will the Project involve the harvesting of forests? | No | There is no forest area in and in the close vicinity of the project area. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 9.8 Food** | | | | |
| | Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives? | No | The project is not relevant since it is a renewable energy project. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 9.9 Animal husbandry** | | | | |

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| | Will the Project involve animal husbandry? | No | The project is not relevant since it is a renewable energy project. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| | **Principle 9.10 High Conservation Value Areas and Critical Habitats** | | | | |
| | Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified? | No | The project may affect fish habitats; hence the project owner is obliged to build a functional fish passage | Fish passage has been designed by experienced engineering company considering river characteristics and reviewed by Province Directorate of Agriculture's experts. The functionality of the fish passage will also be monitored by the experts after commissioning of the plant as seen in letter in Annex 6<br><br>The effectiveness of the fish passage design shall be assessed by an independent expert with relevant background and experience and the expert opinion provided to the VVB in | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |

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| | | | | | view of the verification process. The opinion provided will be supported by references to literature and data relevant to the local conditions. The effectiveness of the fish passage shall be included in the Monitoring Plan with an expert opinion based on fieldwork and observations to be provided as part of the first monitoring report on time for the first verification. In case the design proves not to be effective enough, recommendations on available alternatives and compensation measures shall be discussed in the statement provided by the expert. The same was validated and verified during first CP. verification. Hence no need to monitor in this CP. | |
| | | **Principle 9.11 Endangered Species** | | | | |

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| | Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)?<br><br>AND/OR<br><br>Does the Project potentially impact other areas where endangered species may be present through transboundary affects? | No | There is no endangered species in the project area. | N/A | The justification provided by PP was found adequate based on the sectoral expertise of validation team. Further PP representative/employee and stakeholders were interviewed during the remote audit to confirm the same. |
| **Findings** | CAR 06 is raised and closed. Refer Appendix 4 of this report for more details. | | | | |
| **Conclusion** | Validation team has carried out offsite interviews to cross check the safeguarding principle assessment conducted by the PP. GS VVB has also reviewed the initial GS local stakeholder consultation report and GS4GG PDD and found that the PP has assessed all the required critical safeguarding principle of United Nations in project activity. It has been found that the PA fulfil all the principles like Human Rights, Labor standards, environment protection, and anti-corruption. | | | | |

### D.4. Stakeholder Inputs & Grievance Mechanism

<table>
<tr><td>Means of validation</td><td>Discussion of continuous input /grievance mechanism<br>As part of the grievance mechanism in place, the local stakeholders are encouraged to approach the PP through following avenues i.e. in-person, e-mail and telephone to express their grievance, if any.<br><br>The project proponent informed the users about the input and grievance mechanism in village Muhktar's. They were informed about the maintenance of a grievance expression book which would be maintained to have a continuous account of stakeholder's feedback. Grievance Expression Process Book have been located at Muhktar's office, in Şahinkayası Neighborhood and grievance box in Çataloluk Village as the stakeholders' chosen places. The inputs received will be taken into consideration and assessed in the 2nd CP through these mechanisms by PP. All the sites are appropriate publicly accessible location where local stakeholders can provide their feedback about the project.<br><br>The telephone contact details/email address of the company and GS were explained and discussed at the Meeting and also provided in the Continuous Input / Grievance Expression Process Book. Stakeholders were provided below details to register their issues:
<table>
<tr><td>GS Contact (mandatory)</td><td><u>help@goldstandard.org</u></td></tr>
<tr><td>Telephone access</td><td>Elestaş Elektrik Üretim A.Ş<br>PO Responsible : Hakan Yuksel (Site Manager)<br>Phone: +90 507 768 82 15</td></tr>
</table>
</td></tr>
<tr><td>Findings</td><td>CAR-07 is raised and closed. Refer Appendix 4 of this report for more details.</td></tr>
<tr><td>Conclusion</td><td>Validation team has checked the corresponding documents /04/ and found OK. The validation team confirms that the project activity meets the Gold Standard requirements for stakeholder feedback/ grievance mechanism.</td></tr>
</table>

