GLOBAL CARBON COUNCIL

Driving Climate Actions

# Project Verification Report

V3.1 - 2020

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| COVER PAGE<br>Project Verification Report Form (PVR) | |
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| | |
| **BASIC INFORMATION** | |
| **Name of approved GCC Project Verifier / Reference No.**<br>(also provide weblink of approved GCC Certificate) | LGAI Technological Center S.A.<br>Certificate No: GCCV009/00<br>Date of Issue: 14/06/2023<br>https://www.globalcarboncouncil.com/wp-content/uploads/2023/06/GCCV-00900-LGAI-GCC-Verifier-Certificate.pdf |
| **Type of Accreditation** | ☐ Individual Track[1]<br>☒ CDM Accreditation<br>☐ ISO 14065 Accreditation<br><br>(Active accreditation from United Nations Framework Convention on Climate Change valid till 27/11/2028; Ref no. CDM-E0032)<br>https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0032 |
| **Approved GCC Scopes and GHG Sectoral scopes for Project Verification** | **GHG Sectoral Scope**:<br>Scope 1 - Energy (renewable/non-renewable sources) (CDM TA 1.1, 1.2)<br>Scope 3 - Energy Distribution (CDM TA 3.1)<br>Scope 13 – Waste handling and disposal (CDM TA 13.1, 13.2)<br>**GCC Scopes:**<br>Green House Gas (GHG# - ACC)<br>Environmental No-harm (E+)<br>Social No-harm (S+)<br>Sustainable Development Goals (SDG+) |
| **Validity of GCC approval of Verifier** | Active accreditation from United Nations Framework Convention on Climate Change valid till 28/11/2028; Ref no. CDM-E0032[2]<br>Re-approval on GCC pending from GCC. Extended based on the renewal of the CDM accreditation from 05/06/2023 to 04/01/2024 (provisional approval of the CDM Accreditation as per EB 119th Meeting). Extended CDM Accreditation until 28/11/2028 communicated to GCC and awaiting responses about the re-approval (extended by GCC) |
| **Title, completion date, and Version number of the PSF to which this report applies** | **Title: 90 MW Bundled Solar Project in Assam**<br><br>**Completion date:** 30/01/2024<br>**Version number:** 08 |

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

[2] https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0032

| | |
|---|---|
| **Title of the project activity** | **90 MW Bundled Solar Project in Assam** |
| **Project submission reference no.**<br>(as provided by GCC Program during GSC) | S00866<br>https://projects.globalcarboncouncil.com/project/793 |
| **Eligible GCC Project Type[3] as per the Project Standard**<br>(Tick applicable project type) | ☒ **Type A:**<br>☐ Type A1<br>☒ Type A2 (Sub Type -1)<br><br>☐ **Type B – De-registered CDM Projects:**<br>☐ Type B1<br>☐ Type[4] B2 |
| **Date of completion of Local stakeholder consultation** | 17/12/2019 (Final date of Local Stakeholder Consultation) |
| **Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.** | Date of GSC completion: 20/02/2023<br>GSC Period: - 06/02/2023 to 20/02/2023<br>GSC comment have been verified from project webpage at GCC website. No comments were received from Global Stakeholders.https://www.globalcarboncouncil.com/global-stakeholders-consultation-8/ |
| **Name of Entity requesting verification service**<br>(can be Project Owners themselves or any Entity having authorization of Project Owners) | Azure Power Forty Private Limited<br>Azure Power India Private Limited |
| **Contact details of the representative of the Entity, requesting verification service**<br>(Focal Point assigned for all communications) | Mr. Sunil Hansu<br>Deputy General Manager (Operation & Maintenance)<br>Azure Power India Private Limited<br>Sunil.hansu@azurepower.com<br>Mob: +91 94684-42097 |
| **Country where project is located** | India |

[3] Project Types defined in Project Standard and Program Definitions on GCC website.
[4] GCC Project Verifier shall conduct Project Verification for all project types except $B_2$.

<table>
<tr><td>GPS coordinates of the Project site(s)</td><td>
<table>
<tr><th colspan="4">Address and Geo-coordinates of the physical site of the Project Activity</th></tr>
<tr><th>Project Activity</th><th>Physical address</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>PA - 1</td><td>Village: Sarbaheura<br>District: Udalguri, Assam</td><td>26˚39’26” N<br>(26.6572° N)</td><td>92˚11’16” E<br>(92.1877° E)</td></tr>
<tr><td>PA - 2</td><td>Village: Makeli,<br>Tehsil: Samaria,<br>District: Kamrup, Assam</td><td>26°02'04" N<br>(26.0344° N)</td><td>91°09'49" E<br>(91.1636° E)</td></tr>
<tr><td>PA - 3</td><td>Village Mikir, Bamuni<br>District: Nagaon, Assam</td><td>26°16'40.9" N<br>(26.2780° N)</td><td>92°48'37.1" E<br>(92.8103° E)</td></tr>
<tr><td>PA - 4</td><td>Village: Polairband<br>District: Cachar, Assam</td><td>24°49'11.4" N<br>(24.8198° N)</td><td>93°02'14.2"E<br>(93.0372° E)</td></tr>
</table>
</td></tr>
<tr><td>Applied methodologies<br>(approved methodologies of GCC or CDM can be used)</td><td>AMS I.D “Grid-connected renewable electricity generation”, Version 18.0<br>ACM0002: Grid-connected electricity generation from renewable sources - Version 21.</td></tr>
<tr><td>GHG Sectoral scopes linked to the applied methodologies</td><td>GHG-SS #1 (Energy (renewable/non-renewable sources))</td></tr>
<tr><td>Project Verification Criteria:<br>Mandatory requirements to be assessed</td><td>☒ ISO 14064-2, ISO 14064-3<br>☒ GCC Rules and Requirements<br>☒ Applicable Approved Methodology<br>☒ Applicable Legal requirements /rules of host country<br>☒ National Sustainable Development Criteria (if any)<br>☒ Eligibility of the Project Type<br>☒ Start date of the Project activity<br>☒ Meet applicability conditions in the applied methodology<br>☒ Credible Baseline<br>☒ Additionality<br>☒ Emission Reduction calculations<br>☒ Monitoring Plan<br>☒ No GHG Double Counting<br>☒ Local Stakeholder Consultation Process<br>☒ Global Stakeholder Consultation Process<br>☒ United Nations Sustainable Development Goals (Goal No 13- Climate Change)<br>☐ Others (please mention below)</td></tr>
</table>

| | |
|---|---|
| **Project Verification Criteria:**<br>Optional requirements to be assessed | ☒ Environmental Safeguards Standard and do-no-harm criteria<br>☒ Social Safeguards Standard do-no-harm criteria<br>☒ United Nations Sustainable Development Goals (in additional to SDG 13)<br>☒ CORSIA requirements |
| **Project Verifier's Confirmation:**<br>The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following: | The GCC Project Verifier [*LGAI Technological Center S.A*], certifies the following with respect to the GCC Project Activity [90 MW Bundled Solar Project in Assam].<br><br>☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 08, dated 30/01/2024) including the applicability of the approved methodology [*CDM methodologies- AMS I.D, Version 18 and ACM0002, version 21.0*] and meets the methodology applicability conditions and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively.<br><br>☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated 1,469,037 $tCO_2e$ throughout the crediting period, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3.<br><br>☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels:<br>☒ Environmental No-net-harm Label (**E⁺**)<br>☒ Social No-net-harm Label (**S⁺**)<br><br>☒ The Project Activity is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of *[03]* SDGs, with the following[5] SDG certification label (**SDG⁺**):<br>☐ Bronze SDG Label<br>☒ Silver SDG Label<br>☐ Gold SDG Label<br>☐ Platinum SDG Label<br>☐ Diamond SDG Label<br><br>☒ The Project Activity complies with all the applicable GCC rules[6] and therefore recommends GCC Program to register the Project activity with above mentioned labels. |
| **Project Verification Report, reference** | Version: 02 |

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

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

| | |
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| **number and date of approval** | Date: 01/02/2024 |
| **Name of the authorised personnel of GCC Project Verifier and his/her signature with date** | Mr. Agustín Calle de Miguel<br>GCC Verifier Technical Manager<br>  <br>Date: 01/02/2024 |

# 1. PROJECT VERIFICATION REPORT

## Section A. Executive summary

Azure Power Forty Private Limited a subsidiary of Azure power India Private Limited has commissioned LGAI Technological Center S.A. to perform a verification of "90 MW Bundled Solar Project in Assam in Udalguri, Kamrup, Nagaon & Cachar district, Assam state in India." (hereafter referred to as the project activity) in This verification report summarizes the findings of the verification of the project, performed based on GCC Project Verification Standard v.3.1/03/.

The project involves installation of Solar Photovoltaic (SPV) Panels of capacity of 90 MW (25 MW + 25 MW+ 15 MW+ 25 MW) at Village Udalguri, Kamrup, Nagaon & Cachar district, Assam state in India.by Azure Power Forty Private Limited

Azure Power Forty Private Limited and Azure Power India Private Limitedwill act as Project owner. The electricity generated from project activity is APDCL under the long-term Power Purchase Agreement (PPA) executed between APDCL and Azure Power Forty Private Limited sold to APDCL under the long-term Power Purchase Agreement (PPA) executed between APDCL and Azure Power Forty Private Limited. Thereby the project replaces equivalent amount of electricity generated by the operation of existing/ grid connected fossil fuel-based power plants.

The main purpose of the project activity is to generate electrical energy through sustainable means using solar energy and sale it to the grid, Purchase of power from PO under long term power purchase agreements. This project activity is a large-scale solar power project. The Location details of each project locations with its commissioning dates are as below: -

| Sr. No | Project Activity | Capacity AC (MW) | Capacity DC (MWp) | COD | Substation | District and State |
|---|---|---|---|---|---|---|
| 01 | PA - 1 | 25 | 37.53 | 12/09/2020 | ROWTA (GSS) Substation (AEGCL) | Village: Sarbaheura District: Udalguri, Assam |
| 02 | PA - 2 | 25 | 37.53 | 30/12/2021 | Balukghata (GSS) Substation (AEGCL) | Village: Makeli, Tehsil: Samaria, District: Kamrup, State: Assam |
| 03 | PA - 3 | 15 | 22.52 | 27/01/2022 | AEGCL | Village Mikir, Bamuni District: Nagaon State: Assam |
| 04 | PA - 4 | 25 | 37.53 | 31/03/2022 | Pailapool Substation (AEGCL) | Village: Polairband District: Cachar State: Assam |

In Section A.2 of PSF, Project Owners have mentioned specific range of GPS coordinates for each project site in details, Same has been verified by assessment team during verification process.

**Scope of Verification**:
The verification scope is defined as an independent and objective review of the project PSF, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against all applicable CDM criteria including the approved baseline and monitoring methodology AMS I.D, version 18 and ACM0002, version 21.0./12/. The verification was based on the requirements in the Project Verification Standard, v.3.1/05/ for the project activity and GCC requirement. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the PSF/09/.
The verification scope is given as a thorough independent and objective assessment of the project design including especially the correct application of the methodology/13/, the project's baseline study, additionality

justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PSF/09/ and other relevant supporting documents, to ensure that the GCC project activity meets all relevant and applicable GCC criteria.

**Verification Process:**

The verification of the project consisted of the following steps:

- Desk review of the PSF and supporting documents submitted by the project owner.
- onsite assessment, background investigation and follow-up interviews with personnel of the project owner and its representatives.
- Draft verification reporting based on the audit findings and desk review of the PSF.
- Resolution of corrective actions (if any).
- Final Verification report reporting based on the closure of corrective actions.
- Technical review of the final verification opinion along with other documents by the independent competent technical review team,
- Final approval of the final verification opinion,

**Appointment of the verification team:**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA)
- Auditor (A) / Auditor in Training (AiT)
- Technical Expert (TE)
- Technical Reviewer (TR)

The sectoral scope / technical area knowledge linked to the applied methodology/ies/13/ shall be covered by the assessment team.

The complete list of CVs is included as Appendix 2 of this report.

| Name | Role | SS Coverage | TA Coverage | Financial aspect | Host country experience |
|---|---|---|---|---|---|
| Mr. Pankaj Kumar | LA/TE | Yes | Yes | Yes | Yes |
| Mr. Deepak Pundlik | A | Yes | No | No | Yes |
| Ms. Ritu Singh | AiT | No | No | No | Yes |
| Mr. Denny Xue | TR | Yes | Yes | Yes | NA |

**Conclusion:**

The review of the PSF, supporting documentation and subsequent follow-up actions (onsite audit and interviews) have provided LGAI Technological Center, S.A. (Applus+ Certification) with sufficient evidence to determine the fulfilment of stated criteria. LGAI Technological Center, S.A. (Applus+ Certification) is of the opinion that the project activity “90 MW Bundled Solar Project in Assam” as described in the final PSF

meets all relevant requirements of GCC and host country (legal requirements for producing power) criteria and has correctly applied the CDM methodology AMS I.D, version 18 and ACM0002, version 21.0/13/. Additionally, the project activity has fulfilled all the requirements related to local stakeholder process, Environmental Safeguards (E+ label), CORSIA Plus[7], Social Safeguards (S+ label) and has forecasted to contribute to 03 UN SDGs. Therefore, the project is being recommended to GCC Steering committee for request for registration.

☒ The Project activity is being recommended to GCC Steering Committee for request for registration.

☐ The Project activity is not recommended for request for registration.

# Section B. Project Verification team, technical reviewer and approver

## B.1. Project Verification team

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity) | Involvement in | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Desk/document review | On-site inspection | Interviews | Project Verification findings |
| 1. | Lead Auditor / Financial Expert | OR | Kumar | Mr. Pankaj | True Quality Certification Private Limited | Yes | Yes | Yes | Yes |
| 2. | Auditor | OR | Pundlik | Mr. Deepak | True Quality Certification Private Limited | No | No | No | No |
| 3. | Auditor in Training | OR | Singh | Ms. Ritu | True Quality Certification Private Limited | Yes | Yes | Yes | Yes |

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

| No. | Role | Type of resource | Last name | First name | Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity) |
|---|---|---|---|---|---|
| 1. | Technical reviewer | EI | Xue | Denny | Applus+ Certification |
| 2. | Approver | IR | Calle de Miguel | Agustin | Applus+ Certification |

# Section C. Means of Project Verification

## C.1. Desk/document review

The details of the document observed during the verification process are listed below in Appendix 3 of this report.

[7] Applicable only once PO submit host country approval for further verification of project activity. Also FAR has been raised in appendix 04 of this report.

## C.2. On-site inspection

| Duration of on-site inspection: 05/07/2023 | | | | |
|---|---|---|---|---|
| **No.** | **Activity performed on-site** | **Site location** | **Date** | **Team member** |
| 1 | Verification team checked the implementation of the project, Baseline emission, and emission reduction calculation, technical description of the project and Onsite Monitoring practice. | Udalguri, Kamrup, Nagaon & Cachar district, Assam state in India. | 05/07/2023 | Mr. Pankaj Kumar (Team Leader / Financial Expert Mr. Deepak Pundlik (Auditor) & Ms. Ritu Singh (AiT) |

## C.3. Interviews

| **No.** | **Interview** | | | **Date** | **Subject** | **Team member** |
|---|---|---|---|---|---|---|
| | **Last name** | **First name** | **Affiliation** | | | |
| 1. | Sasmal | Prasanjit | Azure Power (Assistant Manager) | 05/07/2023 | Project Implementation status, Project Boundary Methodology[13], Eligibility criteria Host country Requirements, Monitoring Plan Project activity start date and Crediting period Roles and responsibilities of the project owner Baseline Assumptions Emission reduction calculations Additionality Training to the Monitoring personnel. Legal Ownership of the project activity, Double counting of the carbon credits of the project activity E+, S+, SDG+ and CORSIA aspects as per the PSF and GCC requirement's geographical location and project boundaries, project capacities applicable legal compliances. | Mr. Pankaj Kumar (Lead Auditor / Financial Expert Mr. Deepak Pundlik (Auditor) & Ms. Ritu Singh (AiT) |
| 2. | Singha | Prasanjit | Lead engineer(O& M) | | | |
| 3. | Sinha | Rajshree | Sr. Tech | | | |
| 4. | Shah | Manoj | Azure Power | | | |

### C.4. Sampling approach

The verification team did not apply any sampling approach for the project activity. The onsite audit was conducted for the complete solar project implemented in the locations/site as mentioned in the PSF[/09/].

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

| Areas of Project Verification findings | Applicable to Project Types | No. of CL | No. of CAR | No. of FAR |
|---|---|---|---|---|
| **Green House Gas (GHG)** | | | | |
| Identification and Eligibility of project type | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| General description of project activity | $A_1$, $A_2$, $B_1$, $B_2$ | CL02 CL03 | CAR01, CAR02 | |
| Application and selection of methodologies and standardized baselines | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| - Application of methodologies and standardized baselines | $A_1$, $A_2$, $B_1$, $B_2$ | - | CAR03 | - |
| - Deviation from methodology and/or methodological tool | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| - Clarification on applicability of methodology, tool and/or standardized baseline | $A_1$, $A_2$, $B_1$, $B_2$ | - | | - |
| - Project boundary, sources and GHGs | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| - Baseline scenario | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| - Demonstration of additionality including the Legal Requirements test | $A_1$, $A_2$, $B_1$, $B_2$ | - | | - |
| - Estimation of emission reductions or net anthropogenic removals | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| - Monitoring plan | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| Start date, crediting period and duration | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| Environmental impacts | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| Local stakeholder consultation | $A_1$, $A_2$, $B_1$ | - | CAR04 | - |
| Approval & Authorization- Host Country Clearance | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | FAR01 |
| Project Owner- Identification and communication | $A_1$, $A_2$, $B_1$, $B_2$ | - | | - |
| Global stakeholder consultation | $A_1$, $A_2$, $B_1$ | CL01 | - | - |
| Others (please specify) | $A_1$, $A_2$, $B_1$, $B_2$ | - | - | - |
| **VOLUNTARY CERTIFICATION LABELS** | | | | |
| Environmental Safeguards ($E^+$) | $A_1$, $A_2$, $B_1$ | - | CAR05 | - |
| Social Safeguards ($S^+$) | $A_1$, $A_2$, $B_1$ | - | CAR06 | - |
| Sustainable development Goals ($SDG^+$) | $A_1$, $A_2$, $B_1$ | - | CAR07 | - |
| Authorization on Double Counting from Host Country (only for CORSIA) | $A_1$, $A_2$, $B_1$ | - | CAR08 | FAR01 |
| CORSIA Eligibility ($C^+$) | | - | - | FAR01 |
| **Total** | | 03 | 08 | 01 |

## Section D. Project Verification findings

### D.1. Identification and eligibility of project type

| | |
|---|---|
| **Means of Project Verification** | The project is eligible under Type A2 (Sub-Type1) category as per GCC Project standard and Clarification No 01[/07/] which is acceptable since the project has not been registered under any GHG program and the program operations started since |

| | |
|---|---|
| | 12/09/2020 which is the commissioning date of 90 MW plant site and Start of Crediting period is from 12/09/2020. The commissioning document of the project activity has been verified in this regard and found in order. Further following project meets the Type A2 (Sub-Type 1) project category as:<br>I. It is not required by a legal mandate and it does not implement a legally enforced mandate, as confirmed by the assessment team verification of the relevant policies pertaining to generation of energy in the host country i.e.,<br>• Electricity Act 2003 (May 2007 Amendment)[8]<br>• National Electricity policy 2005[9]<br>• The Electricity (Supply) Act, 1948[10]<br>• The Electricity Regulation Commission Act, 1998[11]<br>• Schedule 1 of Ministry of Environmental and Forest notification[12]<br>• National Renewable Energy Act 2015<br>II. It complies with all the applicable host country legal requirements and it ensures compliance with legal requirements. The project is a renewable energy project activity and meets the host country requirements of sustainable development criteria. According to the Assam Power Distribution Company Limited (APDCL), a Power Purchase Agreement executed between APDCL and Azure Power Forty Private Limited. sold to APDCL under the long-term Power Purchase Agreement (PPA) executed between APDCL and Azure Power Forty Private Limited. was signed for the project activity prior to the start date of the Project activity which is in-line with the paragraph 16 (b) of Project Standard Version 3.1/02/, the project owner has demonstrated that required approvals and authorizations are available or being processed prior to the start of commercial operations of the project activity which is acceptable to the project verification team.<br>III. The project also delivers real, measurable and additional emission reduction of 146,910 $tCO_2e$ annually (average value over the crediting period) as compared to the baseline scenario.<br>IV. Project applies an approved CDM monitoring and baseline methodology AMS I.D "Grid-connected renewable electricity generation", Version 18.0 ACM0002: Grid-connected electricity generation from renewable sources - Version 21/13/. |
| **Findings** | CL02, CL03 and CAR01, CAR02 were raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | The project activity was found eligible as per the requirements under section 4 of the GCC Project Standard which was verified from the documents issued by the state utility. Further, found sub type of project activity (i.e., Sub-Type 1) is in line with the Clarification No. 1/07/ issued by GCC. Verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry/46/, VERRA Registry/47/, Gold Standard (GS) Registry/48/, and voluntary non-GHG Programs like I-REC Renewable Energy Certificate (I- REC) Mechanism in India for the information regarding the consistency of the title of the project activity, GPS coordinates, Legal Ownership of the Project activity and confirmed that the project was not submitted or |

[8] https://cercind.gov.in/Act-with-amendment.pdf
[9] https://powermin.gov.in/en/content/national-electricity-policy
[10] https://cercind.gov.in/ElectSupplyAct1948.pdf
[11] https://cercind.gov.in/ElectReguCommiAct1998.pdf
[12] https://parivesh.nic.in/writereaddata/MINISTRY%20OF%20ENVIRONMENT%20AND%20FORESTS%20SO474E.pdf

| | |
|---|---|
| | registered under any other GHG programmes and non-voluntary non-GHG Programs. |

## D.2. General description of project activity

**Means of Project Verification**

The project involves the installation of a 90 MW (AC) (in four-part 25 MW,25 MW,15 MW and 25 MW) solar PV plant in village Udalguri, Kamrup, Nagaon & Cachar district, Assam state in India. The electricity generated from the project activity is exported to the Indian gird in India through power purchase agreement between APDCL and Azure Power Forty Private Limited., there by displacing electricity from the regional grid generated by fossil fuel-based power plants. Thus, the project activity generated average 157,792 MWh/year electricity and displacing 146,903 $tCO_2e$/year.

The project activity will have stepwise commissioning:

| Sr. No | Project Activity | Capacity AC (MW) | Capacity DC (MWp) | COD | Substation | District and State |
|---|---|---|---|---|---|---|
| 01 | PA - 1 | 25 | 37.53 | 12/09/2020 | ROWTA (GSS) Substation (AEGCL) | Village: Sarbaheura District: Udalguri, Assam |
| 02 | PA - 2 | 25 | 37.53 | 30/12/2021 | Balukghata (GSS) Substation (AEGCL) | Village: Makeli, Tehsil: Samaria, District: Kamrup, State: Assam |
| 03 | PA - 3 | 15 | 22.52 | 27/01/2022 | AEGCL | Village Mikir, Bamuni District: Nagaon State: Assam |
| 04 | PA - 4 | 25 | 37.53 | 31/03/2022 | Pailapool Substation (AEGCL) | Village: Polairband District: Cachar State: Assam |

Bundled project activity involves installation of four Solar photovoltaic power generation projects in Assam at four locations with installed capacities of 25 MW, 25 MW, 15 MW and 25 MW each with total project capacity of 90 MW. During desk review, Assessment team found that Project was allocated to Azure Power Forty Private Limited a subsidiary of Azure power India Private Limited. by Assam Power Distribution Company Limited (APDCL), via competitive bidding process of APDCL for all the four project activities separately. /38/

During onsite audit and interview with the local stakeholders, verification team observed that the project is a greenfield project and in the absence of the same the electricity requirement would have been met from fossil fuel intensive national grid, same has been confirmed through Detailed Project Reports. Therefore, the grid connected power plants has been selected as the baseline appropriately.

During assessment, the verification team observed that the site is already commissioned, details for date of commissioning are mentioned below. Also, the detailed information related to the project site's location is mentioned above in section A of this report. The location and GPS coordinated were checked during onsite audit with the help of Google map Software i.e., Google maps, further cross checked with onsite geo-tagged pictures submitted by PO to verifier's team.

The project activity consists of solar power plant location with its capacity. Details are as follows: -

| Address and Geo-coordinates of the physical site of the Project Activity | | | |
|---|---|---|---|
| **Project Activity** | **Physical address** | **Latitude** | **Longitude** |
| PA - 1 | Village: Sarbaheura<br>District: Udalguri, Assam | 26˚39'26" N<br>(26.6572° N) | 92˚11'16" E<br>(92.1877° E) |
| PA - 2 | Village: Makeli,<br>Tehsil: Samaria,<br>District: Kamrup, Assam | 26°02'04" N<br>(26.0344° N) | 91°09'49" E<br>(91.1636° E) |
| PA - 3 | Village Mikir, Bamuni<br>District: Nagaon, Assam | 26°16'40.9" N<br>(26.2780° N) | 92°48'37.1" E<br>(92.8103° E) |
| PA - 4 | Village: Polairband<br>District: Cachar, Assam | 24°49'11.4" N<br>(24.8198° N) | 93°02'14.2"E<br>(93.0372° E) |

The power generated by above power plant fed to the national grid via utility substation located near to the Project site substation owned by Assam Electricity Grid Corporation Limited (AEGCL). Electricity is purchased under long term power purchase agreements (PPA)[/23/] signed between APDCL and SPVs, Same is verified and confirmed by verification team.

The operational lifetime of the solar modules installed in the project activity is 25 years as per the technical specification provided by the manufacturer[/19/]. Technical specification of installed solar modules, investors in the project activity is provided in section A.3 of the final PSF[/09/]. Same is verified and confirmed by verification team.

| **Parameter** | **PA - 1** | **PA – 2** | **PA - 3** | **PA - 4** |
|---|---|---|---|---|
| **Project Capacity (AC/DC)** | 25 MW<br>37.5 MWp | 25 MW<br>37.66 MWp | 15 MW<br>22.50 MWp | 25 MW<br>36.90 MWp |
| **Technology** | Poly Crystalline | Poly Crystalline & Mono Crystalline | Poly Crystalline & Mono Crystalline | Mono Crystalline |
| **PV** | Make - Waaree | Make – Waree, Jinko, Risen | Make – Waree & Risen | Make – Jinko |
| | Model | WS-330, WS- | WS-330, WS- | JKM470M-7RL3- |

| | | | | | |
|---|---|---|---|---|---|
| | **Modules** | Number- WS-330 & WS-335[13] | 335, RMS144-6-410M/415M JKM470M-7RL3-V | 335& RMS144-6-415M | V |
| | | Total number of modules – 113,040<br>330 Wp- 71,100<br>335 Wp- 41,490 | Total number of modules – 90,166<br>330Wp- 12,990<br>335Wp- 16,470<br>410Wp-9,483<br>415Wp- 1,943<br>470Wp-49,280 | Total number of modules – 66,246<br>330Wp- 19,980<br>335Wp- 42,930<br>415Wp-3,335 | Total number of modules – 78,512 |
| | | Rating – 330 &335 Wp | Rating – 330Wp, 335Wp, 410Wp & 415 Wp | Rating – 330Wp, 335 Wp & 415 Wp | Rating – 470 Wp |
| | | Annual degradation – 0.7 %[14] | Annual degradation – 0.7 % | Annual degradation – 0.7 % | Annual degradation – 0.6 %[15] |
| | **Central Inverter** | Make - Sungrow | Make - Sungrow | Make - Sungrow | Make – Sungrow & Huawei |
| | | Capacity – 3.125 MW | Capacity – 3.125 MW | Capacity – 200 KW | Capacity – 200KW &185 KW |
| | | Number of Inverters - 08 | Number of Inverters - 08 | Number of Inverters - 76 | Number of Inverters – 129<br>200KW-80<br>185 KW-49 |
| | **Inverter transformer** | Make – Schneider Electric | Make – Schneider Electric | Make – Schneider Electric | Make – Toshiba |
| | | Capacity- 12.5MVA | Capacity- 12.5MVA | Capacity- 7.5MVA | Capacity- 12.8MVA |
| | **Mounting Structure** | Seasonal Tilt | Seasonal Tilt | Seasonal Tilt | Seasonal Tilt |
| | **Energy Meters** | Serial Nos. - Q0302380/ Q0302379 | Serial Nos. - Q03336100/ Q0336101 | Serial Nos. – Q0302219, Q0302220 | Serial Nos. - Q0430041/ Q0430042 |
| | | Meter Location. - AEGCL Substation, Rowta, Udalguri | Meter Location. - AEGCL Substation, Bhalukghata, Boko | Meter Location. - AEGCL Substation, Gendhali Bebejia | Meter Location. - AEGCL Pailapool Substation, Mahalthal |

[13] https://d2ehz7r19zq528.cloudfront.net/documents_ADITYA_SERIES_WS_320_350_WEL_E_and_PD_320_350_72_P_F_03_12_09_2020_46a651bf3a.pdf
[14] https://d2ehz7r19zq528.cloudfront.net/documents_20211117_Limited_Warranty_Statement_WEL_E_and_PD_WS_03_17_11_2021_1_1ee73f4e86.pdf
[15] https://www.jinkosolar.com/uploads/TR%20JKM450-470M-7RL3-(V)-C1-EN.pdf

Further, in order to confirm the legal ownership of each project activity mentioned in above table, Verification team verified through commissioning certificates/18/ for all project site and Power Purchase Agreement/23/. Same we also cross checked with GCC LOA/29/ attested by each legal owner. Thus, found acceptable.

The Project Owners have fixed the crediting period of 10 years which is in accordance with the GCC program manual/01/ and will generate an estimated 146,903 $tCO_2e$ emission reductions annually/10/. The estimated emission reductions achieved for the entire crediting period of 10 years are 1,469,037$tCO_2e$.

The project activity described as Type A2 (Sub-Type 1) and applied CDM AMS I.D, version 18 and ACM0002 Version 21.0./13/, falls into the large-scale category as per CDM methodology/13/.

No sampling approach was applied, as it was not required by the applied methodology/13/, with regard to verification of project description in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities". In addition to generating emission reductions the solar power plant also qualifies for other voluntary certification labels as per GCC requirements.

In addition to generating emission reductions the project activity also qualifies for other voluntary certification labels: -

| Voluntary Labels | Applied by the project | Score/label |
|---|---|---|
| Achieving the United Nations Sustainable Developmental Goals (SDG+) | Yes | 03 (Silver) |
| Environmental No-net harm (E+) | Yes | +06 |
| Social No-Net harms (S+) | Yes | +06 |
| CORSIA (C+) | Yes | ACCs Generated during the crediting periods. |

In the baseline scenario the main source of emission was found to be $CO_2$ as electricity was generated mainly through fossil-fuel based power plants whereas in project scenario the electricity is generated by the Solar Power plant thereby reducing the $CO_2$ emissions. Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary does not include any of the GHG emissions in the project scenario as per the applied methodology/13/.

The description in the PSF/09/ includes sufficient details and provides clarity on the project activity. Further, verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry/46/, VERRA Registry/47/, Gold Standard (GS) Registry/48/, and voluntary non-GHG Programs like I-REC Renewable Energy Certificate (REC) Mechanism in India for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the involved project owners have not submitted the project under any other GHG program apart from GCC.

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| **Findings** | CL02, CL03 and CAR01, CAR02 were raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | The project description was verified based on the review of documents. Based on the review of documents and by means of onsite verification the details provided in the PSF is found acceptable and complete. |

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

### D.3.1 Application of methodology and standardized baselines

**Means of Project Verification**

The applicability of Project activity was verified against CDM methodology AMS- I.D. Version 18[/13/]

| S. no | Methodological Applicability Criteria | Applicability to the Project Activity | Verification by assessment team |
|---|---|---|---|
| 1 | This methodology is applicable to project activities that:<br>a) Install a Greenfield power plant;<br>b) Involve a capacity addition in (an) existing plant(s);<br>c) Involve a retrofit of (an) existing plant(s);<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 involves installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant). Hence, this applicability criterion is satisfied. | Assessment team, through technical specification review and onsite audit verified that the project activity is greenfield grid connected Solar power plant.<br><br>Hence this criterion is fulfilled. |
| 2 | Hydro power plants with reservoirs[16] 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>(b) The project activity is implemented in an existing reservoir[17], where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions | The project activity is a solar power project.<br>Hence this criterion is not applicable to the project activity. | This is not applicable as the project activity is the installation of solar power project to generate electricity, as checked during the onsite audit by the verification team. |

[16] A reservoir is a water body created in valleys to store water generally made by the construction of a dam.
[17] A reservoir is to be considered as an "existing reservoir" if it has been in operation for at least three years before the implementation of the project activity.

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| | | section, is greater than 4 W/m$^2$;<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/m$^2$. | | |
| | 3 | If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel [18], the capacity of the entire unit shall not exceed the limit of 15 MW. | The project activity is a 15 MW(AC) solar based renewable electricity generation and has no non-renewable components or provision for future addition of a co-fired fossil fuel system. Thus, the project activity meets the applicability condition. | Assessment team, through commissioning certificates and remote audit verified that the project activity is 15 MW (AC) solar power plant.<br><br>Hence this criterion is applicable |
| | 6 | Combined heat and power (co-generation) systems are not eligible under this category. | The project activity does not involve cogeneration. Hence it satisfies the applicability criteria. | This is not applicable as the project activity is the installation of solar Power project to generate electricity, as checked during the onsite audit by the verification team |
| | 7 | In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct [19] from the existing units. | This condition is not applicable to the project activity as it is a greenfield project activity and does involve the addition of renewable energy generation units at an existing renewable power generation facility. | This is not applicable as the project activity is the installation of solar Power project to generate electricity, as checked during the onsite audit by the verification team |
| | 8 | 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. | This condition is not applicable to the project activity as it is not a modification/ retrofit measure in an existing power plant | This is not applicable as the project activity is the installation of solar Power project to generate electricity, as checked during the onsite audit by the verification team |

[18] A co-fired system uses both fossil and renewable fuels, for example the simultaneous combustion of both biomass residues and fossil fuels in a single boiler. Fossil fuel may be used during a period of time when the biomass is not available and due justifications are provided.

[19] Physically distinct units are those that are capable of generating electricity without the operation of existing units, and that do not directly affect the mechanical, thermal, or electrical characteristics of the existing facility. For example, the addition of a steam turbine to an existing combustion turbine to create a combined cycle unit would not be considered "physically distinct"

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| 9 | 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. | This condition is not applicable to the project as this is solar based renewable energy project. | This is not applicable as the project activity is the installation of solar Power project to generate electricity, as checked during the onsite by the verification team |
| 10 | In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply. | This condition is not applicable to the project as this is solar based renewable energy project. | This is not applicable as the project activity is the installation of solar Power project to generate electricity, as checked during the remote audit by the verification team |

**Applicability condition of applied methodology ACM0002, version 21.0[/13/]**

| Applicability Conditions as per ACM0002 | Applicability to this Project Activity | Verification by Verification team |
|---|---|---|
| This methodology is applicable to grid-connected renewable power generation project activities that:<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 operating plants/units;<br>(e) Involve a replacement of (an) existing operating plants/units; | The project activity is installation of a new grid connected renewable solar power plant/ unit at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plant) meeting the requirement of criteria (a) and hence this criterion is applicable for this project activity. | The assessment team, through technical specification review, documents and layout review and interview verified that the project is newly installed Greenfield grid connected solar power plant.<br>Hence this criterion is fulfilled. |
| In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: | The project activity does not involve use of Battery Energy Storage System (BESS). Hence, this criterion is not applicable for this project activity. | The project activity does not involve setting up and implementation of a BESS, which was confirmed by the assessment team |

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| | | (a) Integrate BESS with a Greenfield power plant;<br>(b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 or wind power plant(s)/unit(s);<br>(c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s);<br>(d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s). | | through Interview and technical specification review and interviews with the PO representatives. |
| | | The methodology is applicable under the following conditions:<br>a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;<br>b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;<br>c) In case of Greenfield project activities applicable under paragraph (a) above condition, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g., by referring to feasibility studies or investment decision documents); | The project activity is the installation of new grid connected solar power plant and does not involve use of BESS. Hence, this criterion is not applicable for this project activity. | The assessment team confirms that the applicability criterion is met as the project activity includes generation of electricity from new grid connected a renewable source of energy (solar power). Thus, is not applicable. |

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| | | d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g., week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period. | | |
| | | In case of hydro power plants, one of the following conditions shall apply:<br>a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or<br>b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (3), is greater than 4 W/m2; or<br>c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m2.<br>d) The project activity is an integrated hydro power project involving multiple | The proposed project activity is an installation of a new grid connected (solar) power plant/ unit and not Hydro power plant, therefore this criterion is not applicable for this project activity. | This is not applicable as the project activity is the installation of solar PV Panels to generate electricity not a hydro power plant. |

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| | | reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m2, all of the following conditions shall apply:<br>I. The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m2;<br>II. Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;<br>III. Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 shall be;<br>a) Lower than or equal to 15 MW; and<br>b) Less than 10 per cent of the total installed capacity of integrated hydro power project. | | |
| | | In the case of integrated hydro power projects, project proponent shall:<br>(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or<br>(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity. | The proposed project activity is an installation of a new grid connected (solar) power plant/ unit and not Hydro power plant, therefore this criterion is not applicable for this project activity. | This is not applicable as the project activity is the installation of solar PV Panels to generate electricity not an integrated hydro power plant. |
| | | Methodology is not applicable to:<br>(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in | The project activity is installation of a new grid connected (solar) power project/ unit and does not involve switching from | This is not applicable as the project activity is the installation of solar PV Panels to generate electricity. |

| | | |
|---|---|---|
| this case the baseline may be the continued use of fossil fuels at the site<br>(b) Biomass fired power plants/units. | fossil fuel to renewable energy, therefore criterion described in point (a) is not relevant to the project activity. | |
| In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance" | The project activity is a new grid connected (solar) power plant/ unit and not a retrofits, replacements or capacity additions and therefore this criterion is not applicable to the project activity. | This is not applicable as the project activity is the installation of greenfield solar power project in order to generate electricity not a retrofits, replacements, or capacity additions project.<br>This has been verified by reviewing of Plant layouts[/30/]. |

**Applicability of the Tool 01 "Tool for the demonstration and assessment of additionality", is verified as below.**

| Applicability Conditions as per Tool 01 | Applicability to this Project Activity | Verification by Verification team |
|---|---|---|
| The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool. | Project owner is not proposing any new methodology hence, this criterion is not applicable for the project activity. | The project is using CDM methodology ACM0002 v21.0[/13/] and doesn't propose any new methodology. The assessment of additionality has been discussed in detail in section D.3.5 of this report. |
| Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory. | The additionality tool is included in the applied methodology ACM0002. Hence, this criterion is applicable for the project activity. | The tool is included by ACM0002 Version 21.0[/13/] and which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met. |

**Applicability of the Tool 05 ""Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation" version 03.0", is verified as below.**

| Ref | Applicability Criteria | Justification of Project owner | Assessment of verification team |
|---|---|---|---|
| A | If emissions are calculated for electricity consumption, the Tool is only applicable if one out of the following three scenarios applies to the sources of electricity | In the proposed project activity, the electricity is purchased from the grid only and no captive power plant is installed at the site of electricity consumption | During assessment, verification team observed that this project involves scenario A electricity consumption from grid and no captive power |

| | | | | |
|---|---|---|---|---|
| | | consumption:<br><br>(a) Scenario A: Electricity consumption from the grid. The electricity is purchased from the grid only, and either no captive power plant(s) is/are installed at the site of electricity consumption or, if any captive power plant exists on site, it is either not operating or it is not physically able to provide electricity to the electricity consumer;<br><br>(b) Scenario B: Electricity consumption from (an) off-grid fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants are installed at the site of the electricity consumer and supply the consumer with electricity. The captive power plant(s) is/are not connected to the electricity grid; or<br><br>(c) Scenario C: Electricity consumption from the grid and (a) fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants operate at the<br><br>site of the electricity consumer. The captive power plant(s) can provide electricity to the electricity consumer. The captive power plant(s) is/are also connected to the electricity grid. Hence, the electricity consumer can be provided with electricity from the captive power plant(s) and the grid. | (Scenario A). | plant is involved in this project activity and accepted by verification team during desk review and onsite visit of auditing team. |
| | B | This Tool can be referred to in methodologies to provide procedures to | The projects entail compliance with Scenario I: Electricity is supplied to | During assessment, verification team observed that this |

| | | | | |
|---|---|---|---|---|
| | | monitor amount of electricity generated in the project scenario, only if one out of the following three project scenarios applies to the recipient of the electricity generated:<br>(a) Scenario I: Electricity is supplied to the grid;<br>(b) Scenario II: Electricity is supplied to consumers/electricity consuming facilities; or<br>(c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities | the grid. | project involves scenario I electricity supply to the grid and not used for captive consumption in this project activity and accepted by verification team during desk review and onsite visit of auditing team. |
| | C | This Tool is not applicable in cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. The Tool only accounts for $CO_2$ emissions. | No captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. | During assessment, verification team observed that this project do not involves scenario of captive energy consumption of power is involved in this project activity and accepted by verification team during desk review and onsite visit of auditing team. |
| | This tool can be referred to in methodologies to provide procedures to monitor amount of electricity generated in the project scenario. Only if one out of the following three project scenarios applies to the recipient of the electricity generated.<br>(a) Scenario I. Electricity is supplied to the grid:<br>(b)Scenario ii: Electricity is supplied to consumers/electricity consuming facilities or,<br>(c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities. | | Since the project activity supplies electricity to the grid therefore the complies to the scenario I of the applied tools. Hence the tool is applicable to the project activity. | |
| | This tool is not applicable in | | The project include grid | |

| | | |
|---|---|---|
| cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to source of leakage. The tool only accounts for $CO_2$ emission. | connected electricity generation unit and does not include captive renewable power generation technologies to provide electricity in the project activity. | |

**Applicability of the Tool 07 "Tool to calculate the emission factor for an electricity system", is verified as below;**

| Applicability Conditions as per Tool 07 | Applicability to this Project Activity | Verification by Verification team |
|---|---|---|
| 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). | OM, BM and CM are estimated using the tool under section B.6.3 for calculating baseline emissions. Hence, this criterion is applicable for the project activity. | The project involves electricity generation through solar power plant where electricity was generated and delivered to the national grid. Thus, eligibility criteria were found to be 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 II a and option IIb. If option II a is chosen, the conditions specified in "Appendix 1: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity. | Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly. | The project activity involves the electricity generation through a grid connected solar power plant, which was verified through PPA/23/ issued to PO/29/. The emission factor has been calculated through the CEA database/37/, which has used the application of Tool 07/15/ to calculate the grid emission factor for India, which is found to be appropriate. PO has used the latest available CEA database (CO2 Baseline Database for Indian Power Sector, Version 18.0, Dec 2022)/37/. The details regarding the emission factor have been discussed in section D.3.6 of this report. |
| In case of CDM projects the tool is not applicable if the project electricity system is located | The project activity is located in India, a non-Annex I country. Therefore, this | The project activity is located in India which is non-Annex I country. |

| | | |
|---|---|---|
| partially or totally in an Annex I country. | criterion is not applicable for the project activity. | Hence, condition is not applicable. |
| Under this tool, the value applied to the $CO_2$ emission factor of biofuels is zero. | The project activity is a grid connected (solar) power project/ unit and does not involve emission from biofuels. Therefore, this criterion is not applicable. | The condition is not applicable as CEA database[37] does not include any biofuel plant. |

**Applicability of the Tool 24 "Applicability conditions of "common practice – Version 3.1", is verified as below:**

| Applicability Conditions as per Tool 24 | Applicability to this Project Activity | Verification by Verification team |
|---|---|---|
| This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality. | Project activity applies methodological tool 01 "Tool for the demonstration and assessment of additionality". Hence, this criterion is applicable for the project activity. | Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable |
| In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail. | The applied approved baseline and monitoring methodology does not define any different approaches for the conduction of the common practice test from those described in this methodological tool. Hence, this criterion is not applicable for the project activity. | The applied approved baseline and monitoring methodology dose not define approaches for the conduction of the common practice test.<br>Hence this tool not is applicable. |

**Applicability of the Tool 27 ": Investment Analysis – Version 12", is verified as below:**

| Applicability Conditions as per Tool 27 | Applicability to this Project Activity | Verification by Verification team |
|---|---|---|
| This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of | As "Tool for the demonstration and assessment of additionality" is applied, TOOL27 is also applicable and complied with for investment analysis for the demonstration of additionality (Please refer to section B.5 of PSF for details). Hence, this criterion is applicable for the project activity. | This project activity involves demonstration and assessment of "Tool for the demonstration and assessment of additionality". Thus, the applicability criteria were found to be met. Hence this tool is applicable. |

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| | additionality and/or the identification of the baseline scenario. | | |
| | In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail. | The applied approved baseline and monitoring methodology does not contain requirements for the investment analysis that are different from those described in this methodological tool. Hence, this criterion is not applicable for the project activity. | Not applicable as Requirement regarding investment analysis not provided in applied approved baseline and monitoring methodology. |
| **Findings** | No Findings were raised. | | |
| **Conclusion** | The verification team confirms that; It has critically assessed each applicability condition listed in the selected methodology and the relevant information contained in the PSF/09/ against these criteria. The selected CDM methodology and tool for the project activity is found applicable and appropriately described in the PSF/09/ which was checked and found correct. | | |

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

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| **Means of Project Verification** | Since the applicability of methodology was found to be fulfilled, further clarification to the methodology/13/ were not required. |
| **Findings** | CAR03 was raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | The verification team confirms that; It has critically assessed each applicability condition listed in the selected methodology/13/ tool and the relevant information contained in the PSF/09/ against these criteria and was found correct. |