### D.5 Target/Indicator for each of the minimum three SDGs targeted by the PA

<table>
<tr><td>Means of validation</td><td>DR, I</td></tr>
<tr><td>Findings</td><td>-</td></tr>
<tr><td>Conclusion</td><td>The PA mandatorily contributes to SDG 13: Climate Action and several other SDGs, viz. SDG 7: Affordable and Clean Energy; SDG 8: Decent Work and Economic Growth<br><br>Assessment on the identified monitoring parameters linked with selected SDGs and corresponding SDG targets is provided below:
<table>
<tr><th>Sustainable Development Goals Targeted</th><th>SDG Impact Indicator</th><th>Assessment by the validation team</th></tr>
<tr><td>SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</td><td>Indicator 7.2.1 – Renewable energy share in the total final energy consumption (MWh of renewable energy generated)</td><td>This project annually supplements 31,990 MWh of clean and sustainable electricity to the national grid, thereby contributing to the indicator. The stated SDG indicator has been appropriately selected by the PP.</td></tr>
<tr><td>SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</td><td>Indicator 8.5.1 – Average hourly earnings of female and male employees, by occupation, age</td><td>The project leads to employment opportunities of 7 people for the local community with an expected average monthly salary as per government rules, which would</td></tr>
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| | | | |
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| | | and persons with disabilities. | not have been possible in the baseline scenario. PP ensuring that the staff receives their full salaries on time for all including number of locally recruited staff as per their social security records. The project provides sustainable energy resources contributing to the economic development of the region.<br>The stated SDG indicator has been appropriately selected by the PP. |
| | | | |
| | SDG 13: Climate Action (mandatory) | 13.2.2 : Total greenhouse gas emissions per year | Project will achieve Total greenhouse gas emissions of 14,766 $tCO_2$ per annum hence the stated SDG indicator has been appropriately selected by the PP. |
| | The validation team confirms that all the relevant SDG indicators included under the PA are in line with the SDG goals and the GS4GG principles and requirements /B01/. | | |

## SECTION E.Internal quality control

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The final validation report has undergone a technical review and quality review before being submitted to the project participant and Gold Standard. A technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM/GS validation and verification performed the technical review.

## SECTION F.Validation opinion

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The VVB (Carbon Check (India) Private Ltd.) hereafter referred to as CCIPL, has been appointed by Elestaş Elektrik Üretim A.Ş (the PP) to perform validation of their PA "ÇATALOLUK HEPP". The validation was performed on the basis of the UNFCCC criteria for the Clean Development Mechanism and GS4GG requirements. The scope of the validation is defined as an independent and objective review of the project design document (PDD) /01/, meets all applicable GS requirements, including those specified in the CDM Project Standard for PA /B01/, GS4GG Principles and requirements version 1.2 and other relevant GS4GG applicable rules /B03/, relevant methodology /B02/, tools and guidelines and article 12 of the Kyoto Protocol, paragraph 37 of CDM modalities and procedures, subsequent decisions by the COP/MOP and CDM Executive Board. The project's baseline establishment and monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Standard for PA, Version 03.0 /B7/, Kyoto Protocol requirements, CDM Modalities & Procedures and subsequent decisions and guidance by the COP/MOP and CDM Executive Board and GS4GG requirements. Cataloluk HEPP, will annual estimated contribute to "Emissions Reductions or Removals and/or Adaptation to Climate Change" by reducing 14,766 tonnes of CO2e per annum (GS VERs) emissions caused by fossil fuel-fired power plants that are displaced due to the project activity, in line with GS4GG principles.

The report is based on the assessment of the PDD /01/ , initial PDD with GS passport & validation report /B10/, last Monitoring & verification report /B10/, undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, stakeholder interviews, review of the applicable/applied methodology /B02/ and their underlying formulae and calculations.