### D.3.3 Project boundary, sources and GHGs

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| **Means of Project Verification** | As per the applied methodology AMS I.D, version 18 and ACM0002 Version 21.0/13/, "the spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the project power plant is connected to".<br>The components of the project boundary mentioned in the PSF/09/ were found to be in compliance with paragraph 22 of the applied methodology/13/.<br><br>The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. The verification team confirmed that all GHG sources required by the methodology have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology or accuracy of the emission reductions.<br><br>The project boundary is clearly depicted with the help of a line diagram in section B.3 of the PSF/09/ and duly verified by the verification team during the site visit and was found appropriate. |
| **Findings** | No findings were raised. |

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| **Conclusion** | The verification team was able to assess that complete information regarding the project boundary has been provided in PSF and could be assured from the line diagram.<br>The verification team confirms that the identified boundary, selected emissions sources are justified for the project activity. |

### D.3.4 Baseline scenario

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| **Means of Project Verification** | As per para 24 of applied methodology ACM0002 Version 21.0 & AMS I.D "Grid-connected renewable electricity generation", Version 18.0/13/, Baseline emissions for other systems are the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor.<br><br>**Determination of Grid Emission Factor ($EF_{grid,CM,y}$)**<br>The project owner used the "Tool07 : Tool to calculate the emission factor for an electricity system"/15/ to determine the emission coefficient as per 23 (a) of the indicatives simplified baseline and monitoring methodologies for selected large scale CDM project activity ACM0002 (Version 21.0) and AMS ID (Version 18)/13/ methodology and "Tool to calculate the emission factor for an electricity system" states that electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations. In this case the Combined Margin (weighted average of Simple Operating Margin and Build Margin) is estimated based on three years average (2019-20, 2020-21,2021-22) of Simple Operating Margin and Build Margin of current year (2021-22) is in line with steps of "Tool to calculate the emission factor for an electricity system". Both the value of Simple Operating Margin and Build Margin are selected under ex-ante approach. The grid boundary with respect to the connected grid is Indian national electricity grid.<br><br>In accordance with "Tool to calculate the emission factor for an electricity system" Dispatch Data Analysis" is the first methodological choice out of four options of calculating OM emission factor. Nevertheless the "Dispatch data analysis operating margin" is ruled out in India due to lack of necessary dispatch data of the grids. The same fact is also considered by the Central Electricity Authority (Ref the user guide for CO2 Baseline Database for the Indian Power Sector version 18.0, December 2022)/37/.<br><br>Out of other 3 options of calculating OM, Project Owner have rightly selected simple OM emission factor calculation as the share of low cost / must run resources of the selected grid over the five most recent years (16-17,17-18,18-19, 19-20, 20-21, 2021-22) which is less than 50% of the gross grid generation. For wind and solar projects, "Tool to calculate the emission factor for an electricity system" allows the usage of the default weights are as follows: WOM =0.75 and WBM = 0.25. Using the above values, the combined margin emission factor is valued at 0.9310 tCO2/MWh.<br><br>The calculation of $EF_{grid,CM,y}$ is current and publicly available and published by the Central Electricity Authority on its website. The verification team is convinced of the result of the emission coefficient calculation. It is deemed to be adequate and transparent. |

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| | Further, as per the Indian Electricity Conservation Act 2011, and Central electricity regulatory Authority of India baseline scenario i.e., generation electricity from conventional fossil fuels and supplied to the Indian grid is the continued alternative scenario and the same is in compliance with all applicable legal and regulatory requirements. Hence, the baseline for the project activity is the equivalent amount of power from the Indian grid.<br><br>The baseline scenario in the PSF/09/ is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the Indian Grid. The baseline scenario applied in the PSF was compared with the requirements of the baseline described in the applied methodology/13/ and found consistent. |
| **Findings** | No findings were raised. |
| **Conclusion** | The verification team confirms that:<br>• All assumptions and data used by the project owner are listed in the final PSF/09/.<br>• All documentation used as the basis of assumption and source of data for establishment of baseline scenario has been correctly interpreted in the final PSF.<br>• The baseline methodology/13/ and the applicable tool(s) have been applied correctly to calculate baseline, project and leakage emissions.<br><br>The verification team also concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project activity. |

### D.3.5 Demonstration of additionality

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| **Means of Project Verification** | For demonstrating additionality under GCC the project activity is required to undergo the following tests: -<br>**For small scale in the bundled project**<br>As per the paragraph 11 (i) of the clarification No.01, version 1.3, when both the large-scale and the small-scale methodologies have been applied, the additionality approach shall be followed by the large-scale methodology.<br><br>a) **Legal Requirement Test:** - based on the following available literature on Electricity Market Law in India: -<br>• Electricity Act 2003 (May 2007 Amendment)[20]<br>• National Electricity policy 2005[21]<br>• The Electricity (Supply) Act, 1948[22]<br>• The Electricity Regulation Commission Act, 1998[23]<br>• Schedule 1 of Ministry of Environmental and Forest notification[24]<br>• National Renewable Energy Act 2015[25]<br><br>The Project activity conforms to all the applicable laws and regulations in India: |

[20] https://cercind.gov.in/Act-with-amendment.pdf
[21] https://powermin.gov.in/en/content/national-electricity-policy
[22] https://cercind.gov.in/ElectSupplyAct1948.pdf
[23] https://cercind.gov.in/ElectReguCommiAct1998.pdf
[24] https://parivesh.nic.in/writereaddata/MINISTRY%20OF%20ENVIRONMENT%20AND%20FORESTS%20SO474E.pdf
[25] https://mnre.gov.in/img/documents/uploads/68b053c5a944493e813c24a93cb39263.pdf

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| | • Power generation using renewable energy is not a legal requirement or a mandatory option.<br>• The Indian Electricity Act, 2003 (May 2007 Amendment) does not influence the choice of fuel used for power generation.<br>• There is no legal requirement on the choice of a particular technology for power generation.<br>• Both the baseline and project activity are in compliance with laws and regulations required. There is no mandatory requirement to implement the project activity.<br><br>As per the paragraph 46 of the project standard V3.1/02/, the project conforms to all the applicable laws and regulations and is not implemented by the force of law. This is a voluntary activity undertaken by the project owner in compliance with all the legal requirements of the host country. Hence project complies with the legal requirement test, verified by the assessment team. It was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions. The assessment team assessed the relevant regulations of the host county to confirm the requirements and also confirmed based on the local expertise by the verification team the project is not implemented to meet any legal requirement.<br><br>b) **Additionality Tests:**<br>Additionality has been demonstrated as per the applied methodology ACM0002 "Grid-connected electricity generation from renewable sources", Version 21.0. Methodology requires the project owner to determine the additionality based on Tool 01: "Tool for the demonstration and assessment of additionality", Version 7.0.0. /14/<br><br>The PO has adopted the stepwise approach for demonstrating and assessing the additionality of the project activity as follows:<br><br>Project was envisaged for capacity of 90MW in Assam states of India. Currently, Project activity is fully commissioned and continuously contributing towards emission reduction. GCC PSF/09/ for this project activity was web-hosted for global stakeholder's consultation on 06/02/2023. Start date of the Project is 12/09/2020 which is Commissioning/18/ date of 90 MW plant site.<br><br>In line with GCC Project Standard, version 03.1./02/, the additionality of the Project activity is ascertained in line with the applicable guidance from the GCC. The demonstration of additionality for the proposed Project activity is being carried out in accordance with the additionality tool provided by the UNFCCC i.e., "Tool for demonstration and assessment of Additionality" Version 7.0.0/14/. The tool provides a step-wise approach to establish additionality of the project activity has been followed, details of which are provided in the following paragraphs:<br><br>As per of TOOL 01: 'Tool for demonstration and assessment of Additionality' version 7.0.0:/14/ - |

**Step 0: Demonstration whether the proposed project activity is the first of-its-kind.**

This step is optional and not used for this project as this is not a first of its kind project activity.

**Step 1: Identification of alternatives to the project activity consistent with current laws and regulations**

As per the applied methodology/13/ paragraph 24, the project activity is the installation of a Greenfield power plant, and the baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. Thus, the baseline scenario is applied as per the methodology and no alternative selection is required as per paragraph 55 of the Project standard version 3.1./02/

**Step 2: Investment analysis**

In this section it is demonstrated that the project activity is not financially feasible without the revenue from the sale of ACCs. This is demonstrated in following sections as per "Investment analysis" (Version 12.0)/17/.

The project is bagged by Azure Power Forty Private Limited and Azure Power India Private Limited through bidding/38/ process from Assam Power Distribution Company Limited (APDCL). PO has considered the investment decision dates as dates of Power Purchase agreements (PPA). For 90 MW site date is as 25/06/2018 after getting Letter of awards issued by Assam Power Distribution Company Limited.

During review, assessment team found that Initially, Azure Power Forty Private Limited and Azure Power India Private Limited, participated in the bidding process and successfully secured the project for future development. Upon receiving the confirmation letter/39/ for winning the bid, PO proceeded to execute the power purchase agreement/23/ through its wholly owned special purpose vehicle (SPV), Azure Power Forty Private Limited (Legal owners) and Azure Power India Private Limited (Focal Point).

Following are the chronological events of the project activity.

| | **90 MW Bundled Project - Assam** | **Chronology of the project** | | | |
|---|---|---|---|---|---|
| **S. No.** | **Document** | **Region 1 - Udalguri (25 MW)** | **Region 2 - Kamrup (25 MW)** | **Region 3 - Nagaon (15 MW)** | **Region 4 - Cachar (25 MW)** |
| 1 | RfP date | 03/03/2018 | 03/03/2018 | 03/03/2018 | 03/03/2018 |
| 2 | Board Resolution for Investment | 10/05/2018 | 10/05/2018 | 10/05/2018 | 10/05/2018 |

| | | | | | |
|---|---|---|---|---|---|
| 3 | Letter of Award | 15/06/2018 | 15/06/2018 | 15/06/2018 | 15/06/2018 |
| 4 | DPR date | 20/06/2018 | 20/06/2018 | 20/06/2018 | 20/06/2018 |
| 5 | Power Purchase Agreement (PPA) | 25/06/2018 | 25/06/2018 | 25/06/2018 | 25/06/2018 |
| 6 | Purchase Order (Supply Order) | 24/12/2019 | 24/12/2019 | 24/12/2019 | 24/12/2019 |
| 7 | Commissioning Date | 12/09/2020 | 30/12/2021 | 27/01/2022 | 31/03/2022 |
| 8 | LSC Meeting | 27/05/2019-28/05/2019 | 22/08/2019 | 14/11/2019 | 16/12/2019-17/12/2019 |

**Sub-step 2a: Determine appropriate analysis method.**

Project owner had demonstrated that the financial returns of the proposed GCC project activity would be insufficient to justify the required capital investment as per GCC Verification Standard/03/.

The project is generating revenue in terms of power generated from the Solar power plant being used for sell to grid. Thus, simple cost analysis (Option I) is not appropriate. Hence out of 2 options, investment comparison analysis (Option II) benchmark analysis (Option III), benchmark analysis is used for the project activity as per project type and decision-making context. Therefore, the Expected return on equity is considered appropriate benchmark.

All the steps followed to reach the conclusion have been assessed and the choice of analysis technique is accepted by the verification team.

**Sub-step 2b: Option III. Apply benchmark analysis:**

Benchmark selection and its appropriateness:

As per Paragraph 15 of the investment analysis/17/, version 12.0 “The applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or WACC are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for an equity IRR. Benchmarks supplied by relevant national authorities are also appropriate. The DOE shall validate that the benchmarks used are applicable to the project activity and the type of IRR calculation presented”.

The Project owner has chosen Post tax equity IRR as the financial indicator, based on the above the appropriate benchmark is required/expected returns on equity which is correctly chosen by the project owner, and it is acceptable.

As per paragraph 19 of the Investment Analysis tool 27/17/, version 12.0 “If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix; or by (b) calculating the cost of equity using CAPM”. Project owner has taken the default

value for expected return on equity of 9.77% as given in the table of Appendix of Tool 27- Investment Analysis (EB 116 Annex 2) Version 12.0 which was the latest version applicable at the time of submission of project activity for additionality demonstration. Hence the value considered by the project owner is appropriate and acceptable to verification team.

The benchmark return on equity in the tool is expressed in real terms. The post-tax equity IRR calculated is in nominal terms as escalation is considered in O&M cost. Accordingly, Project owner converted the default benchmark which is in real terms into nominal terms by using the following equation:

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

Verification team referenced the book 'Corporate Finance" 2nd edition, by Aswath Damodaran/49/. In page 320 of the book, the same equation is mentioned for converting real into nominal values. Hence the assessment team considers the above equation as appropriate for converting real benchmark into nominal benchmark.

As per paragraph 16 of the Tool 27/17/ state that the inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period, accordingly project owner has chosen the Reserve Bank of India (RBI) is Central Bank of host country (India) and it is India's monetary authority which is acceptable to the verification team. The CPI inflation forecasted by RBI for next 5 years is expected to be 4.00% under Monitoring Policy amended in 2016.

Hence the nominal Benchmark estimated as = {(1+9.77%) *(1+4.50%)-1 = 14.71%. The verification team has verified the sources and confirmed that the benchmark identified to compare the financial attractiveness of the project activity is appropriate.

| | |
|---|---|
| Default Value for India as per UNFCCC guidelines | **9.77%** |
| Inflation targets as per RBI for 10 years | **4.50%** |
| Nominal Benchmark | **14.71%** |

**b) Parameters and assumptions used:**

The input parameters in the financial analysis/11/ have been taken as per the values and assumptions applicable and available at the time of decision to invest in the project activity in line with Paragraph 10, investment analysis tool version 12.0/17/. All the input values are based on the detailed project reports (DPR)/24/ prepared by the company Azure Power Forty Private Limited.

As per Paragraph 101 a) of VVS Version 3.0[26], where the Detailed project reports has been the basis of Letter of Award and financial Bid, the decision to proceed with the investment decision by board is taken as signing of PPA/23/ i.e., that the period of time between the finalized detailed project report and the investment decision/PPA

[26] https://cdm.unfccc.int/Reference/Standards/index.html

should be sufficiently short to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed.

The project owner has participated in the bidding of Request for Proposal (RfP) issued by Assam Power Distribution Company Limited dated 03/03/2018. The project owner has prepared the investment note with key assumptions and financial parameters for the participation of bid. This is the time when the board has started evaluating the input assumptions and financial viability of the project activity to participate in the bidding and further to invest in the project activity and the board resolution for the participation on the bidding has been passed on 10/05/2018. The letter of award for the implementation of the project was received on 15/06/2018 and the project owner has prepared the Detailed Project Report after the receival of letter of award with the same assumptions considered in the investment note. Input values for the investment analysis are sourced from the investment note which is the first and foremost document available at the time the project owner started evaluating the project for the bidding and investment. Hence, all the input parameters used in the investment analysis are available at the time of decision making.

The verification team cross check the input values with publicly available sources like CERC tariff order, Income Tax/Companies Act for its appropriateness at the time of the investment decision according to the requirement against VVS Paragraph 99. The assessment involved checking the data input taken from Detailed Project Report/24/, Purchase order22/, loan Sanction letter/33/, Income Tax Act, adoption of correct accounting principle and arithmetical accuracy. CARs and CLs were raised on non-conformities, and they were set right. With the corrections having been incorporated, the input values considered appear to be in order. All the input parameters considered in computation, the basis, correctness and appropriateness thereof are given in below table along with verification team comments. Verification Team, therefore, conforms to guidance given vide paragraphs paragraph 99 and 101 of VVS version 3.0. The post-tax equity IRR for the project activity at the time of investment decision for P1, P2, P3, P4 comes out to 6.54% and 3.15%,2.88% and 4.38% respectively.

The project activity is a renewable source of electricity generation and supplies the electricity to the Indian Electricity grid. The key parameters which determine the Equity IRR of the project activity are project cost, PLF and profitability estimates.

In the revised GCC PSF/09/, the project cost is based on the DPRs (Detailed Project Report)/24/. The details of the DPRs are as below:

**For Project 1 (25 MW) site**

| Particulars | Value | Unit | Assessment |
|---|---|---|---|
| Capacity of the project | 25.0 | MW | The installed capacity of the project activity is 25 MW / 37.536 MWp. The installed capacity is assessed from the LOA/29/ that was available prior to the investment decision/23/ date of the project activity and further it is cross checked by the PPA/23/ signed between Legal Owner and Assam Power Distribution Company Limited (APDCL) and commissioning certificate/18/. At the time of investment decision/23/, The total installed capacity of the project activity is also established during onsite audit with the help of interviewing the PO representative and found |
| | 37.536 | MWp | |

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| | | | | appropriate. |
| | Project Life Time | 25 | Years | The operational lifetime of the project activity is sourced from DPR[/24/] which was available at the time of investment decision[/23/] and it is crosschecked with the technical data sheet[/19/] provided by the project owner and found in line with DPR[/24/] value. Incidentally, this is also in conformity with the operating life given by Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[27] which is prevailing at the time of decision making[/26/]. Hence, the value considered by project owner is correct and appropriate for the project. |
| | Plant Load Factor | 22.50 | % | The PLF is considered as 22.50 % which is based at estimated energy production calculations sourced from PVSyst report[/32/] prepared by Azure Power Forty Private. which was available at the time of investment decision[/23/]. Hence the value considered by the project owner for demonstrating additionality of the project is deemed acceptable to the verification team and also in line with paragraph 3 (b) of "Guidelines for the reporting and Validation of Plant Load Factors" (Annex 11 of EB 48). Hence the value considered by the project owner in the investment analysis is conservative and acceptable to the verification team.<br><br>Also, verification team crosschecked the actual electricity generation achieved by the solar plant for the recent operational years 2022 to 2023[/52/] and found that the average PLF achieved is only approximately 22.83%, which is more than the figure (22.50%) achieved in sensitivity analysis with a +10% variation. Verification team carried out its own an independent assessment, which reveals that the project would become nonadditional if PLF goes up +28.87%, which translates the PLF value of 28.99% which is unlikely scenario. |
| | First year Degradation | 2 | % | This value is sourced from Detailed Project Report[/24/] which was available at the time of investment decision[/23/]. Further, verification team has cross verified with the NERL report on Photovoltaic Degradation Rates - An Analytical Review[28]. The report covers nearly 2000 degradation rates all across the globe and degradation rates has a mean of 0.8% per year. Also, normally most of the PV panels manufacturer[29] guaranteed 2-3% degradation in first year and 0.7% on each year up to 10 years. So, the value considered in the investment analysis is conservative compared to the above referred values and acceptable to the verification team, even total removal of the value does not render the project non -additional. |
| | Annual Degradation (2nd years onwards) | 0.7 | | |
| | Project cost | 1327.50 | INR Million | The amount INR 1372.50 million considered as the net project cost as a cash outflow in the Post tax equity IRR calculations. The project cost taken to demonstrate the additionality is based on the Investment Note which is the available data at the time of investment decision[/23/] to the project owner. However, as an additional check, the verification team cross checked actual cost[/51/] incurred by the project owner for the project activity through Purchase orders[/22/] placed to the major equipment suppliers[/31/] and chartered accountant certificate[/52/] evidence for the investment as per the requirements set forth by VVS |

[27] https://cercind.gov.in/2020/orders/13-SM-2020.pdf
[28] https://www.nrel.gov/docs/fy12osti/51664.pdf
[29] https://www.solarquotes.com.au/blog/solar-panel-degradation/

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| | | | | paragraph 99. Consequently; it was found that that the actual project cost incurred by the project owner is 14.69% (Rs 1132.4 million) More than the cost considered in the DPR[/24/]. Whereas the breaching values is -25.35%. Hence the consideration of project cost from the actual cost as against the DPR project cost still results in the Post tax equity IRR remaining below the benchmark.<br>A threshold analysis was carried out and found that the project would become non additional only if project cost goes down by -25.35 %. However, reduction in project cost is not a likely scenario in the verification team's opinion, as the project has been already commissioned and also actual cost incurred by the project owner is supported by the supply - service agreement[/22/] and Chartered accountant Certificate[/51/]. Taking into consideration all these factors and based on the local and sectoral expertise, the verification team concludes that the project cost is reliable and appropriate for the project activity. |
| | Debt | 70.0% | % | The debt equity ratio is based on the Investment note which was available at the time of investment decision[/23/]. The actual financing pattern yields a gearing of 80:20 which is based on actual loan sanctioned[/33/] to the project activity by the bank. However as per Central Electricity Regulatory Commission (CERC) Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 which is prevailing at the time of decision-making[/26/]. Suggest for 70:30 ratio. Therefore, the debt: equity ratio of the project is considered to be in order. Hence the debt equity ratio considered is acceptable |
| | Equity | 30.0% | % | |
| | Interest rate | 11.00 % | % | The interest rate is based Investment note which was available at the time of investment decision[/23/]. Also, as per the loan sanction letter from bank[/33/], the actual cost of debt for the project activity loan is 7.20%. The interest rate determined in Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020/48/, is 12.76% which is higher than the interest rate considered in the IRR sheet[/11/]. However even with the actual interest rate of 7.20%, there is no major impact on IRR and it is well below the benchmark. |
| | Debt Repayment tenure | 15 | Years | Loan Tenure is based on the Investment Note which was available at the time of investment decision[/23/]. The loan tenure suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 is 12 years with 0-year moratorium and 12 years repayment. Hence the project considers conservative value in both moratorium period (01 years) and repayment period (16 years). Verification team also verified the loan sanction letter[/33/] and found that the actual repayment period is 15 years. Thus, the repayment period considered is on par with the actual period. Hence, the repayment period & moratorium period considered for IRR calculation is found to be appropriate. |
| | Moratorium | 01 | Years | |
| | Operation and Maintenance | 0.75 | INR Million /MW | The O&M cost and its escalation is based on the Investment Note which was available at the time of investment decision[/23/]. The O&M cost suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated |

| | | | | |
|---|---|---|---|---|
| | Escalation in O & M | 5.00 | % | 21.07.2020[30] is 0.7 INR million /MW.<br>It is observed that O&M cost is not a critical factor at all in as much as only a 164.88 % reduction in O&M cost (which in effect means free O&M service) would render the project non-additional. Further the 164.88% reduction in O&M cost is not a likely scenario in terms of project type and its context. The verification team crosschecked the actual O&M cost from the O&M Agreements/21/ of the project activity which is on par with the values assumed in during the investment decision making time. Hence the assumption of O&M cost and its escalation is acceptable to verification team. |
| | Tariff | 3.74 | Rs/kWh | The tariff base rate is based on the power purchase agreement/23/, which was available at the time of investment decision/23/. This is also crosschecked through the actual invoices/36/ raised to Assam Power Distribution Company Limited (APDCL) The PPA/23/ is fixed without any escalation for 25 years. Hence, the tariff considered in the investment analysis is acceptable and found to be appropriate.<br><br>Further increase in tariff is the unlikely scenario as the tariff is fixed without any escalation for 25 years from the commercial operation date of the unless extended by the parties as per the Power Purchase Agreement/23/. Verification team also verified the actual invoices/36/ raised by the project owner to Assam Power Distribution Company Limited (APDCL) and found the actual tariff is INR 3.7 /kWh/23/.". Hence tariff rate considered in the investment analysis is deemed appropriate and acceptable to the verification team. |
| | Depreciation Rate (Book) | 4.00% | % | The project owner has considered straight-line method for book depreciation where 90% of the initial value of the project cost is depreciated for the life period of the project considering 10% salvage value. This is as per as per Schedule XIV of the Companies Act, 1956 for computing book profit which is as per accounting practices followed in the host country. The following link has been verified and found correct.<br>https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html |
| | Residual Value | 189.00 | INR Million | The Residual Value is based DPR/24/ which was available at the time of investment decision/23/. The residual value is taken as 10% of the Depreciable cost in the project cost + Cost of land, which is in conformity with the best international practices and local accounting principles Also the same is in line with Salvage value provided in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[31] which was available at the time of investment decision/23/. Further verification team cross checked from Section 205 (2b and c) of Companies Act 1956, which allows a depreciable cost of ninety five percent which implies a consideration of 5% of salvage value as a standard accounting practice. This can be verified from the below link https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html As required by Tool 27/17/ the expected realisation on the sale of assets at the end of the operating life has been taken as residual value in the terminal year in the cash inflow in calculation of the post-tax equity IRR. The principle adopted conforms to the accepted accounting and taxation principles. Hence the salvage value considered in the project owner is appropriate and conservative. |
| | IT | 7.6 | % | The IT depreciation is based on the DPR/24/ available at the time |

[30] https://cercind.gov.in/2016/orders/sm_3.pdf
[31] https://cercind.gov.in/2016/orders/sm_3.pdf

| | | | |
|---|---|---|---|
| Depreciation Rate | 9 | | of investment decision[23]. The project owner considered the IT depreciation rate 7.69% for power generating units. As per the act the depreciation rate for Solar power generation unit from AY 2006-07 to AY 2018-19 is 80% and the rate changed to 40% from AY 2018-19 onwards. This is as per Income Tax Act 1961 stipulated for income tax calculation which is as per accounting practices followed in the host country. The following web link has been verified and found correct. https://incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm |
| Effective Income tax rate | 34.94 % | % | The corporate tax payable is calculation based on the base corporate tax, Surcharge & educational cess given in the Union budget analysis for the year 2018-19 which was available at the time of investment decision[23]. The calculation based on the following values:<br>Income tax rate- 30%<br>Surcharge – 12% of corporate tax<br>Health and Educational Cess- 4% of corporate tax.<br>The corporate tax value considered is correct and applicable to the project activity. The same has been verified in the following weblink and found to be correct.<br>https://taxguru.in/income-tax/income-tax-rates-financial-year-2021-22-ay-2022-23.html |
| Effective GST | 18 | % | |

**For Project 2 (25 MW) site**

| Particulars | Value | Unit | Assessment |
|---|---|---|---|
| Capacity of the project | 25.0 | MW | The installed capacity of the project activity is 25 MW / 37.536 MWp. The installed capacity is assessed from the LOA[29] that was available prior to the investment decision[23] date of the project activity and further it is cross checked by the PPA[23] signed between Legal Owner and Assam Power Distribution Company Limited (APDCL) and commissioning certificate[18]. At the time of investment decision[23], The total installed capacity of the project activity is also established during onsite audit with the help of interviewing the PO representative and found appropriate. |
| | 37.536 | MWp | |
| Project Life Time | 25 | Years | The operational lifetime of the project activity is sourced from DPR[24] which was available at the time of investment decision[23] and it is crosschecked with the technical data sheet[19] provided by the project owner and found in line with DPR[24] value. Incidentally, this is also in conformity with the operating life given by Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 [32] which is prevailing at the time of decision making[26]. Hence, the value considered by project owner is correct and appropriate for the project. |
| Plant Load Factor | 22.50 | % | The PLF is considered as 22.50 % which is based at estimated energy production calculations sourced from PVSyst report[32] prepared by Azure Power Forty Private. which was available at the time of investment decision[23]. Hence the value considered by the project owner for demonstrating additionality of the project is deemed acceptable to the verification team and also in line with paragraph 3 (b) of "Guidelines for the reporting and Validation of Plant Load Factors" (Annex 11 of EB 48). Hence the value considered by the project owner in the investment analysis is conservative and acceptable to the verification team. |

[32] https://cercind.gov.in/2020/orders/13-SM-2020.pdf

| | | | | |
|---|---|---|---|---|
| | | | | Also, verification team crosschecked the actual electricity generation achieved by the solar plant for the recent operational years 2022 to 2023[/52/] and found that the average PLF achieved is only approximately 17.99%, which is less than the figure (22.50%) achieved in sensitivity analysis with a +10% variation. Verification team carried out its own an independent assessment, which reveals that the project would become nonadditional if PLF goes up +46.33%, which translates the PLF value of 32.92% which is unlikely scenario. |
| | First year Degradation | 2 | % | This value is sourced from Detailed Project Report[/24/] which was available at the time of investment decision[/23/]. Further, verification team has cross verified with the NERL report on Photovoltaic Degradation Rates - An Analytical Review[33]. The report covers nearly 2000 degradation rates all across the globe and degradation rates has a mean of 0.8% per year. Also, normally most of the PV panels manufacturer[34] guaranteed 2-3% degradation in first year and 0.7% on each year up to 10 years. So, the value considered in the investment analysis is conservative compared to the above referred values and acceptable to the verification team, even total removal of the value does not render the project non -additional. |
| | Annual Degradation (2nd years onwards) | 0.70 | | |
| | Project cost | 132 7.50 | INR Million | The amount INR 1372.50 million considered as the net project cost as a cash outflow in the Post tax equity IRR calculations. The project cost taken to demonstrate the additionality is based on the Detailed Project Report (DPR)[/24/] which is the available data at the time of investment decision[/23/] to the project owner. However, as an additional check, the verification team cross checked actual cost[/51/] incurred by the project owner for the project activity through Purchase orders[/22/] placed to the major equipment suppliers[/31/] and chartered accountant certificate[/52/] evidence for the investment as per the requirements set forth by VVS paragraph 99. Consequently; it was found that that the actual project cost incurred by the project owner is 16.7% (Rs 1104.5 million) More than the cost considered in the DPR[/24/]. Whereas the breaching values is -36.36%. Hence the consideration of project cost from the actual cost as against the DPR project cost still results in the Post tax equity IRR remaining below the benchmark.<br>A threshold analysis was carried out and found that the project would become non additional only if project cost goes down by 36.36 %. However, reduction in project cost is not a likely scenario in the verification team's opinion, as the project has been already commissioned and also actual cost incurred by the project owner is supported by the supply - service agreement[/22/] and Chartered accountant Certificate[/51/]. Taking into consideration all these factors and based on the local and sectoral expertise, the verification team concludes that the project cost is reliable and appropriate for the project activity. |

[33] https://www.nrel.gov/docs/fy12osti/51664.pdf

[34] https://www.solarquotes.com.au/blog/solar-panel-degradation/

| | | | | |
|---|---|---|---|---|
| | Debt | 70.0 % | % | The debt equity ratio is based on the DPR /24/ which was available at the time of investment decision/23/. The actual financing pattern yields a gearing of 80:20 which is based on actual loan sanctioned/33/ to the project activity by the bank. However as per Central Electricity Regulatory Commission (CERC) Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 which is prevailing at the time of decision-making/26/. Suggest for 70:30 ratio. Therefore, the debt: equity ratio of the project is considered to be in order. Hence the debt equity ratio considered is acceptable |
| | Equity | 30.0 % | % | |
| | Interest rate | 11.00% | % | The interest rate is based DPR/24/ which was available at the time of investment decision/23/. Also, as per the loan sanction letter from bank/33/, the actual cost of debt for the project activity loan is 7.20%. The interest rate determined in Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020/48/, is 12.76% which is higher than the interest rate considered in the IRR sheet/11/. However even with the actual interest rate of 7.20%, there is no major impact on IRR and it is well below the benchmark. |
| | Debt Repayment tenure | 15 | Years | Loan Tenure is based on the Investment Note which was available at the time of investment decision/23/. The loan tenure suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 is 12 years with 0-year moratorium and 12 years repayment. Hence the project considers conservative value in both moratorium period (01 years) and repayment period (16 years). Verification team also verified the loan sanction letter/33/ and found that the actual repayment period is 15 years. Thus, the repayment period considered is on par with the actual period. Hence, the repayment period & moratorium period considered for IRR calculation is found to be appropriate. |
| | Moratorium | 01 | Years | |
| | Operation and Maintenance | 0.75 | INR Million /MW | The O&M cost and its escalation is based on the Investment Note which was available at the time of investment decision/23/. The O&M cost suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[35] is 0.7 INR million /MW.<br>It is observed that O&M cost is not a critical factor at all in as much as only a 236.47 % reduction in O&M cost (which in effect means free O&M service) would render the project non-additional. Further the 236.47% reduction in O&M cost is not a likely scenario in terms of project type and its context. The verification team crosschecked the actual O&M cost from the O&M Agreements/21/ of the project activity which is on par with the values assumed in during the investment decision making time. Hence the assumption of O&M cost and its escalation is acceptable to verification team. |
| | Escalation in O & M | 5.00 | % | |
| | Tariff | 3.28 | Rs/kWh | The tariff base rate is based on the power purchase agreement/23/, which was available at the time of investment decision/23/. This is also crosschecked through the actual invoices/36/ raised to Assam Power Distribution Company Limited (APDCL) The PPA/23/ is fixed without any escalation for 25 years. Hence, the tariff considered in the investment analysis is acceptable and found to be appropriate.<br><br>Further increase in tariff is the unlikely scenario as the tariff is fixed without any escalation for 25 years from the commercial operation date of the unless extended by the parties as per the Power Purchase Agreement/23/. Verification team also verified |

[35] https://cercind.gov.in/2016/orders/sm_3.pdf

| | | | | |
|---|---|---|---|---|
| | | | | the actual invoices[/36/] raised by the project owner to Assam Power Distribution Company Limited (APDCL) and found the actual tariff is INR 3.24/kWh[/23/].". Hence tariff rate considered in the investment analysis is deemed appropriate and acceptable to the verification team. |
| | Depreciation Rate (Book) | 4.00 % | % | The project owner has considered straight-line method for book depreciation where 90% of the initial value of the project cost is depreciated for the life period of the project considering 10% salvage value. This is as per as per Schedule XIV of the Companies Act, 1956 for computing book profit which is as per accounting practices followed in the host country. The following link has been verified and found correct. https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html |
| | Residual Value | 189.00 | INR Million | The Residual Value is based DPR[/24/] which was available at the time of investment decision[/23/]. The residual value is taken as 10% of the Depreciable cost in the project cost + Cost of land, which is in conformity with the best international practices and local accounting principles Also the same is in line with Salvage value provided in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[36] which was available at the time of investment decision[/23/]. Further verification team cross checked from Section 205 (2b and c) of Companies Act 1956, which allows a depreciable cost of ninety five percent which implies a consideration of 5% of salvage value as a standard accounting practice. This can be verified from the below link https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html As required by Tool 27[/17/] the expected realisation on the sale of assets at the end of the operating life has been taken as residual value in the terminal year in the cash inflow in calculation of the post-tax equity IRR. The principle adopted conforms to the accepted accounting and taxation principles. Hence the salvage value considered in the project owner is appropriate and conservative. |
| | IT Depreciation Rate | 7.69 | % | The IT depreciation is based on the DPR[/24/] available at the time of investment decision[/23/]. The project owner considered the IT depreciation rate 7.69% for power generating units. As per the act the depreciation rate for Solar power generation unit from AY 2006-07 to AY 2018-19 is 80% and the rate changed to 40% from AY 2018-19 onwards. This is as per Income Tax Act 1961 stipulated for income tax calculation which is as per accounting practices followed in the host country. The following web link has been verified and found correct. https://incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm |
| | Effective Income tax rate | 34.94% | % | The corporate tax payable is calculation based on the base corporate tax, Surcharge & educational cess given in the Union budget analysis for the year 2018-19 which was available at the time of investment decision[/23/]. The calculation based on the following values:<br>Income tax rate- 30%<br>Surcharge – 12% of corporate tax<br>Health and Educational Cess- 4% of corporate tax.<br>The corporate tax value considered is correct and applicable to the project activity. The same has been verified in the following weblink and found to be correct.<br>https://taxguru.in/income-tax/income-tax-rates-financial-year-2021-22-ay-2022-23.html |
| | Effective GST | 18 | % | |

[36] https://cercind.gov.in/2016/orders/sm_3.pdf

**For Project 3 (15 MW) site**

| Particulars | Value | Unit | Assessment |
|---|---|---|---|
| Capacity of the project | 15.0 | MW | The installed capacity of the project activity is 25 MW / 22.522 MWp. The installed capacity is assessed from the LOA[/29/] that was available prior to the investment decision[/23/] date of the project activity and further it is cross checked by the PPA[/23/] signed between Legal Owner and Assam Power Distribution Company Limited (APDCL) and commissioning certificate[/18/]. At the time of investment decision[/23/], The total installed capacity of the project activity is also established during onsite audit with the help of interviewing the PO representative and found appropriate. |
| | 22.522 | MWp | |
| Project Life Time | 25 | Years | The operational lifetime of the project activity is sourced from DPR[/24/] which was available at the time of investment decision[/23/] and it is crosschecked with the technical data sheet[/19/] provided by the project owner and found in line with DPR[/24/] value. Incidentally, this is also in conformity with the operating life given by Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[37] which is prevailing at the time of decision making[/26/]. Hence, the value considered by project owner is correct and appropriate for the project. |
| Plant Load Factor | 22.50 | % | The PLF is considered as 22.50 % which is based at estimated energy production calculations sourced from PVSyst report[/32/] prepared by Azure Power Forty Private. which was available at the time of investment decision[/23/]. Hence the value considered by the project owner for demonstrating additionality of the project is deemed acceptable to the verification team and also in line with paragraph 3 (b) of "Guidelines for the reporting and Validation of Plant Load Factors" (Annex 11 of EB 48). Hence the value considered by the project owner in the investment analysis is conservative and acceptable to the verification team.<br><br>Also, verification team crosschecked the actual electricity generation achieved by the solar plant for the recent operational years 2022 to 2023[/52/] and found that the average PLF achieved is only approximately 17.39%, which is less than the figure (22.50%) achieved in sensitivity analysis with a +10% variation. Verification team carried out its own an independent assessment, which reveals that the project would become nonadditional if PLF goes up +48.14%, which translates the PLF value of 33.33% which is unlikely scenario. |
| First year Degradation | 2 | % | This value is sourced from Detailed Project Report[/24/] which was available at the time of investment decision[/23/]. Further, verification team has cross verified with the NERL report on Photovoltaic Degradation Rates - An Analytical Review[38]. The report covers nearly 2000 degradation rates all across the globe and degradation rates has a mean of 0.8% per year. Also, normally most of the PV panels manufacturer [39] guaranteed 2-3% degradation in first year and 0.7% on each year up to 10 years. So, the value considered in the investment analysis is conservative compared to the above referred values and acceptable to the verification team, even total removal of the value does not render the project non -additional. |
| Annual Degradation (2nd | 0.7 | | |

[37] https://cercind.gov.in/2020/orders/13-SM-2020.pdf
[38] https://www.nrel.gov/docs/fy12osti/51664.pdf
[39] https://www.solarquotes.com.au/blog/solar-panel-degradation/

| | | | | |
|---|---|---|---|---|
| | years onwards) | | | |
| | Project cost | 796.50 | INR Million | The amount INR 796.50 million considered as the net project cost as a cash outflow in the Post tax equity IRR calculations. The project cost taken to demonstrate the additionality is based on the Detailed Project Report (DPR)/24/ which is the available data at the time of investment decision/23/ to the project owner. However, as an additional check, the verification team cross checked actual cost/51/ incurred by the project owner for the project activity through Purchase orders/22/ placed to the major equipment suppliers/31/ and chartered accountant certificate/52/ evidence for the investment as per the requirements set forth by VVS paragraph 99. Consequently; it was found that that the actual project cost incurred by the project owner is Rs 664.8 million 16.5 more than the cost considered in the DPR/24/. Whereas the breaching values is -37.32%. Hence the consideration of project cost from the actual cost as against the DPR project cost still results in the Post tax equity IRR remaining below the benchmark.<br>A threshold analysis was carried out and found that the project would become non additional only if project cost goes down by 37.32 %. However, reduction in project cost is not a likely scenario in the verification team's opinion, as the project has been already commissioned and also actual cost incurred by the project owner is supported by the supply - service agreement/22/ and Chartered accountant Certificate/51/. Taking into consideration all these factors and based on the local and sectoral expertise, the verification team concludes that the project cost is reliable and appropriate for the project activity. |
| | Debt | 70.0% | % | The debt equity ratio is based on the DPR /24/ which was available at the time of investment decision/23/. The actual financing pattern yields a gearing of 80:20 which is based on actual loan sanctioned/33/ to the project activity by the bank. However as per Central Electricity Regulatory Commission (CERC) Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 which is prevailing at the time of decision-making/26/. Suggest for 70:30 ratio. Therefore, the debt: equity ratio of the project is considered to be in order. Hence the debt equity ratio considered is acceptable |
| | Equity | 30.0% | % | |
| | Interest rate | 11.00% | % | The interest rate is based DPR/24/ which was available at the time of investment decision/23/. Also, as per the loan sanction letter from bank/33/, the actual cost of debt for the project activity loan is 7.20%. The interest rate determined in Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020/48/, is 12.76% which is higher than the interest rate considered in the IRR sheet/11/. However even with the actual interest rate of 7.20%, there is no major impact on IRR and it is well below the benchmark. |
| | Debt Repayment tenure | 15 | Years | Loan Tenure is based on the Investment Note which was available at the time of investment decision/23/. The loan tenure suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 is 12 years with 0-year moratorium and 12 years repayment. Hence the project considers conservative value in both moratorium period (01 years) and repayment period (16 years). Verification team also verified the loan sanction letter/33/ and found that the actual repayment period is 15 years. Thus, the repayment period considered is on par with the actual period. Hence, the repayment period & moratorium period considered |
| | Moratorium | 01 | Years | |

| | | | | |
|---|---|---|---|---|
| | | | | for IRR calculation is found to be appropriate. |
| | Operation and Maintenance | 0.75 | INR Million /MW | The O&M cost and its escalation is based on the Investment Note which was available at the time of investment decision/23/. The O&M cost suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[40] is 0.7 INR million /MW.<br>It is observed that O&M cost is not a critical factor at all in as much as only a 242.69 % reduction in O&M cost (which in effect means free O&M service) would render the project non-additional. Further the 242.69% reduction in O&M cost is not a likely scenario in terms of project type and its context. The verification team crosschecked the actual O&M cost from the O&M Agreements/21/ of the project activity which is on par with the values assumed in during the investment decision making time. Hence the assumption of O&M cost and its escalation is acceptable to verification team. |
| | Escalation in O & M | 5.00 | % | |
| | Tariff | 3.24 | Rs/kWh | The tariff base rate is based on the power purchase agreement/23/, which was available at the time of investment decision/23/. This is also crosschecked through the actual invoices/36/ raised to Assam Power Distribution Company Limited (APDCL) The PPA/23/ is fixed without any escalation for 25 years. Hence, the tariff considered in the investment analysis is acceptable and found to be appropriate.<br><br>Further increase in tariff is the unlikely scenario as the tariff is fixed without any escalation for 25 years from the commercial operation date of the unless extended by the parties as per the Power Purchase Agreement/23/. Verification team also verified the actual invoices/36/ raised by the project owner to Assam Power Distribution Company Limited (APDCL and found the actual tariff is INR 3.20/kWh/23/.". Hence tariff rate considered in the investment analysis is deemed appropriate and acceptable to the verification team. |
| | Depreciation Rate (Book) | 4.00 % | % | The project owner has considered straight-line method for book depreciation where 90% of the initial value of the project cost is depreciated for the life period of the project considering 10% salvage value. This is as per as per Schedule XIV of the Companies Act, 1956 for computing book profit which is as per accounting practices followed in the host country. The following link has been verified and found correct.<br>https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html |
| | Residual Value | 189.00 | INR Million | The Residual Value is based DPR/24/ which was available at the time of investment decision/23/. The residual value is taken as 10% of the Depreciable cost in the project cost + Cost of land, which is in conformity with the best international practices and local accounting principles Also the same is in line with Salvage value provided in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 [41] which was available at the time of investment decision/23/. Further verification team cross checked from Section 205 (2b and c) of Companies Act 1956, which allows a depreciable cost of ninety five percent which implies a consideration of 5% of salvage value as a standard accounting practice. This can be verified from the below link https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html As required by Tool 27/17/ the expected realisation on the sale of assets at the end of the operating life |

[40] https://cercind.gov.in/2016/orders/sm_3.pdf
[41] https://cercind.gov.in/2016/orders/sm_3.pdf

| | | | |
|---|---|---|---|
| | | | has been taken as residual value in the terminal year in the cash inflow in calculation of the post-tax equity IRR. The principle adopted conforms to the accepted accounting and taxation principles. Hence the salvage value considered in the project owner is appropriate and conservative. |
| IT Depreciation Rate | 7.69 | % | The IT depreciation is based on the DPR[/24/] available at the time of investment decision[/23/]. The project owner considered the IT depreciation rate 7.69% for power generating units. As per the act the depreciation rate for Solar power generation unit from AY 2006-07 to AY 2018-19 is 80% and the rate changed to 40% from AY 2018-19 onwards. This is as per Income Tax Act 1961 stipulated for income tax calculation which is as per accounting practices followed in the host country. The following web link has been verified and found correct. https://incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm |
| Effective Income tax rate | 34.94% | % | The corporate tax payable is calculation based on the base corporate tax, Surcharge & educational cess given in the Union budget analysis for the year 2018-19 which was available at the time of investment decision[/23/]. The calculation based on the following values:<br>Income tax rate- 30%<br>Surcharge – 12% of corporate tax<br>Health and Educational Cess- 4% of corporate tax.<br>The corporate tax value considered is correct and applicable to the project activity. The same has been verified in the following weblink and found to be correct.<br>https://taxguru.in/income-tax/income-tax-rates-financial-year-2021-22-ay-2022-23.html |
| Effective GST | 18 | % | |
| Equity | 30.0% | % | |

**For Project 4 (25 MW) site**

| Particulars | Value | Unit | Assessment |
|---|---|---|---|
| Capacity of the project | 25.0 | MW | The installed capacity of the project activity is 25 MW / 37.536 MWp. The installed capacity is assessed from the LOA[/29/] that was available prior to the investment decision[/23/] date of the project activity and further it is cross checked by the PPA[/23/] signed between Legal Owner and Assam Power Distribution Company Limited (APDCL) and commissioning certificate[/18/].<br>At the time of investment decision[/23/], The total installed capacity of the project activity is also established during onsite audit with the help of interviewing the PO representative and found appropriate. |
| | 37.536 | MWp | |
| Project Life Time | 25 | Years | The operational lifetime of the project activity is sourced from DPR[/24/] which was available at the time of investment decision[/23/] and it is crosschecked with the technical data sheet[/19/] provided by the project owner and found in line with DPR[/24/] value. Incidentally, this is also in conformity with the operating life given by Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 [42] which is prevailing at the time of decision making[/26/]. Hence, the value considered by project owner is correct and appropriate for the project. |
| Plant Load Factor | 24.00 | % | The PLF is considered as 24.00% which is based at estimated energy production calculations sourced from PVSyst report[/32/] prepared by Azure Power Forty Private. which was available at |