The Validation team confirms the contractual relationship signed between the VVB, CCIPL and the Elestaş Elektrik Üretim A.Ş . The team assigned to the validation meets the CCIPL internal procedures including the UNFCCC requirements for the team composition and competence. The validation team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

Validation methodology and process

The validation has been performed as per the requirements described in the Gold Standard for the Global Goals Principles & Requirements (version 1.2); and CDM VVS for PA (version 03.0) /B03/ and constitutes the review and completion of the following steps:

- Desk review of the PDD /01/ and ER spread sheet /02/
- Review of the applied monitoring methodology AMS.I.D, Ver 18" /B02/
- Remote interview (17/05/2022)
- Issuance of Draft Validation Report
- Resolution of CARs and CLs raised during verification
- Issuance of Final Validation Report.

The PA will result in emissions reductions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PA is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the PA.

The validation did not reveal any information that indicates that the PA can be seen as a diversion of ODA funding.

The PDD /01/ contains monitoring plan for the monitoring of the emission reductions from the PA. The monitoring arrangement described in the monitoring plan is feasible within the project design and its CCIPL's opinion that the project participants are able to implement the monitoring plan.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the GS PA "ÇATALOLUK HEPP", as described in the PDD /01/, meets all applicable CDM/GS requirements, including those specified in the CDM Project Standard for PA /B03/, GS4GG PA requirement /B01/ relevant methodology /B02/ and article 12 of the Kyoto Protocol, paragraph 37 of the CDM modalities and procedures and the subsequent decisions by the COP/MOP and CDM Executive Board.

Carbon Check (India) Private Ltd., therefore, requests the registration of the project activity as a GS PA with Gold Standard.

# Appendix 1.Abbreviations

| Abbreviations | Full Texts |
|---|---|
| BE | Baseline Emission |
| CAR | Corrective Action Request |
| CCIPL | Carbon Check (India) Private Ltd. |
| CDM | Clean Development Mechanism |
| CDM EB | CDM Executive Board |
| CER | Certified Emission Reduction |
| CER | Certified Emission Reduction |
| CL | Clarification Request |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon Dioxide Equivalent |
| COP/MOP | Conference of Parties/ Meeting of Parties |
| DNA | Designated National Authority |
| DOE | Designated Operational Entity |
| DR | Document Review |
| EB | Executive Board |
| EIA | Environmental Impact Assessment |
| ER | Emission Reduction |
| FAR | Forward Action Request |
| GHG | Greenhouse Gas |
| GS | Gold Standard |
| GS4GG | Gold Standard for global goals |
| GWh | Giga Watt Hours |
| I | Interview |
| IPCC | Intergovernmental Panel on Climate Change |
| kW | Kilo Watt |
| kWh | Kilo Watt Hours |
| $LE_y$ | Leakage |
| LoA | Letter of Approval |
| LSC | Local Stakeholder Consultation |
| LS | Local Stakeholder |
| MoV | Means of Validation |
| MOC | Modalities of Communications |
| NA | Not applicable |
| NGO | Non-Government Organisation |
| Nox | Nitrogen Oxides |
| ODA | Official Development Assistance |
| OSV | On Site Visit |
| PE | Project Emission |
| PA | Programme of Activities |
| PDD | Project Design Document |
| PP | Project Participant |
| PS | Project Standard |
| PCP | Project Cycle Procedure |
| SD | Sustainable Development |
| T | Tonne |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VPA | Voluntary Project Activity |
| VVS | Validation and Verification Standard |
| VVB | Validation and Verification Body |

# Appendix 2.Competence of team member and technical reviewers

Carbon CHECK

## Carbon Check (India) Private Limited

## Certificate of Competency

### Mr. Dinesh Mane

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**
27th July 2023

**Expiry Date**
26th July 2024

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

# Carbon Check (India) Private Limited

## Certificate of Competency

### Muhammet Ali ERDURAN

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 Turkey | | |

*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**

**03rd May 2023**

**Expiry Date**

**02nd May 2024**

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

# Carbon Check (India) Private Limited

## Certificate of Competency

### Ms. Indumathi C

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 Sri Lanka | | |

*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.Documents reviewed or referenced

| SN | Document |
|---|---|
| /01/ | •GS PDD Ver 01 dated 25/04/2022<br>•GS PDD Ver 09 9 dated 21/08/2023 |
| /02/ | •Emission reduction calculation spread sheet corresponding to PDD Ver 01<br>•Emission reduction calculation spread sheet corresponding to PDD Ver 09 |
| /03/ | Technical specifications/photographs of turbines, generators, electricity meters etc. as provided in registered PDD |
| /04/ | Power purchase Agreement with EPIAS |
| /05/ | Single line diagram for the flow of electricity from generation point to feed in grid including meter locations |
| /06/ | Project site photographs |
| /07/ | Electricity production license |
| /08/ | •Commissioning document (Provisional Acceptance Letter)<br>•EIA Exemption letter<br>•Water use agreement<br>•System Usage Agreement with AEDAŞ<br>•Connection Agreement with AEDAŞ |
| /09/ | Calibration Certificates and meter test report for main meter and check/backup meter |
| /10/ | Sample electricity generation data from TEİAŞ – EPIAS web site |
| /11/ | Proof of location of the weirs, powerhouse, turbines |
| /12/ | FSR and Proof of Meters information (Manufacture, Calibration date, Validation, Accuracy class) |
| /13/ | Sample Invoice raised by PP to TEIAS |
| /14/ | Proof of Area of the reservoir measured i.e., Surface area determined using the lake surface area map or from topographical surveys or maps in KML file |
| /15/ | Sample social security records for PP Site Employees |
| /16/ | Communiqué for Metering Devices |
| /17/ | Proof of installed capacity of the Project Activity i.e., showing in SCADA system |
| /18/ | Valid Meters “Type and System Approval” certificate from the Ministry of Trade and Industry in compliance with TS-620 EN 60044-1 and TS718 IEC60044 |
| /19/ | The ICE/TSE 62053-22: Electricity metering equipment (a.c) – Particular requirements - Part 22: Static meters for active energy (Classes 0.2 S and 0.5 S) |
| /20/ | Fish Passage Design Expert Report |
| /21/ | Sample of occupational trainings and occupational health trainings provided |
| /22/ | Proof Metering records readings mentioned in ER sheet (Gross and Self) for current monitoring period |
| /23/ | Sample Hazardous Waste Disposal Declaration Form |
| /24/ | Sample sewage truck record |
| /25/ | Transition Documents including PDD Ver 10 |
| /26/ | Proof of name change of both the PP |
| /27/ | Ministry published Emission factor dated 20/09/2022 |
| /28/ | VERPA (Verified Emission Reduction purchase Agreement) |
| /29/ | Contract signed in between CCIPL and GTE |