[42] https://cercind.gov.in/2020/orders/13-SM-2020.pdf

| | | | | |
|---|---|---|---|---|
| | | | | the time of investment decision/23/. Hence the value considered by the project owner for demonstrating additionality of the project is deemed acceptable to the verification team and also in line with paragraph 3 (b) of "Guidelines for the reporting and Validation of Plant Load Factors" (Annex 11 of EB 48). Hence the value considered by the project owner in the investment analysis is conservative and acceptable to the verification team.<br><br>Also, verification team crosschecked the actual electricity generation achieved by the solar plant for the recent operational years 2022 to 2023/52/ and found that the average PLF achieved is only approximately 18.73%, which is less than the figure (24.00%) achieved in sensitivity analysis with a +10% variation. Verification team carried out its own an independent assessment, which reveals that the project would become nonadditional if PLF goes up +39.83%, which translates the PLF value of 33.56% which is unlikely scenario. |
| | First year Degradation | 2 | % | This value is sourced from Detailed Project Report/24/ which was available at the time of investment decision/23/. Further, verification team has cross verified with the NERL report on Photovoltaic Degradation Rates - An Analytical Review[43]. The report covers nearly 2000 degradation rates all across the globe and degradation rates has a mean of 0.8% per year. Also, normally most of the PV panels manufacturer[44] guaranteed 2-3% degradation in first year and 0.6% on each year up to 10 years. So, the value considered in the investment analysis is conservative compared to the above referred values and acceptable to the verification team, even total removal of the value does not render the project non -additional. |
| | Annual Degradation (2nd years onwards) | 0.60 | | |
| | Project cost | 1327.50 | INR Million | The amount INR 1372.50 million considered as the net project cost as a cash outflow in the Post tax equity IRR calculations. The project cost taken to demonstrate the additionality is based on the Detailed Project Report (DPR)/24/ which is the available data at the time of investment decision/23/ to the project owner. However, as an additional check, the verification team cross checked actual cost/51/ incurred by the project owner for the project activity through Purchase orders/22/ placed to the major equipment suppliers/31/ and chartered accountant certificate/52/ evidence for the investment as per the requirements set forth by VVS paragraph 99. Consequently; it was found that that the actual project cost incurred by the project owner is Rs 1017.3 1 million. 23% more than the cost considered in the DPR/24/. Whereas the breaching values is -32.71%. Hence the consideration of project cost from the actual cost as against the DPR project cost still results in the Post tax equity IRR remaining below the benchmark.<br>A threshold analysis was carried out and found that the project would become non additional only if project cost goes down by 32.71 %. However, reduction in project cost is not a likely scenario in the verification team's opinion, as the project has been already commissioned and also actual cost incurred by the project owner is supported by the supply - service agreement/22/ and Chartered accountant Certificate/51/. Taking into consideration all these factors and based on the local and sectoral expertise, the verification team concludes that the project cost is reliable and appropriate for the project activity. |

[43] https://www.nrel.gov/docs/fy12osti/51664.pdf

[44] https://www.solarquotes.com.au/blog/solar-panel-degradation/

| | | | | |
|---|---|---|---|---|
| | Debt | 70.0% | % | The debt equity ratio is based on the DPR /24/ which was available at the time of investment decision/23/. The actual financing pattern yields a gearing of 80:20 which is based on actual loan sanctioned/33/ to the project activity by the bank. However as per Central Electricity Regulatory Commission (CERC) Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 which is prevailing at the time of decision-making/26/. Suggest for 70:30 ratio. Therefore, the debt: equity ratio of the project is considered to be in order. Hence the debt equity ratio considered is acceptable |
| | Equity | 30.0% | % | |
| | Interest rate | 11.00 % | % | The interest rate is based DPR/24/ which was available at the time of investment decision/23/. Also, as per the loan sanction letter from bank/33/, the actual cost of debt for the project activity loan is 7.20%. The interest rate determined in Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020/48/, is 12.76% which is higher than the interest rate considered in the IRR sheet/11/. However even with the actual interest rate of 7.20%, there is no major impact on IRR and it is well below the benchmark. |
| | Debt Repayment tenure | 15 | Years | Loan Tenure is based on the Investment Note which was available at the time of investment decision/23/. The loan tenure suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020 is 12 years with 0-year moratorium and 12 years repayment. Hence the project considers conservative value in both moratorium period (01 years) and repayment period (16 years). Verification team also verified the loan sanction letter/33/ and found that the actual repayment period is 15 years. Thus, the repayment period considered is on par with the actual period. Hence, the repayment period & moratorium period considered for IRR calculation is found to be appropriate. |
| | Moratorium | 01 | Years | |
| | Operation and Maintenance | 0.75 | INR Million /MW | The O&M cost and its escalation is based on the Investment Note which was available at the time of investment decision/23/. The O&M cost suggested in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[45] is 0.7 INR million /MW.<br>It is observed that O&M cost is not a critical factor at all in as much as only a 212.74% reduction in O&M cost (which in effect means free O&M service) would render the project non-additional. Further the 212.74% reduction in O&M cost is not a likely scenario in terms of project type and its context. The verification team crosschecked the actual O&M cost from the O&M Agreements/21/ of the project activity which is on par with the values assumed in during the investment decision making time. Hence the assumption of O&M cost and its escalation is acceptable to verification team. |
| | Escalation in O & M | 5.00 | % | |
| | Tariff | 3.20 | Rs/kWh | The tariff base rate is based on the power purchase agreement/23/, which was available at the time of investment decision/23/. This is also crosschecked through the actual invoices/36/ raised to Assam Power Distribution Company Limited (APDCL) The PPA/23/ is fixed without any escalation for 25 years. Hence, the tariff considered in the investment analysis is acceptable and found to be appropriate.<br><br>Further increase in tariff is the unlikely scenario as the tariff is fixed without any escalation for 25 years from the commercial operation date of the unless extended by the parties as per the Power Purchase Agreement/23/. Verification team also verified |

[45] https://cercind.gov.in/2016/orders/sm_3.pdf

| | | | | |
|---|---|---|---|---|
| | | | | the actual invoices/36/ raised by the project owner to Assam Power Distribution Company Limited (APDCL) and found the actual tariff is INR 3.17/kWh/23/.". Hence tariff rate considered in the investment analysis is deemed appropriate and acceptable to the verification team. |
| | Depreciation Rate (Book) | 4.00% | % | The project owner has considered straight-line method for book depreciation where 90% of the initial value of the project cost is depreciated for the life period of the project considering 10% salvage value. This is as per as per Schedule XIV of the Companies Act, 1956 for computing book profit which is as per accounting practices followed in the host country. The following link has been verified and found correct. https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html |
| | Residual Value | 189.00 | INR Million | The Residual Value is based DPR/24/ which was available at the time of investment decision/23/. The residual value is taken as 10% of the Depreciable cost in the project cost + Cost of land, which is in conformity with the best international practices and local accounting principles Also the same is in line with Salvage value provided in the Central Electricity Regulatory Commission Tariff order number 13/SM/2020 (Suo-Motu) dated 21.07.2020[46] which was available at the time of investment decision/23/. Further verification team cross checked from Section 205 (2b and c) of Companies Act 1956, which allows a depreciable cost of ninety five percent which implies a consideration of 5% of salvage value as a standard accounting practice. This can be verified from the below link https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html As required by Tool 27/17/ the expected realisation on the sale of assets at the end of the operating life has been taken as residual value in the terminal year in the cash inflow in calculation of the post-tax equity IRR. The principle adopted conforms to the accepted accounting and taxation principles. Hence the salvage value considered in the project owner is appropriate and conservative. |
| | IT Depreciation Rate | 7.69 | % | The IT depreciation is based on the DPR/24/ available at the time of investment decision/23/. The project owner considered the IT depreciation rate 7.69% for power generating units. As per the act the depreciation rate for Solar power generation unit from AY 2006-07 to AY 2018-19 is 80% and the rate changed to 40% from AY 2018-19 onwards. This is as per Income Tax Act 1961 stipulated for income tax calculation which is as per accounting practices followed in the host country. The following web link has been verified and found correct. https://incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm |
| | Effective Income tax rate | 34.94 % | % | The corporate tax payable is calculation based on the base corporate tax, Surcharge & educational cess given in the Union budget analysis for the year 2016-17 which was available at the time of investment decision/23/. The calculation based on the following values:<br>Income tax rate- 30%<br>Surcharge – 12% of corporate tax<br>Health and Educational Cess- 4% of corporate tax.<br>The corporate tax value considered is correct and applicable to the project activity. The same has been verified in the following weblink and found to be correct. https://taxguru.in/income-tax/income-tax-rates-financial-year-2021-22-ay-2022-23.html |
| | Effective GST | 18 | % | |

[46] https://cercind.gov.in/2016/orders/sm_3.pdf

| | | | |
|---|---|---|---|
| Equity | 30.0% | % | |

**Financial calculation and conclusion:**

The Post tax equity IRR calculations were provided in a spreadsheet[/11/]. The calculation was verified and found to be correct by project verification team; as well as the assumptions used in the calculation were deemed to be correct. The Post tax equity IRR without carbon credit revenues are;

| Sites | Equity IRR | Benchmark (Equity IRR) |
|---|---|---|
| 25 MW | 6.54% | 14.71% |
| 25 MW | 3.15% | 14.71% |
| 15 MW | 2.88% | 14.71% |
| 25 MW | 4.38% | 14.71% |

which confirms that the proposed project activity in absence of the carbon credit benefits and compared to the benchmark return on equity 14.71% is not financially attractive.

**Sensitivity Analysis:**

The Guidance on Assessment of Investment Analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation. The project developer has identified generation, project cost, O&M cost, tariff as critical assumptions. These constitute more than 20% of the project cost/revenue. Guidance 28 of Tool 27[/17/] states that as a general point of departure, variations in the sensitivity analysis should at least cover a range of +10% and –10%, unless this is not deemed appropriate in the context of the specific project circumstances. Since project has already been implemented any variation in project cost is hypothetical. Nevertheless, the project cost has also been subjected to 10% variation. The sensitivity analysis reveals that excepting when the power tariff or PLF goes up by 10% or project cost comes down by 10% as given in the following table.

**For Project 1 (25 MW) site:**

| Variation % | -10% | Normal | 10% |
|---|---|---|---|
| **PLF (%)** | 3.80% | 6.54% | 9.29% |
| **O&M Cost (Mn INR)** | 7.10% | 6.54% | 6.01% |
| **Project Cost (Mn INR)** | 9.05% | 6.54% | 4.52% |
| **Tariff (INR/KWh)** | 3.80% | 6.54% | 9.29% |

The results of sensitivity analysis show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, Post Tax equity IRR is significantly lower than the

benchmark. And it is evident from the results given above; the project remains additional even under the most favourable conditions. Also, the reasonable variations for these parameters were checked by calculating the variation necessary to reach the benchmark and then discussing the likelihood for that to happen.

The project becomes non additional only if cost of project is reduced by 25.35% which is an unlikely scenario since the project is commissioned and actual cost (Rs 1327.50million) incurred by the project owner 14.69% less than the project cost (Rs 11324.4 million) considered in the investment analysis. The actual cost incurred by the project participant is supported by Chartered Accountant Certificate/51/ and supply - service agreements/22/ placed between Azure Power Forty Limited.

Also, tariff increases 28.33 % which is not a plausible scenario since the power purchase agreement/23/ has been executed for the project activity, where in the tariff was determined for the life time of the project activity.

The O & M costs coming down by 164.88 % which is not a likely scenario for the project activity where inflation exists in the host country.

The IRR reaches the benchmark if the PLF goes up 28.33% which translates the PLF value of 28.87% which is unlikely scenario. Verification team crosschecked the actual electricity generation achieved by the solar plant for the operational year Apr 2021 to Mar 2022 and found that the maximum annual PLF achieved is only approximately 22.82%. Hence further increase in PLF is highly unlikely scenario.

All the four scenarios highly hypothetical and impossible. Verification Team has arrived at the conclusion that the project scenario is not economically feasible without benefits from carbon benefits.

**For Project 2 (25 MW) site:**

| Variation % | -10% | Normal | 10% |
|---|---|---|---|
| PLF (%) | 0.84% | 3.15% | 2.53% |
| O&M Cost (Mn INR) | 3.75% | 3.15% | 4.10% |
| Project Cost (Mn INR) | 5.27% | 3.15% | 1.55% |
| Tariff (INR/KWh) | 0.84% | 3.15% | 5.60% |

The results of sensitivity analysis show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, Post Tax equity IRR is significantly lower than the benchmark. And it is evident from the results given above; the project remains additional even under the most favourable conditions. Also, the reasonable variations for these parameters were checked by calculating the variation necessary to reach the benchmark and then discussing the likelihood for that to happen.

The project becomes non additional only if cost of project is reduced by 36.36 % which is an unlikely scenario since the project is commissioned and actual cost (Rs

1104.5 million) incurred by the project owner 16.7% less than the project cost (Rs 1327.50 million) considered in the investment analysis. The actual cost incurred by the project participant is supported by Chartered Accountant Certificate/51/ and supply - service agreements/22/ placed between Azure Power Forty Limited

Also, if tariff increases 46.33 % which is not a plausible scenario since the power purchase agreement/23/ has been executed for the project activity, where in the tariff was determined for the life time of the project activity.

The O & M costs coming down by 236.47% which is not a likely scenario for the project activity where inflation exists in the host country.

The IRR reaches the benchmark if the PLF goes up 46.33% which translates the PLF value of 32.92% which is unlikely scenario. Verification team crosschecked the actual electricity generation achieved by the solar plant for the operational year Nov 2021 to Oct-2022 and found that the maximum annual PLF achieved is only approximately 17.99%. Hence further increase in PLF is highly unlikely scenario.

All the four scenarios highly hypothetical and impossible. Verification Team has arrived at the conclusion that the project scenario is not economically feasible without benefits from carbon benefits.

**For Project 3 (15 MW) site:**

| Variation % | -10% | Normal | 10% |
|---|---|---|---|
| **PLF (%)** | 0.68% | 2.88% | 5.26% |
| **O&M Cost (Mn INR)** | 3.42% | 2.88% | 2.26% |
| **Project Cost (Mn INR)** | 4.97% | 2.88% | 1.25% |
| **Tariff (INR/KWh)** | 0.68% | 2.88% | 5.26% |

The results of sensitivity analysis show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, Post Tax equity IRR is significantly lower than the benchmark. And it is evident from the results given above; the project remains additional even under the most favourable conditions. Also, the reasonable variations for these parameters were checked by calculating the variation necessary to reach the benchmark and then discussing the likelihood for that to happen.

The project becomes non additional only if cost of project is reduced by 37.32 % which is an unlikely scenario since the project is commissioned and actual cost (Rs 664.8 million) incurred by the project owner 16.5% less than the project cost (Rs 796.50 million) considered in the investment analysis. The actual cost incurred by the project participant is supported by Chartered Accountant Certificate/51/ and supply - service agreements/22/ placed between Azure Power Forty Limited.

Also, tariff increases 48.14 % which is not a plausible scenario since the power purchase agreement/23/ has been executed for the project activity, where in the tariff

was determined for the life time of the project activity.

The O & M costs coming down by 242.69 % which is not a likely scenario for the project activity where inflation exists in the host country.

The IRR reaches the benchmark if the PLF goes up 48.14% which translates the PLF value of 33.33% which is unlikely scenario. Verification team crosschecked the actual electricity generation achieved by the solar plant for the operational year Nov 2021 to Oct 2022 and found that the maximum annual PLF achieved is only approximately 17.39%. Hence further increase in PLF is highly unlikely scenario.

All the four scenarios highly hypothetical and impossible. Verification Team has arrived at the conclusion that the project scenario is not economically feasible without benefits from carbon benefits.

**For Project 4 (25 MW) site:**

| Variation % | -10% | Normal | 10% |
|---|---|---|---|
| PLF (%) | 1.90% | 4.38% | 6.89% |
| O&M Cost (Mn INR) | 4.91% | 4.38% | 3.78% |
| Project Cost (Mn INR) | 6.59% | 4.38% | 2.53% |
| Tariff (INR/KWh) | 4.91% | 4.38% | 3.78% |

The results of sensitivity analysis show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, Post Tax equity IRR is significantly lower than the benchmark. And it is evident from the results given above; the project remains additional even under the most favourable conditions. Also, the reasonable variations for these parameters were checked by calculating the variation necessary to reach the benchmark and then discussing the likelihood for that to happen.

The project becomes non additional only if cost of project is reduced by 16.40 % which is an unlikely scenario since the project is partially commissioned and actual cost till the date of assessment (Rs 1017.3 million) incurred by the project owner 23% less than the project cost (Rs 1327.50 million) considered in the investment analysis. The actual cost incurred by the project participant is supported by purchase order[/22/] placed between Azure Power Forty Limited.

Also, tariff increases 39.83% which is not a plausible scenario since the power purchase agreement[/23/] has been executed for the project activity, where in the tariff was determined for the life time of the project activity.

The O & M costs coming down by 212.74 % which is not a likely scenario for the project activity where inflation exists in the host country.

The IRR reaches the benchmark if the PLF goes up 39.83% which translates the PLF value of 31.46% which is unlikely scenario. Verification team crosschecked the actual

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| | electricity generation achieved by the solar plant for the operational year Apr 2022 to Mar 2023 and found that the maximum annual PLF achieved is only approximately 18.73%. Hence further increase in PLF is highly unlikely scenario.<br><br>All the four scenarios highly hypothetical and impossible. Verification Team has arrived at the conclusion that the project scenario is not economically feasible without benefits from carbon benefits.<br><br>**Step 3: Barrier Analysis**<br><br>The additionality of the project has been demonstrated by applying the investment analysis, thus no barrier analysis is carried out.<br><br>**Step 4: Common Practice Analysis**<br>Stepwise approach for common practice analysis has been carried out as per Methodological tool "Common Practice", version 03.1 EB84, Annex 7:<br><br>*(a)* The project is located in the applicable geographical area;<br>*(b)* The project applies the same measure as the proposed project activity;<br>*(c)* The project use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;<br>*(d)* The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g., clinker) as the proposed project plant;<br>*(e)* The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;<br>*(f)* The projects started commercial operation before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.<br><br>**Project Activity 03**<br><br>**Step (1):** Calculate applicable capacity or output range as +/- 50% of the total design capacity or output of the proposed project activity:<br><br>The capacity of the project activity is 15 MW and hence the output range as per the guideline is selected to be 7.5 MW to 22.5 MW.<br><br>**Step (2):** Identification of the similar projects (CDM and non-CDM) is carried out as per sub-steps of Step (2) as follows:<br><br>a) The projects are located in Assam state of India. The project was awarded to Azure Power Forty Private Limited by Assam Power Distribution Company Limited (APDCL) through competitive bidding process of APDCL for all the four project activities separately. However, each state has different tariff order, thus each state have different investment climate and APDCL is the organization which conducted the bidding process. Therefore, projects located in Assam state have been chosen for analysis.<br>b) The projects applying same measure (i.e, only renewable energy through Solar) are selected as the project activity is solar power project. |

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| | Therefore, all projects applying same measure (b) as the project activity are candidates for similar projects.<br>c) The energy source used by the project activity is Solar. Hence, only solar energy projects have been considered for analysis.<br>d) The project activity produces electricity; therefore, all solar power plants that produce electricity are candidates for similar projects.<br>e) The capacity range of the projects is within the applicable capacity range for the chosen projects (7.5 MW to 22.5 MW).<br>f) The start date for the project is 24/12/2019 (EPC contract signing date). As Kyoto Protocol was ratified by India on 26/08/2002[47], therefore projects which had started commercial operation between 26/08/2002 to 24/12/2019.<br><br>Numbers of Similar projects identified which fulfill above-mentioned conditions are<br>**$N_{solar}$ = 0**<br><br>The projects considered for analysis are sourced from list of commissioned solar projects published by the Central Electricity Authority, Government of India website[48].<br><br>**Step (3):** within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number, $N_{all}$.<br>CDM/VCS/GS/GCC project activities, which have got registered, submitted for registration or are under validation, have been excluded in this step. The list of the power plants identified is provided to the verifier. After excluding the registered, submitted for registration and under validation projects the total number of projects.<br>**$N_{all}$** = 0<br><br>**Step (4):** within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number $N_{diff}$.<br><br>From the projects identified above, those projects which employ "**different technologies**" have been excluded and the number of such projects has been identified as $N_{diff}$.<br>Hence, **$N_{diff}$** = 0<br>**Step (5):** calculate factor $F=1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.<br><br>Calculate **$F = 1-N_{diff}/N_{all}$**<br>**F** = 1-(0/0) = **1**<br>**$N_{all} - N_{diff}$** = 0 - 0 = 0<br><br>As per methodological Tool 24 "Common Practice", Version 3.1, the project activity |

[47] https://unfccc.int/node/61082

[48] https://cea.nic.in/wp-content/uploads/2020/04/Plant-wise-details-of-RE-Installed-Capacity-merged.pdf

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| | is a "common practice" within a sector in the applicable geographical area if the factor F is greater than 0.2 and $N_{all}$ - $N_{diff}$ is greater than 3. Thus, if both conditions are fulfilled, then project activity will be a common practice. Otherwise, the project activity is treated as not a common practice.<br><br>**Outcome of Step 5:**<br>As,<br>i. F = 1; which is greater than 0.2<br>ii. $N_{all}$ - $N_{diff}$ = 0; which is not greater than 3<br><br>The project activity does not satisfy the second condition. Hence, project activity is not a common practice.<br>**Conclusion:**<br><br>As described above, the project fulfils all necessary requirements of additionality specified in the Tool 01 "Tool for th the demonstration and assessment of additionality", Version 7.0.0. Hence, the project is additional.<br>**<u>For Project Activity 01, 02 & 04</u>**<br><br>**Step (1):** Calculate applicable capacity or output range as +/- 50% of the total design capacity or output of the proposed project activity:<br><br>Since the start dates were common for all the large-scale projects and they all were of same capacity which is of 25 MW, that's why the additionality (common practice) is proven for one of the projects only.<br><br>The capacity of the project activity is 25 MW and hence the output range as per the guideline is selected to be 12.5 MW to 37.5 MW.<br><br>**Step (2):** Identification of the similar projects (CDM and non-CDM) is carried out as per sub-steps of Step (2) as follows:<br><br>a) The projects are located in Assam state of India. The project was awarded to Azure Power Forty Private Limited by Assam Power Distribution Company Limited (APDCL) through competitive bidding process of APDCL for all the four project activities separately. However, each state has different tariff order, thus each state have different investment climate and APDCL is the organization which conducted the bidding process. Therefore, projects located in Assam state have been chosen for analysis.<br>b) The projects applying same measure (i.e, only renewable energy through Solar) are selected as the project activity is solar power project.<br>Therefore, all projects applying same measure (b) as the project activity are candidates for similar projects.<br>c) The energy source used by the project activity is Solar. Hence, only solar energy projects have been considered for analysis.<br>d) The project activity produces electricity; therefore, all power plants that produce electricity are candidates for similar projects.<br>e) The capacity range of the projects is within the applicable capacity range for the chosen projects (12.5 MW to 37.5 MW). |