### Background documents

| S. No. | Document |
|---|---|

| | |
|---|---|
| /B01/ | •GS4GG Principles & requirements version 1.2<br>•GS4GG Safeguarding principles & requirements version 1.2<br>•GS4GG Stakeholder-Consultation requirements version 1.2<br>•GS4GG Gender-Equality-Requirements-Guidelines version 1.1 |
| /B02/ | •Baseline and monitoring methodology, "AMS.I.D "Grid connected renewable electricity generation", Ver 18.0"<br>•Tool 07, ''Tool to calculate the emission factor for an electricity system'', Version 07.0<br>•Tool 20 "Assessment of debundling for small-scale project activities", Version 04.0<br>•Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period, Version 3.0.1 |
| /B03/ | •CDM VVS for PA (version 03.0)<br>•CDM PS for PA (version 03.0)<br>•CDM PCP for PA (version 03.0) |
| /B04/ | Site Visit And Remote Audit Requirements And Procedures version 1 dated 17/11/2021 |
| /B05/ | Renewable Energy Activity Requirements, version 1.4 dated 16/08/2021 |
| /B06/ | GHG Emissions Reduction & Sequestration Product Requirements, version 2 dated 01/04/2021 |
| /B07/ | •Template Key Project Information & Project Design Document (PDD), version 1.2 dated 14/10/2020<br>•TEMPLATE GUIDE Key Project Information & Project Design Document v.1.2 |
| /B08/ | Rule Update Covid 19: Interim Measures, version 5 dated 21/12/2021 |
| /B09/ | Rule Update Applicability of Minimum Site Visit Requirements by VVB, Dated 16/08/2021 |
| /B10/ | •Initial validation report V2 dated 08.07.2011 and PDD Version: 07 Dated 08.07.2011 & GS Passport Version :3, Date:01/02/2012<br>•Last Monitoring report V6 dated 22.12.2016<br>•Last verification report V 1.3 dated 24/01/2017<br>•Last verification GS performance review document |

# Appendix 4.Clarification requests, corrective action requests and forward action requests

**Table 1. CARs from this validation**

| **CAR** | 01 | **Section no.** | PDD | **Date:** 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| CAR being raised for the following corrections related to PDD template and guide version 1.2 /B07/ and other GS rules:<br><br>1) SECTION A i.e. DESCRIPTION OF PROJECT shall describe information on all 4 headings as given in PDD Template Guide V1.2.<br>2) In line with Template Guide. V1.2, in section A.1.1 of PDD, PP needs to demonstrate how project meets the eligibility criteria as per section 3.1.1 of GS4GG Principles & Requirements.<br>3) Section A.3 of PDD need to illustrate all 3 headings as required by Template Guide v1.2 headed for provide technical information. Also Information on The age and average lifespan of the equipment based on the manufacturer's specifications and industry standards o be provided here as per PDD filing guidelines in same section of PDD.<br>4) In section A.1.2 of PDD Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project needs to justify for each point, justify that project owner has, as per PDD template guidelines for all 3 points.<br>5) The total nos. of turbines and their capacity is required to be provided in section A.1 of PDD.<br>6) The generation and step-up voltage of project activity is 6.3/34.5 kV. The same is wrongly provided in PDD.<br>7) PP is requested to provide dates of First index protocol, system use agreement, name of change of both PP, commissioning date of turbines in Table 1 of PDD.<br>8) The contact information of project participants needs to be filled for both PP in APPENDIX 2 of PDD. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| 1)The four subheadings are added to Section A.1. and the project description is revised accordingly.<br>2)Eligibility criteria are added under Section A.1.1.<br>3)Three headings are added to the A.3.<br>4)The legal ownership is explained.<br>5)The number of turbines and their capacities are provided.<br>6)The generation voltage and the step-up voltage are corrected.<br>7)The first index of the previous meters and the new meters are added.<br>8)Contact information is provided. | | | | |
| **Documentation provided by the PP** | | | | |
| Revised MR, PP changed related docs. | | | | |
| **VVB assessment** | | | | **Date: 10/10/2022** |
| The changes made in revised PDD is found to appropriate, hence this CAR is closed. | | | | |

| **CAR** | 02 | **Section no.** | B.2 | **Date:** 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| As per PDD Template guide v1.2 /B07/,<br><br>"*Justify the choice of the selected methodology by demonstrating that the project meets each applicability condition of the applied methodology (typically listed the start of the methodology) in section B.2 of PDD*"<br>Also confirm that the latest version of the methodology and applicable tools was applied at this Design certification Renewal Stage the PA to Gold Standard as per PDD filling guidelines. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| The justification and the applicability of the chosen methodology are added to Section B.2. Also latest version is added. | | | | |

| **Documentation provided by the PP** | |
|---|---|
| Revised PDD | |
| **VVB assessment** | **Date:** 10/10/2022 |
| The changes made in section B.2 of the revised PDD is found to appropriate, hence this CAR is closed. | |

| **CAR** | 03 | **Section no.** | B.3 & B.4 | **Date:** 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| Demonstrating that the project meets each applicability condition of the tool including tool 20 (typically listed the start of the methodology).<br>Also the justification of baseline provided in section B.4 of PDD to support the appropriateness of section.<br>Additionally, pl provide reference paragraph of the selected methodology in same section while selecting baseline scenario.<br>Although the statements provided in section B.4 such as *"…. high capacity coal and natural gas power plants."* and "*…..abundance of economically accessible lignite.*" Needs to be justified with evidence. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| The justification and the applicability of the chosen methodology are added to Section B.2.<br>The justification of baseline is provided in section B.4.<br>The necessary references are provided as such:<br>"1 https://webapi.teias.gov.tr/file/18800125-dc32-4c4e-8a3e-c771863e5a49?download<br>1 https://webapi.teias.gov.tr/file/07f76c00-d256-4ccb-b25e-9478c9dedc04?download<br>1 https://webapi.teias.gov.tr/file/163dfadf-80d8-4271-baf8-bc0b76710177?download" | | | | |
| **Documentation provided by the PP** | | | | |
| Revised PDD | | | | |
| **VVB assessment** | | | | **Date:** 10/10/2022 |
| The revised PDD is found to appropriately revied in section B. Hence this CAR is closed. | | | | |

| **CAR** | 04 | **Section no.** | B.6 | **Date:** 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| The OM and BM values are not in line with latest data published by Ministry of Energy and Natural Resources, Turkey, in section B.6 of PDD, accordingly the calculation of CM will also need to be changed.<br>Also the purpose of data is not provided in section B.6.2 of PDD such as related SDG indicator reference.<br>Additionally power density of PA as per applied methodology, needs to calculate as the parameters related to same are monitored in section B.7 of PDD.<br>Also non applicability of leakage emissions for PA ,needs to be justify by giving reference of paragraph of methodology. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| The OM and BM factors are corrected, and SDG 13 is referred in B.6.2.<br>Power density of PA as per applied methodology is calculated.<br>The reference methodology and paragraph number is given. | | | | |
| **Documentation provided by the PP** | | | | |
| Revised PDD | | | | |
| **VVB assessment** | | | | **Date:** 10/10/2022 |
| The revised PDD is found to appropriately revied in section B.6. Hence this CAR is closed. | | | | |

| **CAR** | 05 | **Section no.** | B.5.2 | **Date:** 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| In line with requirement stated in 4.1.52 GS4GG PRINCIPLES & REQUIREMENTS Version 1.2 Ongoing Financial Need shall be demonstrated at Design Certification Renewal. The project shall provide a qualitative narrative, supported by an overview of project finances, that demonstrates how the finance derived Gold Standard Certification is material to the ongoing sustainability of the Project. The narrative may include, but not limited to the following:<br><br>(a) Information highlighting the key categories and amounts or relative proportions (%) of project income and outgoings, including the relative proportion of certification related cost and revenue.<br><br>(b) Description on how finance derived Gold Standard Certification contributes to or is being used to sustain or enhance the project.<br><br>Also PP is requested to support the justification with evidence and also provide the calculation sheet on how the values were arrived at. | | | | |

| PP response | Date: 07/10/2022 |
|---|---|
| A qualitative narrative and project finances details are provided in B.5. | |
| **Documentation provided by the PP** | |
| Revised MR | |
| **VVB assessment** | **Date:** 10/10/2022 |
| The revised PDD section B.5.2 is found to appropriately revied in section B.6. Hence this CAR is closed. | |