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|---|---|
| | f) The start date for the project is 08/02/2021 (EPC contract signing date). As Kyoto Protocol was ratified by India on 26/08/2002[49], therefore projects which had started commercial operation between 26/08/2002 to 24/12/2019.<br><br>Numbers of Similar projects identified which fulfill above-mentioned conditions are<br>**$N_{solar}$ = 0**<br><br>The projects considered for analysis are sourced from list of commissioned solar projects published by the Central Electricity Authority, Government of India website[50].<br><br>**Step (3):** within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number $N_{all}$.<br><br>CDM/VCS/GS/GCC and EU-ETS project activities, which have got registered, submitted for registration or are under validation, have been excluded in this step. The list of the power plants identified is provided to the verifier. After excluding the registered, submitted for registration and under validation projects the total number of projects.<br>**$N_{all}$** = 0<br><br>**Step (4):** within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number $N_{diff}$.<br><br>From the projects identified above, those projects which employ "**different technologies**" have been excluded and the number of such projects has been identified as $N_{diff}$.<br>Hence, **$N_{diff}$** = 0<br>**Step (5):** calculate factor $F=1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.<br><br>Calculate **$F = 1-N_{diff}/N_{all}$**<br>**F** = 1-(0/0) = **1**<br>**$N_{all} - N_{diff}$** = 0 - 0 = 0<br><br>As per methodological Tool 24 "Common Practice" Version 3.1, the project activity is a "common practice" within a sector in the applicable geographical area if the factor F is greater than 0.2 and $N_{all} - N_{diff}$ is greater than 3. Thus, if both conditions are fulfilled, then project activity will be a common practice. Otherwise, the project activity is treated as not a common practice. |

[49] https://unfccc.int/node/61082

[50] https://cea.nic.in/wp-content/uploads/2020/04/Plant-wise-details-of-RE-Installed-Capacity-merged.pdf

| | |
|---|---|
| | **Outcome of Step 5:**<br>As,<br>$F = 1$; which is not greater than 0.2<br>$N_{all} - N_{diff} = 0$; which is not greater than 3<br>The project activity does not satisfy the second condition. Hence, project activity is not a common practice.<br>**Conclusion:**<br>As described the start dates were common for all the large-scale projects and they all were of same capacity which is of 25 MW, that's why the additionality (common practice) is proven for one of the projects only. The Project fulfils all necessary requirements of additionality specified in the Tool 01: "Tool for the demonstration and assessment of additionality", Version 7.0.0. Hence, the project is additional. |
| **Findings** | No findings were raised. |
| **Conclusion** | The information mentioned in the PSF is duly supported by evidence quoted therein. The verification team has described all steps taken, and sources of information used to cross-check the information contained in the PSF/09/. The verification team determined that the evidence assessed is credible, where appropriate. |

### D.3.6 Estimation of emission reductions or net anthropogenic removal

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|---|---|
| **Means of Project Verification** | The project verification team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for PSF/09/ is in accordance with applied methodology/13/. Project Verification team checked section B.6 of the PSF to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology.<br><br>**Emission Reductions as per ACM0002 "Grid-connected electricity generation from renewable sources", Version 21.0**<br><br>**$ER_y = BE_y - PE_y$**<br><br>Where<br>$ER_y$ = Emission reductions in year y (t $CO_2e$/yr)<br>$BE_y$ = Baseline emissions in year y (t $CO_2$/yr)<br>$PE_y$ = Project emissions in year y (t $CO_2$/yr)<br><br>**Baseline Emissions ($BE_y$):**<br><br>The baseline emissions are the product of electrical energy baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.<br><br>**Baseline Emission as per ACM0002 "Grid-connected electricity generation from renewable sources", Version 21.0**<br><br>**$BEy = EG_{PJ,y} \times EF_{grid,CM,y}$**<br><br>AS per para 49 of ACM0002 "Grid-connected electricity generation from renewable sources", version 21.0, when the project activity is installation of Greenfield power |

plant, then:

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

Where,

$EG_{facility,y}$ = Total quantity of net electricity delivered to the INDIAN grid in year y (MWh/yr)

$EF_{grid,CM,y}$ = Baseline grid emission factor (t $CO_2$/MWh)
= 0.9310 t $CO_2$/MWh

The $EG_{facility,y}$ is estimated for entire crediting period of the Project Activity 1 & 2 considering the annual degradation of 0.70% and for Project 4 with the annual degradation of 0.60% in the generation and PLF provided as per the third-party engineering company report as below:

| Crediting Period | Project-1 | Project-2 | Project-4 | Total Net Electricity generation (MWh) |
|---|---|---|---|---|
| Year | Net Electricity Generation (MWh) | Net Electricity Generation (MWh) | Net Electricity Generation (MWh) | |
| 12/09/2020 to 11/09/2021 | 49,275 | 0 | 0 | 49,275 |
| 12/09/2021 to 11/09/2022 | 48,930 | 34,560 | 23,760 | 107,250 |
| 12/09/2022 to 11/09/2023 | 48,587 | 49,033 | 52,417 | 150,037 |
| 12/09/2023 to 11/09/2024 | 48,246 | 48,689 | 52102 | 149,037 |
| 12/09/2024 to 11/09/2025 | 47,908 | 48,348 | 51,789 | 148,045 |
| 12/09/2025 to 11/09/2026 | 47,572 | 48,009 | 51,478 | 147,059 |
| 12/09/2026 to 11/09/2027 | 47,239 | 47,672 | 51,169 | 146,079 |
| 12/09/2027 to 11/09/2028 | 46,908 | 47,338 | 50,861 | 145,107 |
| 12/09/2028 to 11/09/2029 | 46,579 | 47,006 | 50,555 | 144,140 |
| 12/09/2029 to 11/09/2030 | 46,252 | 46,676 | 50,251 | 143,179 |
| **Total** | **477,496** | **417,331** | **434,382** | **1,329,208** |

The $EG_{facility,\ y}$ generated for the entire crediting period is as below

**$EG_{facility,\ y}$ = 1,329,208 MWh**

As per section B.6.1 above, the combined margin grid emission factor ($EF_{grid,CM,y}$) is 0.9310 t$CO_2$/MWh

Hence the baseline emission for the entire crediting period of the Project Activity 1,

2 & 4 is calculated as below:

| Crediting Period | Project Activity 1, 2 & 4 | Baseline Emissions ($tCO_2e$) |
|---|---|---|
| Year | Total Net Electricity generation (MWh) | |
| 12/09/2020 to 11/09/2021 | 49,275 | 45,875 |
| 12/09/2021 to 11/09/2022 | 107,250 | 99,849 |
| 12/09/2022 to 11/09/2023 | 150,037 | 139,684 |
| 12/09/2023 to 11/09/2024 | 149,037 | 138,753 |
| 12/09/2024 to 11/09/2025 | 148,045 | 137,829 |
| 12/09/2025 to 11/09/2026 | 147,059 | 136,911 |
| 12/09/2026 to 11/09/2027 | 146,079 | 135,999 |
| 12/09/2027 to 11/09/2028 | 145,107 | 135,094 |
| 12/09/2028 to 11/09/2029 | 144,140 | 134,194 |
| 12/09/2029 to 11/09/2030 | 143,179 | 133,299 |
| **Total** | **1,329,208** | **1,237,487** |

The baseline emission reduction for the entire crediting period of the Project Activity 1, 2 & 4 is **1,237,487 $tCO_2$**

**Project emission:**

As per of applied methodology[13], For most renewable energy project activities, PEy = 0. Since Solar power is a GHG emission free source of energy project emission considered as Zero for the project activity.

**Emission Reductions ($ER_y$):**

**$ER_y = BE_y - PE_y$**

Since the project emission is estimated as zero

The Emissions Reduction for the entire crediting period of the project activities 1, 2 & 4 is as below,

| Crediting Period for Large Scale Project | Baseline emissions | Project emissions | Leakage emissions | Emission Reductions |
|---|---|---|---|---|
| Year | ($tCO_2e$) | ($tCO_2e$) | ($tCO_2e$) | ($tCO_2e$) |
| 12/09/2020 to 11/09/2021 | 45,875 | 0 | 0 | 45,875 |
| 12/09/2021 to 11/09/2022 | 99,849 | 0 | 0 | 99,849 |
| 12/09/2022 to 11/09/2023 | 139,684 | 0 | 0 | 139,684 |

| | | | | |
|---|---|---|---|---|
| 12/09/2023 to 11/09/2024 | 138,753 | 0 | 0 | 138,753 |
| 12/09/2024 to 11/09/2025 | 137,829 | 0 | 0 | 137,829 |
| 12/09/2025 to 11/09/2026 | 136,911 | 0 | 0 | 136,911 |
| 12/09/2026 to 11/09/2027 | 135,999 | 0 | 0 | 135,999 |
| 12/09/2027 to 11/09/2028 | 135,094 | 0 | 0 | 135,094 |
| 12/09/2028 to 11/09/2029 | 134,194 | 0 | 0 | 134,194 |
| 12/09/2029 to 11/09/2030 | 133,299 | 0 | 0 | 133,299 |
| **Total** | **1,237,487** | **0** | **0** | **1,237,487** |

The Emission reduction ($ER_y$) for the entire crediting period of the Project Activity 1, 2 & 4 is as below:

$$\mathbf{ER_y = BE_y = 1{,}237{,}487\ tCO_2e}$$

**Emission Reductions as per AMS I.D "Grid connected renewable electricity generation", Version 18.0**

$\mathbf{ER_y = BE_y – PE_y – LE_y}$

Where,

$ER_y$ = Emission Reduction in $tCO_2$/year
$BE_y$ = Baseline emission in $tCO_2$/year
$PE_y$ = Project emissions in $tCO_2$/year
$LE_y$ = Leakage Emissions in $tCO_2$/year

**Baseline Emission as per AMS I.D "Grid connected renewable electricity generation", Version 18.0**

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

As per para 26 of AMS I.D "Grid connected renewable electricity generation", Version 18.0 when the project activity is installation of Greenfield power plant, then:

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

Where,

$EG_{PJ,facility,y}$ = Total quantity of net electricity delivered to the INDIAN grid in year y (MWh/yr)
$EF_{grid,y}$ = Baseline grid emission factor (t $CO_2$/MWh)
= 0.9310 t $CO_2$/MWh

The $EG_{PJ,facility,y}$ is estimated for the entire crediting period of Project Activity 3 considering the annual degradation of 0.60% in the generation and PLF provided as per the third-party engineering company report as below:

| **Crediting Period** | **Project-3** |
|---|---|
| **Year** | **Net Electricity Generation** |
| 12/09/2020 to 11/09/2021 | 0 |
| 12/09/2021 to 11/09/2022 | 18,954 |

| | |
|---|---|
| 12/09/2022 to 11/09/2023 | 29,432 |
| 12/09/2023 to 11/09/2024 | 29,225 |
| 12/09/2024 to 11/09/2025 | 29,020 |
| 12/09/2025 to 11/09/2026 | 28,817 |
| 12/09/2026 to 11/09/2027 | 28,616 |
| 12/09/2027 to 11/09/2028 | 28,415 |
| 12/09/2028 to 11/09/2029 | 28,216 |
| 12/09/2029 to 11/09/2030 | 28,019 |
| **Total** | **248,715** |

The $EG_{facility, y}$ generated for the entire crediting period is as below

$$\mathbf{EG_{facility, y} = 248,715\ MWh}$$

As per section B.6.1 above, the combined margin grid emission factor ($EF_{grid,y}$) is 0.9310 $tCO_2$/MWh

Hence the baseline emission for the entire crediting period of the Project Activity 3 is calculated as below:

| Crediting Period | Project-3 | Baseline Emissions ($tCO_2e$) |
|---|---|---|
| Year | Net Electricity Generation | |
| 12/09/2020 to 11/09/2021 | 0 | 0 |
| 12/09/2021 to 11/09/2022 | 18,954 | 17,646 |
| 12/09/2022 to 11/09/2023 | 29,432 | 27,401 |
| 12/09/2023 to 11/09/2024 | 29,225 | 27,208 |
| 12/09/2024 to 11/09/2025 | 29,020 | 27,018 |
| 12/09/2025 to 11/09/2026 | 28,817 | 26,828 |
| 12/09/2026 to 11/09/2027 | 28,616 | 26,641 |
| 12/09/2027 to 11/09/2028 | 28,415 | 26,454 |
| 12/09/2028 to 11/09/2029 | 28,216 | 26,269 |
| 12/09/2029 to 11/09/2030 | 28,019 | 26,085 |
| **Total** | **248,715** | **231,550** |

The baseline emission reduction for the entire crediting period of the Project Activity 3 is **231,550 $tCO_2$**

**Project Emissions ($PE_y$):**

As per the approved consolidated Methodology ACM0002 “Grid-connected electricity generation from renewable sources”, Version 21.0 para 35 & AMS I.D “Grid-connected renewable electricity generation”, Version 18.0 para 39: “For most renewable energy power generation project activities, $PE_y = 0$.

**Leakage Emissions ($LE_y$ ):**

No other leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected.

$$LE_y = 0$$

**Emission Reductions ($ER_y$):**

**$ER_y = BE_y – PE_y – LE_y$**

Since the project and leakage emissions are estimated as zero

The Emissions Reduction for the entire crediting period of the project activities 3 is as below,

| Crediting Period for Large Scale Project | Baseline emissions | Project emissions | Leakage emissions | Emission Reductions |
|---|---|---|---|---|
| Year | ($tCO_2e$) | ($tCO_2e$) | ($tCO_2e$) | ($tCO_2e$) |
| 12/09/2020 to 11/09/2021 | 0 | 0 | 0 | 0 |
| 12/09/2021 to 11/09/2022 | 17,646 | 0 | 0 | 17,646 |
| 12/09/2022 to 11/09/2023 | 27,401 | 0 | 0 | 27,401 |
| 12/09/2023 to 11/09/2024 | 27,208 | 0 | 0 | 27,208 |
| 12/09/2024 to 11/09/2025 | 27,018 | 0 | 0 | 27,018 |
| 12/09/2025 to 11/09/2026 | 26,828 | 0 | 0 | 26,828 |
| 12/09/2026 to 11/09/2027 | 26,641 | 0 | 0 | 26,641 |
| 12/09/2027 to 11/09/2028 | 26,454 | 0 | 0 | 26,454 |
| 12/09/2028 to 11/09/2029 | 26,269 | 0 | 0 | 26,269 |
| 12/09/2029 to 11/09/2030 | 26,085 | 0 | 0 | 26,085 |
| **Total** | **231,550** | **0** | **0** | **231,550** |

The **Emission reduction ($ER_y$)** for the entire crediting period of the Project Activity 3 is as below:

**$ER_y = BE_y = 231,550\ Tco_2e$**

Considering the different commissioning date of and annual degradation, the emission reduction estimation for the entire crediting period of all the project activities is provided below:

| | | | | | |
|---|---|---|---|---|---|
| | **Year** | **Baseline emissions ($tCO_2e$)** | **Project emissions ($tCO_2e$)** | **Leakage emissions ($tCO_2e$)** | **Emission reductions ($tCO_2e$)** |
| | 12/09/2020 to 11/09/2021 | 45,875 | 0 | 0 | 45,875 |
| | 12/09/2021 to 11/09/2022 | 117,495 | 0 | 0 | 117,495 |
| | 12/09/2022 to 11/09/2023 | 167,085 | 0 | 0 | 167,085 |
| | 12/09/2023 to 11/09/2024 | 165,961 | 0 | 0 | 165,961 |
| | 12/09/2024 to 11/09/2025 | 164,847 | 0 | 0 | 164,847 |
| | 12/09/2025 to 11/09/2026 | 163,739 | 0 | 0 | 163,739 |
| | 12/09/2026 to 11/09/2027 | 162,640 | 0 | 0 | 162,640 |
| | 12/09/2027 to 11/09/2028 | 161,548 | 0 | 0 | 161,548 |
| | 12/09/2028 to 11/09/2029 | 160,463 | 0 | 0 | 160,463 |
| | 12/09/2029 to 11/09/2030 | 159,384 | 0 | 0 | 159,384 |
| | **Total** | **1,469,037** | | | **1,469,037** |
| | **Total number of Crediting years** | **10** | | | |
| | **Annual Average over the crediting period** | **146,903** | | | |
| **Findings** | CAR04 was raised and closed successfully. Please refer to the appendix 4 for further details. | | | | |
| **Conclusion** | The verification team confirms that:<br>• All assumptions and data used by the project owner are listed in the PSF[/09/] including their sources and references.<br>• All documentation used by the project owner as their basis for assumptionsand sources of data is correctly quoted and interpreted in the PSF[/09/].<br>• All the values used in the PSF[/09/] are considered reasonable in the context ofthe proposed project activity.<br>• The baseline methodology and corresponding tool(s) have been appliedcorrectly to calculate baseline emissions, project emissions, leakage emissions and emission reduction.<br>All the estimates of the baseline emissions can be replicated using the dataand parameter values provided in the PSF[/09/]. | | | | |

### D.3.7 Monitoring plan

| | |
|---|---|
| **Means of Project Verification** | The monitoring plan is included in Section B.7 of the PSF based on the approved monitoring methodology ACM0002, version 21.0 & AMS I.D, Version 18[/13/] and is correctly applied to the project activity. The monitoring plan has been found to be in compliance with the requirements of the applied methodology for calculation of GHG emission reductions, GCC Environment and Social Safeguards Standard v.3.0[/04/], and Project Sustainability Standard v.3.1[/05/]. The monitoring plan includes following parameters:<br>Ex-ante Parameters: |

| **Parameter** | **Value** | **Source** |
|---|---|---|
| Build Margin Emission factor ($EF_{grid,BM,y}$) | 0.8687 $tCO_2$/MWh | Based on latest $CO_2$ Baseline Database for the Indian Power Sector User Guide, Version 18.0, December 2022[/37/] |
| Operating Margin emission factor ($EF_{grid,OM,y}$) | 0.9518 $tCO_2$/MWh | |
| Combined Margin $CO_2$ emission factor ($EF_{grid,CM,y}$) | 0.9310 $tCO_2$/MWh | |

Ex-post Parameters:

| S.no. | Monitoring Parameter | Assessment |
|---|---|---|
| 1. | ***EG**facility,y* **(SDG 7)** | **Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y.**<br>The details of the meters for project site are in mentioned under Appendix 1 of the report.<br><br>The Net electricity supplied by the project activity is the difference between export and import of the electricity from the project activity. The export and import readings of the project activity will be sourced from Joint Meter Report/Credit note/Form B report/monthly generation report from state utility board/DISCOM/35/ issued by the state utility which is Assam Power Distribution Company Limited (APDCL). The value of net electricity supplied to the grid as per Monthly Joint Meter Reading Report forms the basis for calculation of the emission reductions, which can be cross-checked from the invoice raised to APDCL.<br>The meter(s) are calibrated and maintained by the DISCOMs as per their own schedule, and this frequency of meter calibration is not within the control of the Project Owner.<br>Calibration of electricity meters is carried out in-line with the National standard which recommends at least once in 5-year[51] calibration or whenever abnormal difference/inconsistency is observed between main meter and check meter.<br>For the purpose of measurement, the readings of main meter will be accounted in normal scenario but in case of failure of main meter, Standby meter reading will be accounted.<br>The monitoring parameter will be recorded for emission reduction on monthly basis. Value for electricity generation will be calculated as per the calculation method mentioned in table 1 of Section B.7.1 of PSF/09/. Cross check mechanism also will be in line with the mechanism mentioned in the same section. |
| 2. | **$CO_2$ emissions (EA03)** | The project activity involves electricity generation from solar modules which is a renewable source of energy displacing equivalent energy that would have been generated using fossil fuel fired plants. Thus, the project activity reduces $CO_2$ emissions from fossil fuel fired plants. The parameter is calculated based on the net electricity generation from the project activity and grid emission factor. Reduction of $CO_2$ emissions due to implementation of project activity that would otherwise be emitted by thermal power plants.<br>The $CO_2$ emission reductions will be monitored and calculated yearly using approved CDM methodology applied which is checked and found acceptable. The electricity generation and emission reductions records will be maintained for emission reduction verification. |
| 3. | **Ensure access to affordable, reliable, sustainable, and modern energy for all (SDG 7)** | Ensure access to affordable, reliable, sustainable, and modern energy for all: SDG Target 7.2, The project activity contributes towards this goal by replacing the generation of fossil fuel dominated grid in baseline by renewable solar-based power generation. The contribution towards SDG goal is being monitored by the parameter '$EG_{PJ,facility,l,y}$', quantity of net electricity generation supplied by the project plant/ unit to the grid in the monitoring plan and is found adequate. |
| 4. | **Promote sustained, inclusive,** | SDG Target 8.5.1-This indicator refers to Average hourly earnings of female and male employees, by occupation, age and persons with disabilities. Accordingly, PO will employee at least 10 |

[51] https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf

| | | | |
|---|---|---|---|
| | | **and sustainable economic growth, full and productive employment and decent work for all (SDG 8)** | employee/annually without any discrimination of female, male, occupation, age and person with disability. The contribution towards SDG goal is by providing local employment. This is being monitored by the parameter 'SDG 8' in the monitoring plan and is found adequate. |
| | 5. | **Take urgent action to combat climate change and its impacts (SDG 13)** | Emission reduction achieved due to the implementation of project activity that would have been otherwise be emitted by fossil fuel-based power plants. The monitoring parameter will be continuously monitored by means of on-site meters. The project is expected to reduce 146,910 $tCO_2$/ Year. The ER calculation sheet[/10/] was verified and found appropriate. |
| | 6. | **Solid waste Pollution from Hazardous wastes (EL02)** | The PO has claimed that the hazardous waste produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management hazardous waste will be followed according with compliance with the local laws[52], same have been verified by the assessment team and found acceptable. As per the guidance of the hazardous waste generated from the project activity will be collected by the dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to dismantler or recycler. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity. |
| | 7. | **Solid waste Pollution from E-wastes (EL04)** | The PO has claimed that the E-waste generated from the project activity shall be stored and disposed-off as per the guidance of E-waste management and Handling Rules in the host country[53]. As per the guidance the E-waste generated from the project activity will be collected by the dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to dismantler or recycler. This will be monitored by means of the records by the project owner in the all the installation sites when E waste will be disposed of or sent for refurbishment. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team. |
| | 8. | **Solid waste pollution from batteries (EL05)** | The PO has claimed that the Solid waste pollution from batteries produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the company have been verified by the assessment team and found to be in compliance with the applicable regulations (Battery Waste Management Rules,2020). The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity. |
| | 9. | **Solid waste Pollution from end-of-life products/** | The PO has claimed that the hazardous waste produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the company have been verified by the assessment team and found to be in |

[52] Hazardous and waste management rules 2016.