| CAR | 06 | Section no. | D | Date: 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| Safeguarding Principle such as 9.4 which will be monitored is provided in section D.1 of PDD, however the same is not discussed as mitigation measure in appendix 1 of PDD. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| The safeguarding principles in Appendix 1 are revised in line with D.1. | | | | |
| **Documentation provided by the PP** | | | | |
| Revised PDD | | | | |
| **VVB assessment** | | | | **Date:** 10/10/2022 |
| All the measures related to Safeguarding Principles are discussed in section D.1 and appendix 1 of PDD hence this CAR is closed. | | | | |

| CAR | 07 | Section no. | PDD | Date: 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| CAR being raised for the following editorial corrections in the PDD:<br><br>1) PDD completion date to be provided in title page of PDD.<br>2) Unit need to keep VERs also for SDG 13 in table 1 of PDD. Also unit of SDG 7 is same table also needs to be made consistent.<br>3) Numbering of Renewable Energy Activity Requirements in section A.1.1 of PDD needs to start from 4.1 as per same requirements.<br>4) The name of parameter in section B.6 of PDD "$EF_{CM,y}$" is not in line with methodology.<br>5) The information such as role and responsibility on "AEDAŞ" distribution company is not provided in section B.7.2 of PDD.<br>6) The logbook for locals stakeholders ongoing communication is provided in village. The same information is not reflected in E of PDD.<br>7) "Date of Design Certification" not provided in PDD title page.<br>8) The version no. of applied methodology is not provided in title page of PDD.<br>9) As the project activity is implemented in 17/04/2010, however PDD still discussing about ***proposed*** project activity. | | | | |
| **PP response** | | | | **Date:** 07/10/2022 |
| 1.PDD completion date is revised<br>2.GS VERs added to table 1<br>3.Renewable Activity Requirements are added accordingly.<br>4.Corrected.<br>5.The information is added in B.7.3.<br>6.The details of the logbook are given in E.1. and E.2.<br>7.Date of Design Certification is provided as (09/09/2011)<br>8.Provided in PDD.<br>9."proposed project" is changed with "project" | | | | |
| **Documentation provided by the PP** | | | | |
| Revised PDD | | | | |
| **VVB assessment** | | | | **Date:** 10/10/2022 |
| The changes made in revised PDD is found to be appropriate hence this CAR is closed. | | | | |

| CAR | 08 | Section no. | B.7 | Date: 17/05/2022 |
|---|---|---|---|---|
| **Description of CAR** | | | | |

| |
|---|
| CAR being raised for the following corrections related to Monitoring section (B.7 ) of the PDD:<br><br>1) The name of parameter “EGfacility y” in section B.7.1 of PDD is not matching with methodology. Also provided Source of data of same parameter is not consistent with registered PDD.<br>2) As per discussion with PP the frequency of testing/calibrations of energy meter needs to be checked. The same is not reflected in PDD for parameter “EGfacility y”.<br>3) The value for parameter “APJ” is not correct as per discussion with PP.<br>4) For parameter “Air Quality” latest data of National Inventory of Turkey is not used to derive kg/MWh of data.<br>5) SDG indicator reference is not provided for parameter “Quality of Employment” in additional comment section.<br>6) Pl provide last calibration dates of energy meters in section B.7.2 of PDD.<br>7) The parameters “Water Quality and quantity”, “Other Pollutants-Waste Oil” is repeated in section B.7.1 and D.1 of PDD.<br>8) The certain parameters such as “Soil Condition, Biodiversity, Sediment Management, Livelihood of the poor” are provided as per safeguarding principles mitigation measures , however the same are not discussed in Appendix 1 of PDD. |
| PP response **Date:** 07/10/2022 |
| 1)Parameter is corrected as “EG,PJ,facility,y” and the source of data is corrected as per PDD.<br>2)As per comment, the due and the frequency of the calibration is added under the parameter “EG,PJ,facility,y”<br>3)Apj is corrected.<br>4)Please see ER sheet V02, the air quality data is updated according to the latest current data set from TEİAŞ website (2020).<br>5) “To monitor the contribution to SDG 8” is added.<br>6) Last calibration dates are provided.<br>7)The parameters sourced from safeguarding principles are placed in section D.1. and Appendix 1.<br>8) These parameters are removed as per latest safeguarding principle assessment. As these parameters were checked in last CP. |
| **Documentation provided by the PP** |
| Revised PDD |
| **VVB assessment ,** **Date:** 10/10/2022 |
| The changes made in revised PDD sections B.7.1 and D.1 & appendix 1 is found to be appropriate hence this CAR is closed. |