[53] E-Waste Management Amendment rules, 2018.

| | | |
|---|---|---|
| | **equipment (EL06)** | compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity. |
| 10. | **Replacing fossil fuels with renewable sources of energy (ENR07)** | Amount of electricity generated by the project activity that would have been otherwise be generated by fossil fuel-based power plants. The monitoring parameter will be continuously monitored by means of on-site meters. The project is expected to generate 157,798 MWh/year. The ER calculation sheet[/10/] was verified for calculation and found appropriate. |
| 11. | **Long-term jobs (> 10 year) created (SJ01)** | The PO has claimed that at any given point there would generate long term jobs by the project during the operation of the project activity. Few samples records[/43/] for employment was provided and were found acceptable. The monitoring parameter will be continuously monitored by means of employment records site records. |
| 12. | **Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04)** | The project activity has claimed for Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities. At the time of project verification project in its group level HR policy is committed to be an equal opportunity employer and provide fair and equal chance of succeeding, there is no discrimination based on gender, race, colour, religion, origin, marital status, age, sexual orientation, etc. Therefore, no social impacts are anticipated from the project. This has been validated by the HR manual and policy submitted by the PO. The monitoring parameter will be continuously monitored. |
| 13. | **Reducing / increasing accidents/Incidents/fatality (SHS03)** | This parameter is monitored based on the number of trainings provided by the project owners to the employees and staff of the project activity to reduce the accidents at site. This was confirmed by interviewing the monitoring personnel of the project activity during on onsite audit and the sample of training related to health and safety records[/44/] conducted by PO was checked and found acceptable to the assessment team. The monitoring parameter will be continuously monitored through training records for all the employees. |
| 14. | **Specialized training /education to local personnel (SE01)** | As a part of the project activity specialized training has been imparted to staffs/ employees in the area of technology measures, operation and maintenance which results in a positive social impact. The parameter is monitored on the annual basics and data is archived by PO. |
| 15. | **Women's empowerment (SW06)** | The Project Activity provides opportunity to employment to women in project organization level.The data will be based on the employment record and payroll record. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team. |
| 16. | **Exploitation of Child labour (human rights) (SW08)** | This parameter to ensure that the project owner will not employ any Child Labour. This will be verified using the Company HR policy. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team. |

| | |
|---|---|
| | The verification team confirmed that the parameters are sufficient to calculate the emission reductions including the environmental and social safeguards in accordance with the methodology/13/ and are correctly reported in the PSF/09/. |
| **Findings** | No Findings were raised. |
| **Conclusion** | The verification team confirms that,<br>• The verification team confirms that the monitoring plan based on the approved monitoring methodology/13/ is correctly applied to the PSF/09/.<br>• The monitoring plan will give opportunity for real measurements of achieved emission reductions. The verification team considers that monitoring arrangements described in the monitoring plan is feasible within the project design.<br>• The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity is verifiable and thereby satisfying the requirement of Verification Standard/03/.<br>The monitoring plan will give opportunity for real measurements of achieved emission reductions. There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF/09/. |

## D.4. Start date, crediting period and duration

| | |
|---|---|
| **Means of Project Verification** | The Start date of commercial operations of the project activity is 12/09/2020 which is the date of commissioning/18/ of 90 MW solar plant in the project activity, Start Date of Crediting Period is considered from 12/09/2020, The Commissioning certificates/18/ of the installation of the project activity has been verified and confirmed start date as per PSF/09/ is found correct and acceptable to verification team.<br><br>A crediting period of a maximum length of 10 years has been selected by project owner. The start date of the crediting period is stated as 12/09/2020, which is appropriate as per paragraph 40(b) of the Project Standard version 03.1/02/. The crediting period is therefore from 12/09/2020 to 11/09/2030.<br><br>The expected lifetime of the project activity is 25 years which is verified by the technical details of the PV panels/19/ and confirmed based on the sectoral expertise. |
| **Findings** | No Findings were raised. |
| **Conclusion** | The start dates and the crediting period type & length have been verified and found to be in accordance with GCC project standard version 03.1/02/. |

## D.5. Environmental impacts

| | |
|---|---|
| **Means of Project Verification** | As The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006. Further amendments to the notification have been done on 14/07/2018, the Solar Power projects are not listed in any of the categories of the schedule, hence, No EIA required as per host country legislation |
| **Findings** | No findings were raised. |
| **Conclusion** | In the opinion of the Verification team, in the project activity environmental impacts is not significant as per host country legislation. Further analysis not required in this context. |

## D.6. Local stakeholder consultation

**Means of Project Verification**

A LSC was conducted for the project activity on below mentioned dates: -

**Project Activity 1:**

| Stakeholder type | Name of the person | Department/Address | Date |
|---|---|---|---|
| Project owner | Manoj shah | Azure Power | 27/05/2019 |
| | Sameer chandna | Azure Power | 27/05/2019 |
| | Kanwardeep singh narula | Azure Power | 27/05/2019 |
| Health centre | Atul Daimary, Supervisor | Primary Sub Health Center, Lailangpara | 27/05/2019 |
| | Rupalim Sinha (ANM) | Primary Sub Health Center, Lailangpara | 27/05/2019 |
| | Bijoli Devi (ANM) Worker | Primary Sub Health Center, Lailangpara | 27/05/2019 |
| Revenue officer | Pinkei Borgoyari | Revenue | 28/05/2019 |
| Educational institution | Mabel Narzary | Lailangpara High school | 28/05/2019 |
| | Komal sundra basomatan | Lailangpara High school | 28/05/2019 |
| | Jagmurti brahma | Lailangpara Lower Primary school | 28/05/2019 |

| | | | | |
|---|---|---|---|---|
| | Villagers | • Mr. Nakar Singh,<br>• Mr. Bom Singh,<br>• Mr. Nakta Ram,<br>• Mr. Dan Ram,<br>• Mr. Mohan Singh,<br>• Mr. Sugana Ram,<br>• Mr. Ghevar Ram,<br>• Mr. Jhethu Singh,<br>• Mr. Mukhand Singh,<br>• Mr. Suphu Kumar,<br>• Mr. Chander Kaur<br>• Mr. Prem Kaur,<br>• Mr. Tej Singh,<br>• Mr. Aman Sigh,<br>• Mr. Raul Singh<br>• Mr. Padam Singh,<br>• Mr. Man Singh,<br>• Mr. Sawal Singh<br>• Mr. Punjraj Singh | Sarbaherua | 28/05/2019 |

**Project Activity 2:**

| Stakeholder type | Name of the person | Department/Address | Date |
|---|---|---|---|
| Project owner | Manoj shah | Azure Power | 22/08/2019 |
| | Manoj Das | Azure Power | 22/08/2019 |

| | | | |
|---|---|---|---|
| | Kanwardeep singh narula | Azure Power | 22/08/2019 |
| Revenue officer | NA | Revenue | 23/08/2019 |
| Anganwadi centre | Pramila Daimary | Banialehitha Anganwadi Center | 23/08/2019 |
| | Binita Daimary | Banialehitha Anganwadi Center | 23/08/2019 |
| | Niru Gaigary | Banialehitha Anganwadi Center | 23/08/2019 |
| Health centre | Dr. Aprajita Patar (MBBS) | Bhalukghatu state dispensary | 23/08/2019 |
| | Dr. Swapan Kr Sen (MBBS) | Bhalukghatu state dispensary | 23/08/2019 |
| | Dalimi Nath Das, Nurse | Bhalukghatu state dispensary | 23/08/2019 |
| | Rabiul Hussain (pharmacist) | Bhalukghatu state dispensary | 23/08/2019 |
| Villagers | Bipla Palita | Makeli | 23/08/2019 |
| | Thanda kalita | Makeli | 23/08/2019 |
| | Dolita kolita | Makeli | 23/08/2019 |
| | Ikon kalita | Makeli | 23/08/2019 |
| | Jyoti Prabha Ralik | Makeli | 23/08/2019 |

**Project Activity 3:**

| **Stakeholder type** | **Name of the person** | **Department/Address** | **Date** |
|---|---|---|---|
| Project owner | Mr. Sumit Barat | Azure Power | 14/11/2019 |
| | Kamardeep Narula | Azure Power | 14/11/2019 |
| Land Aggregator | Sunanda Chakarwarti | Nagaon | 14/11/2019 |
| | Gautam Kalita | | 14/11/2019 |
| Revenue Circle Office | Shri Sanjib Dalai, Samaguria Rav. Circle | Nagaon | 14/11/2019 |
| Forest Ranger Samaguri & Nagaon | Mr Das | Forest Range office, Samaguri | 14/11/2019 |
| Educational Institution | Maneshwar Das, Head Master | Gohai Grant School | 14/11/2019 |
| | Junu Mai Bora, teacher | Gohai Grant School | 14/11/2019 |
| | Middle Goswami, Teacher | Lower Primary School | 14/11/2019 |

| | | | | |
|---|---|---|---|---|
| | | Monija Begum, Teacher | Lower Primary School | 14/11/2019 |
| | | Tapan Krishan Boro, Teacher | Lower Primary School | 14/11/2019 |
| | | Reena Rong pipi, Helper | Lower Primary School | 14/11/2019 |
| | Villagers | • Morami Aidew<br>• Rati Aidue<br>• Pankaja Aidew<br>• Jitendra Goha<br>• Mukund Gohai<br>• Gayatri Gohai<br>• Anamika Gohai<br>• John Singh Engiti<br>• Pradeep Shahar<br>• Buddheshear Rongpi<br>• Stephan<br>• Rajan Timu<br>• Shikari Bay<br>• Kundu Maji<br>• Bihu Ram Timu<br>• Mangal Singh Inti<br>• Kaveri Terang Pith<br>• Ompu Timungpi<br>• Reena Rogpi<br>• Malini Doloi<br>• Rastina Bepi | Mikir Gaon Bamuni and Bor Lalung Gaon | 14/11/2019 |

| | | | |
|---|---|---|---|
| | • Reena Terangpi<br>• Purnima Ingjai Pi<br>• Romila Cropi | | |

**Project Activity 4:**

| Stakeholder type | Name of the person | Department/Address | Date |
|---|---|---|---|
| Project owner | Mr. Manoj Shah | Azure Power | 16/12/2019 |
| | Manjji/ dina/ manish (site senior management trainee) | Azure Power | 16/12/2019 |
| | Manish Ranjan (senior executive manager) | Azure Power | 16/12/2019 |

| | | | |
|---|---|---|---|
| | Azure- raju das (senior manager) crafts | Azure Power | 16/12/2019 |
| Land Aggregator | Nashiruddin | ADA enterprise | 16/12/2019 |
| | Islamuddin- subordinate | ADA enterprise | 16/12/2019 |
| | Abdul rauf- subordinate | ADA enterprise | 16/12/2019 |
| Revenue Circle Office | Fakhar Uddin lashkar (supervisor) | Revenue | 16/12/2019 |
| | Hira Babu singh (patwari) | | 16/12/2019 |
| Educational Institution | Lili Sinha | 587 no lalangpar lower primary school | 17/12/2019 |
| | Jamuna Singha | 587 no lalangpar lower primary school | 17/12/2019 |
| | Lalin Kumar | 587 no lalangpar lower primary school | 17/12/2019 |
| Resettlement officer | Jaisika R Lal Singha- | Cachar, ADM | 17/12/2019 |
| Health centre | Dr. H.M Murtaza Lashkar | Bansakandi primary health centre | 17/12/2019 |
| | Bipal das/ M. Ahmad Farbeen (doctor) | Bansakandi primary health centre | 17/12/2019 |
| Villagers | • Innutamba singha<br>• Mazuriddin<br>• Abdul Malik<br>• Raman Singha<br>• Mani Mohan<br>• Raju Singha<br>• Dasini devi<br>• Rimila devi<br>• Ranjana devi<br>• Romita devi | Lalang Kitta Labocpar | 17/12/2019 |

The stakeholders were invited through invitations letter[/20/] by Project owner which is also attached in PSF[/09/]. The consultation was performed to meet the requirement of the GCC since there are no Host country requirement to conduct consultation for such projects.

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| | The verification team confirms that the local stakeholder consultation process was performed by the project owner before the submission of the project activity for global stakeholder consultation. The objective of the local stakeholder consultation carried out to comply with GCC requirements and identify the comments/concerns that might be required to be addressed by PO.<br><br>The stakeholder consultation responses were received by the Verification team. The verification team confirmed by review of the stakeholder responses that the summary of stakeholders' comments reported in PSF/09/ was accurate. There was no negative feedback/20/ received. The list of the relevant stakeholders who were requested for feedback/20/ is also provided. |
| **Findings** | CL01 was raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | The verification team confirms that the summary of stakeholders' comments reported in PSF/09/ is complete. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project participant considering the ongoing pandemic to receive unbiased comments from the all the stakeholders.<br>The verification team confirms that the local stakeholder consultation process performed for the project activity fulfils the requirements. |

## D.7. Approval and Authorization- Host Country Clearance

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| **Means of Project Verification** | As per para 14(c) of Project Standard v3.1/02/, the submission of HCA on double counting is required by CORSIA labelled project after 31/12/2020 as verified under section D.13 of this report. For carbon credits issued during 01/01/2016 to 31/12/2020 the HC approval is not required. |
| **Findings** | FAR01 is raised. Please refer to the appendix 4 for further details. |
| **Conclusion** | The verification team confirms that no Host Country approval is required by the CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered beyond 1st Jan 2021. |

## D.8. Project Owner- Identification and communication

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| **Means of Project Verification** | The information and contact details of the representation of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF/09/ which was checked. The Authorization letters/29/ signed by the project owners has been verified and the company registration documents, and project owner valid KYC document have been checked. All information were consistent in these documents and acceptable to the verification team |
| **Findings** | No findings were raised. |
| **Conclusion** | The verification team confirms that the information of the project owners has been appended as per the template and the information regarding the project owners stated in the PSF/09/ and authorization letter/29/ was found to be consistent. |

## D.9. Global stakeholder consultation

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| **Means of Project Verification** | PSF/09/ was published on the GCC website and invited comments by affected parties, stakeholders, and non-governmental organizations from 06/02/2023 to 20/02/2023. Few comments were received during this period and were resolved by PO same has |

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| | been verified by the submitted GCC stakeholder round Observation and comments records/50/. |
| **Findings** | No findings were raised. |
| **Conclusion** | The verification team confirm that no comments were received during the Global stakeholder consultation. However, few minor issue was raised by GCC expert before GSC webhosting. Same has been closed during assessment. Verification team is of the opinion that the changes in the PSF/09/ during the validation process do not require the publication of the revised PSF/09/ for global stakeholder consultation. |

## D.10. Environmental Safeguards (E+)

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| **Means of Project Verification** | The Project owner has chosen to apply for the Environmental No-net-harm Label (E+). The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF. Out of all the safeguards no risks were identified to the environment due to the project implementation and operation. And the following have been indicated as positive impacts: -<br><br>**Positive Impacts identified as 'Harmless' as regulatory complied OR mitigated:**<br><br>1. **Environmental – Air - $CO_2$ emissions (EA03):** The project activity being renewable power generation avoids $CO_2$ emissions that would have occurred in baseline scenario due to the electricity generation in thermal power plants. The impacts are being monitored through parameter '$CO_2$ emissions' and is verified under section D.3.7 of this report.<br><br>2. **Solid waste Pollution from Hazardous wastes (EL02):-** Any Hazardous waste including capacitors, reactors, transformer oil during the operation and maintenance is generated from the plant shall be discarded in accordance with host country regulation. The parameter is being monitored as 'Project Waste' and validated under section D.3.7 of this report. Proper mitigation action has been implemented for waste management.<br><br>3. **Solid waste Pollution from E- waste (EL04):** - Any E-waste including broken panels or other E-waste if generated from the plant shall be discarded in accordance with host country regulation. The parameter is being monitored as 'Project Waste' and validated under section D.3.7 of this report. Proper mitigation action has been implemented for waste management.<br><br>4. **Solid waste Pollution from end-of-life products/ equipment (EL06):** - Waste generated after end of lifecycle of a product shall be discarded in accordancewith host country regulation. The parameter is being monitored as 'Project Waste' and validated under section D.3.7 of this report. Proper mitigation action has been implemented for waste management.<br><br>5. **Solid waste pollution from batteries (EL05): -** Battery Waste generated from the project activity shall be disposed in accordancewith host country regulation. The parameter is being monitored as 'Project Waste' and validated under section D.3.7 of this report. Proper mitigation action has |

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| | been implemented for waste management.<br><br>6. **Replacing fossil fuels with renewable sources of energy (ENR07):** - Amount of electricity generated renewable sources that would be generated through fossil fuel. The parameter is being monitored and validated under section D.3.7 of this report.<br><br>The appropriate monitoring plan has been put in place to monitor the elements marked positive and risks identified due to implementation of the project activity. Also, the parameter compliance with local regulations/laws i.e., Waste generated from the project activity will be also monitored to ensure the compliance of the laws during the crediting period. The detailed matrix has been included in appendix 5 of the report. |
| **Findings** | CAR05 was raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have a positive impact, hence, is eligible to achieve additional E+ certifications. |

## D.11. Social Safeguards (S+)

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| **Means of Project Verification** | The Project owner has chosen to apply for the Social No-net-harm Label (S+). The assessment for the social safeguard has been carried out by the PO in section E.2 of the PSF[/09/]. Out of all the social impacts, no negative impacts have been identifiedby the Project owner. The positive impacts identified by the project owner are as follows:<br><br>**Impacts identified as 'Harmless' as regulatory complied OR mitigated:**<br><br>1. **Social Jobs: Long-term Jobs (SJ01):** The impacts being monitored throughout crediting period by parameter 'Long-term Jobs" and is verified under section D.3.7 of this report.<br><br>2. **Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04):** The impacts being monitored throughout crediting period under parameter 'Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities' and is verified under section D.3.7 of this report.<br><br>3. **Specialized training / education to local personnel (SE01):** The impacts being monitored throughout crediting period by plants records under parameter 'Specialized training / education to local personnel" and is verified under section D.3.7 of this report.<br><br>4. **Reducing / increasing accidents/Incidents/fatality (SHS03):** The impacts being monitored throughout crediting period by training records under parameter 'Reducing / increasing accidents/Incidents/fatality" and is verified under section D.3.7 of this report.<br><br>5. **Women's empowerment (SW06) (human rights):** The project activity |

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| | provides opportunity, women the chance to be employed in organizational positions within the project in accordance with legal regulations. This parameter will be monitored through the employment record, payroll and verified under section D.3.7 of this report.<br><br>6. **Exploitation of Child labour (SW08) (human rights):** The project activity provides employment in the region. However, project owner ensures that there is no forced labour or child labour. This parameter will be based on the Labour Act and verified under section D.3.7 of this report.<br><br>**Negative Impacts:**<br>No negative impacts identified or verified for the project activity, which cannot be mitigated.<br><br>An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 6 of the report |
| **Findings** | CAR06 was raised and closed successfully. FAR#03 is raised. Please refer to the appendix 4 for further details. |
| **Conclusion** | Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications. |

## D.12. Sustainable development Goals (SDG+)

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| **Means of Project Verification** | The assessment of the contribution of the project activity on United Nations Sustainable Development Goals has been carried out in section F of the PSF. Out of the 17 Goals project activity has no adverse effect on any of the goal and contribute to 3 SDGs:<br><br>1. **Goal 7.** Ensure access to affordable, reliable, sustainable, and modern energy for all: SDG Target 7.2, The project activity contributes towards this goal by replacing the generation of fossil fuel dominated grid in baseline by renewablesolar-based power generation. The contribution towards SDG goal is being monitored by the parameter 'SDG 7. Ensure access to affordable, reliable, sustainable, and modern energy for all', quantity of net electricity generation supplied by the project plant/ unit to the grid in the monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report.<br><br>2. **Goal 8.** Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all: SDG Target 8.5 and 8.8, The contribution towards SDG goal is by providing employment personals for the project activity. This is being monitored by the parameter 'SDG 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all "in the monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report.<br><br>3. **Goal 13**. Take urgent action to combat climate change and its impacts: SDGTarget 13.2, The contribution towards SDG goal is being monitored by |

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| | the parameter 'SDG 13. Take urgent action to combat climate change and its impacts in the monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report.<br><br>An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 7 of the report. The Project activity has achieved a certification label of Silver. |
| **Findings** | CAR07 were raised and closed successfully. Please refer to the appendix 4 for further details. |
| **Conclusion** | Based on the documentation review the verification team can confirm that Project activity is not likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications. |

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

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| **Means of Project Verification** | A declaration under section A.5 of the PSF/09/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 12/09/2020 to 11/09/2030. |
| **Findings** | CAR08 were raised and closed successfully. FAR 01 is raised. Please refer to the appendix 4 for further details. |
| **Conclusion** | The project owner has clarified the intent of use of carbon credits for CORSIA. hence no double counting will take place. |

## D.14. CORSIA Eligibility (C+)

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| **Means of Project Verification** | The project activity meets the CORSIA Eligibility since the crediting period is after 01/01/2016 and the project is applying for registration under GCC which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes |
| **Findings** | FAR 01 is raised. Please refer to the appendix 4 for further details. |
| **Conclusion** | The project activity meets the CORSIA Label (C+) eligibility:<br>• The Project Activity complies with all the requirements for the Emission Unit Criteria of CORSIA<br>• A written attestation from the host country's national focal point on double counting is not required for Emission units till 31 December 2020.<br>• The project meets all the requirement of the Emission Unit Criteria of CORSIA required for projects under GCC and therefore can be issued a CORSIA Label (C+) certification. |

## Section E. Internal quality control

The draft verification report prepared by the verification team was reviewed by an independent technical review team to confirm if the internal procedures established and implemented by LGAI Technological Center S.A. (Applus+ Certification) were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable GCC rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team were independent of the verification team.

The technical review process may accept or reject the verification opinion or raise additional findings in which case these must be resolved before requesting for registration. The technical review process is recorded in the internal documents of LGAI Technological Center S.A. (Applus+ Certification) and the additional findings gets included in the report. The final report approved by the admin reviewer is issued to PO and/or submitted for request for registration, as appropriate on behalf of LGAI Technological Center S.A. (Applus+ Certification).

## Section F. Project Verification opinion

LGAI Technological Center S.A. (Applus+ Certification) has performed a verification of the **"90 MW Bundled Solar Project in Assam".** The verification is performed on the basis of GCC criteria project verification standard, Version 3.1/02/ for the project activity, GCC guideline and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.
The review of the final version of GCC PSF/09/ and the subsequent onsite audit / follow-up interviews has provided Applus+ Certification with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant GCC project standard requirements for the GCC. The project will hence be recommended by LGAI Technological Center S.A. (Applus+ Certification) for registration with the GCC.

The Project activity is not likely to cause any net-harm to the environment and/or society and complies with the environmental and Social Standard, and therefore requests the GCC Steering Committee to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net-harm Label (S+).

The Project activity is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), comply with the Project Sustainability Standard/05/, and contribute to achieving a total of 3 SDGs, which is likely to achieve the silver SDG certification label (SDG+).

The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 01/07/, v1.3 paragraph 21-23, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of $CO_2$ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 146,903 $tCO_2e$ per year.

The verification has been performed following the requirements of the latest version of GCC verification standard, Version 03.1/03/, GCC Project Standard, version 03.1/02/ and on the basis of the contractual agreement.

In detail the conclusions can be summarized as follows:

- The project does not result in negative social, environmental and/or economic impacts.
- The project contribution to Environment, Social Development and Economic and technological development
- The project additionality is sufficiently justified in the GCC PSF.
- Conservative assumptions were applied in the project description.
- The monitoring plan of SDG parameters is transparent and adequate.
- The project meets the local stakeholder consultation requirements.