| | | | | |
|---|---|---|---|---|
| **CAR** | 09 | **Section no.** | PDD | **Date:** 17/05/2022 |
| **Description of CAR** | | | | |
| According to para 5.1.45 of GS4GG PRINCIPLES & REQUIREMENTS Version 1.2, review of the Design Certification Renewal may complete after the last date of current crediting period. In this case, the renewal date shall be the first day after the end date of the current certification cycle. Also, as per para 5.1.46 of same requirements states that delay in the completion of re-validation beyond the last date of current certification cycle shall result in a reduction of any issuance of Certified Products and/or Impact Statements available during following certification cycle. The delay of more than > 5 years (30/04/2017 till date) is occurred in renewal of CP, hence expected start date of 2nd CP (expected renewal date) needs be changed in PDD alongwith total years of 2nd CP. | | | | |
| **PP response** | | | | **Date:** 10/10/2022 |
| The necessary changes made in PDD table 2 and B.6.4 of PDD. | | | | |
| **Documentation provided by the PP** | | | | |
| Revised PDD | | | | |
| **VVB assessment** | | | | **Date:** 10/10/2022 |
| The changes made in revised PDD is found to be appropriate hence this CAR is closed. | | | | |

| | | | | |
|---|---|---|---|---|
| **CAR** | 10 | **Section no.** | PDD | **Date:** 17/05/2022 |
| **Description of CAR** | | | | |

| | |
|---|---|
| During discussion with PP and document review of project license, it is remarked that the Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project is changed from “BEYTEK Elektrik Üretim AŞ” to “Elestaş Elektrik Üretim A.Ş”.<br>Also other PP i.e. “Global Tan Energy Ltd.” Also changed their name to “GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ” in comparison with registered PDD and validation report.<br>In this aspect PP is requested to submit proof of name change communication to sustain cert and evidence of name change to VVB. | |
| **PP response** | **Date:** 07/10/2022 |
| The proof of name change communication is submitted to VVB | |
| **Documentation provided by the PP** | |
| Name change proof of both PP and sustain cert communication email | |
| **VVB assessment** | **Date:** |
| PP is submitted proof of name changes of both PP communication to sustain cert and evidence of name change to VVB. Hence tis CAR is closed | |

# Appendix 5: Assessment of PA Local Stakeholders consultation

## Assessment of PA LSC consultation

The validation team has reviewed PA LS Consultation Report /04/ for LSC conducted on 03/08/2010 and as per the section B.1 of this report it is confirmed that the stakeholder consultation was conducted. There was no stakeholder consultation during this CP. The PA LS consultation was conducted to obtain feedback from relevant national and local authorities, NGO communities, and other stakeholders on the design of the project. Section B.1 summarizes the process of consultation. Validation team has reviewed the Invitations for the consultation, which was sent via email with the Non-Technical Summary /05/ of the PA and the Feedback Form in Turkish. All the received feedback were obtained via mail or via Feedback Forms which were send via mail and personally.

Section C of PA Design Consultation Report summarizes the assessment of comments received. The validation team has reviewed all the comments received from stakeholder and the response provided by the PP. Based on the review of received comments VVB confirms that there is no need for changes on the project design. PP has further confirmed that suggestions related to operation, will be considered when activity LSCs will be planned and conducted. No significant synergies and conflicts with similar project being implemented by other entities in overlapping geographical boundary are expected. The PP also confirms that there will be no double counting by overlapping geographical boundary. This is being done in line with the CDM and Gold Standard requirements via two ways.