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

## Appendix 1. Abbreviations

| Abbreviations | Full texts |
|---|---|
| ACC | Approved Carbon Credits |
| AMS | Approved Methodology for SSC Projects |
| BE | Baseline Emission |
| BM | Build Margin |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CL | Clarification Request |
| CM | Combined Margin |
| CPCB | Central Pollution Control Board |
| $CO_2$ | Carbon dioxide |
| CORSIA | Carbon Offsetting and Reduction Scheme for International Aviation |
| CP | Crediting period |
| EIA | Environmental Impact Assessment |
| FAR | Forward Action Request |
| GHG | Green House Gas |
| GW | Giga Watt |
| GWh | Giga Watt hour |
| IPCC | Intergovernmental Panel on Climate Change |
| kW | Kilo Watt |
| kWh | Kilo Watt hour |
| LSC | Local Stakeholder Consultation |
| MoV | Means of Verification |
| MP | Monitoring Plan |
| MW | Mega Watt |
| MWh | Mega Watt hour |
| OM | Operating Margin |
| PA | Project Activity |
| PSF | Project Submission Form |
| PE | Project Emission |
| PLF | Plant Load Factor |
| PO | Project Owner |
| PS | Project Standard |
| SDG | Sustainable Development Goal |
| $tCO_2e$ | Tonnes of Carbon dioxide equivalent |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VS | Verification Standard |

## Appendix 2. Competence of team members and technical reviewers

- **Mr. Pankaj Kumar** worked as team leader – Bihar for South Asia Climate Proofing and Growth Development (CPGD) – Climate Change Innovation Programme (CCIP) supported by DFID that seeks to mainstream climate change resilience into planning and budgeting at the national and sub-national level in India, Pakistan, Nepal, and Afghanistan. Pankaj Kumar has worked previously with IL&FS Infrastructure Development Corporation and BUIDCO (Bihar Urban Infrastructure Development Corporation), Govt. of Bihar as Environmental Specialist for WB & ADB funded projects. Prior to this, he worked with Carbon Check (UNFCCC accredited DoE), Johannesburg, RSA as Team Leader for validation, verification of around 100 GHG projects in Asia, Africa, USA, Asia Pacific & Americas. Pankaj is accredited Lead Auditor, Validator, Verifier and Technical Expert for Sectoral Scope/Technical Area –1.1, 1.2, 3.1 & 13.1 by UNFCCC DoE (Designated Operational Entity), APPLUS, Spain. He is also member of task force on climate change & human health, Health Department, GoB and on roster of UNICEF's WASH experts. He is an experienced, qualified and result oriented Environment Professional having more than 14 yrs. Of relevant experience in Climate Change (Mitigation &Adaptation), Environmental Due Diligence, Disaster Risk Reduction, Validation and Verification of GHG project under CDM, Verified Carbon Standard, Gold Standard & Social Carbon Standard, Brazil. He provides technical support for environmental investigative, consultative and remedial projects involving air, water and soil, Waste management, EIA, Environmental Compliance, ISO 14001, OHSAS 18001, GHG accounting (ISO 14064) and Carbon foot printing. Pankaj Kumar is Masters in Environment Management from Forest Research Institute (University), I.C.F.R.E, Dehradun, which is Centre of Excellence in Southeast Asia for Forestry education & research and PGDEL from National Law School of India University, Bangalore (India).

- **Mr. Deepak Pundlik** has more than 15 years of experience in climate change, waste management and environmental management. After completing Masters in Environment Sciences from Pune university, He has worked in waste management field. As a GHG consultant, He handled more than 50 projects under renewable energy, waste management sectors during his stint with companies - MITCON and Thermax. Post Thermax, Deepak was involved in organic farming research project with Tata Institute of Social Sciences. Currently working as Lead Auditor of GHG, He has validated/verified projects under CDM/VCS/GS and GCC mechanisms from renewable energy, energy demand, waste management sectors.
- **Ms. Ritu Singh** has done Masters in Environmental Science from Central University of South Bihar, Gaya and bachelor of Science in Zoology from Magadh Mahila College, Patna University, India. She has done Masters' research focused on solid waste management during and post covid-19 pandemic and conducted a survey in Medical Colleges of Bihar to study the trends of waste management. Currently, She is working in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since 2021 and has been involved in supporting Audit teams for Verifications of Project Activities (Renewable and non-Renewable projects) under CDM/VCS/GS4GG/GCC programs.

- **Mr. Denny Xue** Mr. Denny Xue (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China. Mr. Denny Xue participates in the project's technical review team.

## Appendix 3. Document reviewed or referenced

| No. | Author | Title | References to the document | Provider |
|---|---|---|---|---|
| 1. | GCC | GCC Program Manual | Version 03.1 | Publicly available |
| 2. | GCC | Project Standard | Version 03.1 | Publicly available |
| 3. | GCC | Verification Standard | Version 03.1 | Publicly available |
| 4. | GCC | Environment-and-Social - Safeguards-Standard | Version 03.0 | Publicly available |
| 5. | GCC | Project-Sustainability-Standard | Version 03.1 | Publicly available |
| 6. | GCC | Project Submission Form | Version 04.0 | Publicly available |
| 7. | GCC | Clarification 01 | Version 01.3 | Publicly available |
| 8. | GCC | Standard on avoidance of double counting | Version 01.0 | Publicly available |
| 9. | Project Owner | Webhosted Initial PSF<br><br>Final PSF | Version 03, Dated:23/01/2023<br>Version 08, Dated: 30/01/2024 | Project Owner |
| 10. | Project Owner | Webhosted ER sheet<br><br>Final ER sheet | Version 03, Dated:23/01/2023<br>Version 06, Dated:16/01/2024 | Project Owner |
| 11. | Project Owner | Webhosted IRR sheet<br><br>Final IRR sheets | Version 02, Dated:23/01/2023<br>Version 04, Dated:22/12/2023 | Project Owner |
| 12. | Project Owner | Meter Photographs | - | Project Owner |
| 13. | UNFCCC | CDM approved Methodology:<br><br>ACM0002: Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources<br><br>AMS I.D Grid-connected renewable electricity generation | Version 21.0<br><br>Version 18 | Publicly available |
| 14. | UNFCCC | TOOL 01-Tool for the demonstration and assessment of additionality-, EB 70, Annex 8<br><br>TOOL 05- Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation | Version 07.0.0<br><br>Version 3.0 | Publicly available |
| 15. | UNFCCC | TOOL 07 -Tool to calculate the emission factor for an electricity system | Version 07.0 | Publicly available |
| 16. | UNFCCC | TOOL 24- Common practice | Version 03.1 | Publicly available |
| 17. | UNFCCC | TOOL 27- Investment analysis | Version 12.0 | Publicly available |
| 18. | APDCL | 1. Commissioning of Solar PV Plant at Sarubehera Village, Lalpool Tehsil, Udalguri by Azure Power Forty Pvt.Ltd. (Ref no- CGM (COM/APDCL/APFPL/R -1 t2O2O) dated 22-10 -2020' Solar Power<br>2. Commissioning of Project at Boko, Kamrup by Azure Power Forty Pvt. Ref No. CGM(COM)/APDCL/APFP L/ | Dated:12/09/2020<br><br>Dated:30/12/2021 | Project Owner |

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| | | R-1/ 2020 / 24 dated 10/02/2022<br>3. Commissioning of Solar Power Project at Nagaon- Village Mikir, Bamuni by Azure Power Forty Pvt. Ltd. Ref No. CGM(CoM)/APDCL/APFP L/ R-U2020 I dated 10/02/2022<br>4. Commissioning of Solar Power Project at Cachar district-Paloirbond by Azure Power Forty Pvt. Ltd. Ref No. CGM(CoM)/APDCL/APFP L/ R-U2020 I dated 28/04/2022 | Dated:27/01/2022<br>Dated: 31/03/2022 | |
| 19. | Project Owner | Technical Details of Solar PV Modules and Inverters installed at Plant sites. | - | Project Owner |
| 20. | Arcadis India Private Limited | Environmental & Social Impact Assessment (ESIA) of<br>• 25 MW solar power at Village Lalang Kitta Labocpar Part-IV& V, District Cachar, Assam<br>• 25 MW solar power at Village Makeli, District Kamrup, Assam<br>• 25 MW solar power at Udalguri, Bodoland Territorial Area, Assam<br>• 15MW solar power at Village Mikir Gaon, Bamuni and Bor Lalung Gaon (Bor Latum Gaon), District Nagaon, Assam | Dated:01/10/2019<br>Dated:01/10/2019<br>Dated:02/07/2019<br>Dated: 02/12/2019 | Project Owner |
| 21. | Project Owner | Operation and Maintenance: | - | Project Owner |
| 22. | Project Owner | Supply Agreement between:<br>1. Purchase order for 25 MW<br>2. Purchase order for 25 MW<br>3. Purchase order for 15 MW<br>4. Purchase order for 25 MW | Dated: 24/12/2019<br>Dated: 24/12/2019<br>Dated: 08/02/2021<br>Dated: 04/10/2021 | Project Owner |
| 23. | Project Owner | 1. Power Purchase Agreements between M/S. Azure Power Forty Limited and Assam Power Distribution Company Limited for 15 MW.<br>2. Power Purchase Agreements between M/S. Azure Power Forty Limited and Assam Power Distribution Company Limited for 25 MW.<br>3. Power Purchase Agreements between M/S. Azure Power Forty Limited and Assam Power Distribution Company Limited for 25 MW.<br>4. Power Purchase Agreements between M/S. Azure Power Forty Limited and | Dated:25/06/2018 | Project Owner |

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| | | Assam Power Distribution Company Limited for 25 MW. | | |
| 24. | Azure Power | Detailed Project Reports<br>1. 15 MW Solar PV Project Regin-3 Lakhimpur, Assam<br>2. 25 MW Solar PV Project Region-4 Cachar, Assam<br>3. 25 MW Solar PV Project Region -2 Kamrup, Assam<br>4. 25 MW Solar PV Project Regino-1 Udalguri, Assam | Dated:29/03/2021<br>Dated:20/06/2018<br>Dated:20/06/2018<br>Dated:20/06/2018 | Project Owner |
| 25. | State Utility | Calibration Records | - | Project Owner |
| 26. | Azure Power | Investment Notes:<br>1. PA1_25 MW Solar PV_Udulgiri<br>2. PA2_25 MW Solar PV_Kamrup<br>3. PA3_15 MW Solar PV_Lakhimpur<br>4. PA4_25 MW Solar PV_Cachar | - | Project Owner |
| 27. | Project Owner | Self-deceleration on no ODA | Dated: 22/05/2023 | Project Owner |
| 28. | Project Owner | Self-deceleration on No Double counting and Indented use of ACC | Dated: 22/05/2023 | Project Owner |
| 29. | Project Owner | Letter of Authorization | Dated: 28/10/2022 | Project Owner |
| 30. | Project Owner | Single line diagram and site Layout | - | |
| 31. | Project Owner | Purchase orders | - | Project Owner |
| 32. | Azure Power Forty Limited | PVSyst Reports for all the sites | - | Project Owner |
| 33. | Banks | Loan Sanction Letters | - | Project Owner |
| 34. | State Utility | State Energy Account (SEA) | - | Project Owner |
| 35. | Project Owner | Sample of Joint Metering Report. | - | Project Owner |
| 36. | State Utility | Sample of Sales Invoices. | - | Project Owner |
| 37. | Central Electricity Authority (CEA), | Baseline $CO_2$ Emission Database, Version 18.0. Sep 2022 ($CO_2$ Baseline Database for The Indian Power Sector, Dec 2022) | - | Publicly available |
| 38. | Assam Power Distribution Company Limited | 1. CTC-FC Bid for Assam Region-1 APDCL/Solar/17-18/114<br>2. CTC-FC Bid for Assam Region-2 APDCL/Solar/17-18/115<br>3. CTC-FC Bid for Assam Region-3 APDCL/Solar/17-18/116<br>4. CTC-FC Bid for Assam Region-3 APDCL/Solar/17-18/117 | 10/05/2018 | Publicly available |
| 39. | S.R.Batloboi & Co.LLP | Independent Auditor's Report | Dated:25/08/2021 | Project Owner |
| 40. | Government of India | Electricity Act 2003 National Electricity Policy 2005 | Dated:26/05/2003 Dated:12/02/2005 | Publicly available |
| 41. | Government of India | National Electricity Policy 2005 | Dated:12/02/2005 | Publicly available |
| 42. | Government of India | Tariff Policy 2006 | Dated:06/01/2016 | Publicly available |
| 43. | Project Owner | Employee Records & Payroll record. | - | Project Owner |

| | | | | |
|---|---|---|---|---|
| 44. | Project Owner | Training Records. | - | Project Owner |
| 45. | Project Owner | Employee Attendance | - | Project Owner |
| 46. | CDM | CDM Website | https://cdm.unfccc.int/Projects/proj_search.html | Publicly available |
| 47. | VERRA | Verra Registry | https://registry.verra.org/app/search/VCS/All%20Projects | Publicly available |
| 48. | Gold Standard | GS Website: | https://registry.goldstandard.org/projects?q=&page=1 | Publicly available |
| 49. | Project Owner | Grievance register | - | Publicly available |
| 50. | Project Owner | Screen Short of GCC's Completeness checklist containing Issues and observation raised and responses by PO. | - | Project Owner |
| 51. | Vivek Jain Associates | CA certificate (3rd party) dated 31/01/2022 for M/s. Azure Power Forty Private Limited | - | Project Owner |
| 52. | Project Owner | Actual Generation Records | - | Project Owner |

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

Table 1. CLs from this Project Verification

| **CL ID** | 01 | **Section no.** | N/A | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| 1. PO requested to clarify the any open comments raised during GCC completeness check and GSC period. Moreover, also submit evidence for the same. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| SDG 5 in the portal is still inconsistent with SDG 9 in the PSF.<br><br>The SDG 5 is not claimed by the Project activity and the claimed SDGs are SDG7, SDG8 and SDG 13 and the same Will be updated in the portal at the time of request for registration. | | | | |
| **Documentation provided by Project Owner** | | | | |
| | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| The SDG 5 is not claimed by the Project activity and only SDGs claimed are SDG7, SDG8 and SDG 13 and PO ensures that the same Will be updated in the portal at the time of request for registration. Thus, accepted. **CL is Closed.** | | | | |

| **CL ID** | 02 | **Section no.** | N/A | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| PO shall submit the DPR or feasibility report. Kindly submit. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| The Detailed project report of the project activities involved has been submitted | | | | |
| **Documentation provided by Project Owner** | | | | |
| Detailed project report | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| PO has submitted Detailed project report of the project activities and same is found correct. Thus, **CL is Closed.** | | | | |

| CL ID | 03 | Section no. | N/A | Date: 28/07/2023 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| PO shall clarify under Section A.1 whether the generated power from the project activity is supplying to the third-party consumers through the wheeling agreement with the DISCOM or sale to grid. Kindly clarify. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| The Power generated are directly supplied to the grid of Assam Power Distribution Company Limited (APDCL). They have signed PPAs for a period of 25 Years and the information on the same has been updated in the PSF. | | | | |
| **Documentation provided by Project Owner** | | | | |
| *Updated PSF, PPAs (Power Purchase Agreements)* | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| PO has updated information and submitted signed PPAs as the Power generated are directly supplied to the grid of Assam Power Distribution Company Limited (APDCL) and they have signed PPAs for a period of 25 Years same is checked by the assessment team and found consistent. Thus, **CL is Closed.** | | | | |

Table 2. CARs from this Project Verification

| CAR ID | 01 | Section no. | D.2 | Date: 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| 1. Name, designation, date and signature of the Focal point (as per LON/LOA) is missing in the cover page of the PSF. Thus, corrective action sought.<br>2. Project Owner shall submit the Commissioning certificate of all four SPVs of project activity. Kindly Submit.<br>3. PO requested to submit detailed technical specifications details and evidences for the lifetime of the plant/modules etc. Kindly submit. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| 1. The signature of the focal point has been updated in the PSF.<br>2. The Commissioning certificate of all the four SPVs of the project have been submitted.<br>3. The Technical specification details for the lifetime of the plants have been submitted. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Commissioning certificate<br>Technical Specification of panels<br>Warranty Certificate | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| **1.** PO has updated Name, designation, date and signature of the Focal point in the revised PSF. However, LoA/LoN is still not submitted. PO shall submit the same. **CAR is Open.**<br>2. PO has submitted the commissioning certificate of all the four SPVs inline with the dates mentioned in the revised PSF. Thus, accepted. **CAR is Closed.**<br>3. PO has submitted the technical specification details and warranty certificate to cross-check the lifetime of the plants. Thus, **CAR is Closed.** | | | | |
| **Project Owner's response** | | | | **Date:** 08/01/2024 |
| 1. The LoA of the project is submitted now. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Letter of Authorization (LoA) | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 12/01/2024 |
| PO has submitted LoA to the assessment team. However, the sign of the authorised person is found missing on each page. Thus, The Letter of Authorization (LOA) should be prepared on the legal owner's letterhead with sign and stamp on each being it a legal document. **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 16/01/2024 |
| 2. The updated LoA of the project is submitted now. | | | | |
| **Documentation provided by Project Owner** | | | | |

| |
|---|
| Letter of Authorization (LoA) |
| **GCC Project Verifier assessment** **Date:** 19/01/2024 |
| PO has submitted updated LoA to the assessment team same is checked by assessment team and found acceptable. Thus, CAR is Closed. |

| **CAR ID** | 02 | **Section no.** | D.2 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| 1. Project Owner requested to submit Declaration of intention for use of carbon credits (ACCs) of project activity. Kindly submit.<br>2. Inline with para 37 of the GCC Project standard "Project Owners shall provide documentary evidence establishing conclusively any right-of-use arising by virtue of a statutory, proprietary or contractual right of the plant, equipment, process or measure that generates GHG emission reductions and is accorded to the Project Owner". Thus, PO is required to provide signed Authorization letters to confirm the information provided in Appendix 1 of the PSF. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| 1. The Project Owner has submitted the declaration of intention of use of carbon credits (ACCs).<br>2. The documents like PPA, Purchase orders, Letter of Authorization and Commissioning certificate has been submitted which consists of the details on ownership of the project activity. | | | | |
| **Documentation provided by Project Owner** | | | | |
| 1. Declaration letter<br>2. PPA (Power Purchase Agreement), Purchase Order of the Panels, Letter of Authorization (LOA) & Commissioning Certificate. | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| 1. The Project Owner has submitted the declaration of intention of use of carbon credits (ACCs) and same is checked by assessment team and found acceptable. Thus, **CAR is Closed.**<br>2. PO has submitted PPA (Power Purchase Agreement), Purchase Order of the Panels Commissioning Certificate to the assessment team. However, LoA is still not submitted. Thus, **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 08/01/2024 |
| 2. The LoA of the project is submitted now. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Letter of Authorization (LoA) | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 12/01/2024 |
| PO has submitted LoA to the assessment team. However, the sign of the authorised person is found missing on each page. Thus, The Letter of Authorization (LOA) should be prepared on the legal owner's letterhead with sign and stamp on each being it a legal document. **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 16/01/2024 |
| 2. The updated LoA of the project is submitted now. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Letter of Authorization (LoA) | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 19/01/2024 |
| PO has submitted updated LoA to the assessment team same is checked by assessment team and found acceptable. Thus, CAR is Closed. | | | | |

| **CAR ID** | 03 | **Section no.** | D.3.7 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |

| |
|---|
| 1. VVB has found some inconsistency in the calculation of baseline emission under section B.6.3. Emission reduction calculation as per AMS I.D Version 18.0 is missing. PO is requested to revise and submit the updated PSF.<br>2. As the project is already commissioned, PO to provide details of monitoring equipments in section B.7.1 of PSF.<br>3. PO is requested to review and revise section B.7.1 all the selected Data/Parameter to be monitored for E+/S+ assessments and SDG labels are not mentioned. Moreover, PO is requested to submit supportings for Data/Parameter monitored. Kindly submit. |
| **Project Owner's response** **Date:** 22/12/2023 |
| 1. The calculation of baseline emission is corrected and updated throughout the PSF.<br>2. Details of the monitoring equipment have been updated in the Section B.7.1.<br>3. Section B.7.1 for all the selected parameters to be monitored in the E+/S+ assessments and SDG labels (applicable) are mentioned and updated in the PSF. |
| **Documentation provided by Project Owner** |
| Updated PSF |
| **GCC Project Verifier assessment** **Date:** 04/01/2024 |
| **1.** PO has revised the calculation of baseline emission under section B.6.3. and updated throughout the PSF. Thus, **CAR is Closed.**<br>**2.** PO has updated details of the monitoring equipment in the Section B.7.1. of the revised PSF. Thus, **CAR is Closed.**<br>3. All the selected parameters to be monitored in the E+/S+ assessments and SDG labels (applicable) are now mentioned under Section B.7.1 of the revised PSF. Thus, **CAR is Closed.** |

| **CAR ID** | 04 | **Section no.** | D.6 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| PO requested to submit all supporting documents for the Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meetings. Kindly submit. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| The Local Stakeholder Consultation has been conducted along with ESIA study and the outcome of the same have been added in the PSF & ESIA documents. | | | | |
| **Documentation provided by Project Owner** | | | | |
| *Updated PSF*<br>*ESIA Report for all the 4 SPVs* | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| PO has submitted ESIA report for all the 4 SPVs. However, all supporting documents for the Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meetings are not submitted to the assessment team. Thus, **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 08/01/2024 |
| Supporting documents (Photographs, findings, etc) for the Local Stakeholders Consultation conducted are included in the "Stakeholder Consultation" section of the respective ESIA Report of each project activity. | | | | |
| **Documentation provided by Project Owner** | | | | |
| ESIA Report for all the 4 SPVs | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 12/01/2024 |
| PO has submitted Supporting documents (Photographs, findings, etc) for the Local Stakeholders Consultation conducted in the "Stakeholder Consultation" section of the respective ESIA Report of each project activity and same is checked by the assessment team and found acceptable. **CAR is Closed.** | | | | |

| **CAR ID** | 05 | **Section no.** | D.10 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| PO requested to review & revise Environmental safeguards for the positive and negative impacts. Corrective action sought. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| Environmental safeguards for the positive and negative impacts have been revised and the same have been updated in the PSF. | | | | |

| **Documentation provided by Project Owner** | |
|---|---|
| Updated PSF | |
| **GCC Project Verifier assessment** | **Date:** 04/01/2024 |
| PO has revised Environmental safeguards for the positive and negative impacts and updated the same in the revised PSF. Thus, **CAR is Closed.** | |

| **CAR ID** | 06 | **Section no.** | D.11 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| PO requested to review & revised the social safeguards for the positive and negative impacts and provide applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts. Corrective action sought. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| Social safeguards for the positive and negative impacts have been revised and the same have been updated in the PSF. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Updated PSF | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| PO has revised Social safeguards for the positive and negative impacts and updated the same in the revised PSF. Moreover, PO shall provide applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts as it is missing. Thus, **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 08/01/2024 |
| Applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts have been updated in the PSF. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Updated PSF | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 12/01/2024 |
| PO shall provide weblink for applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts mentioned in the in the PSF. **CAR is Open.** | | | | |
| **Project Owner's response** | | | | **Date:** 16/01/2024 |
| Weblinks have been updated to the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts in the PSF. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Updated PSF | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 19/01/2024 |
| PO has updated weblink for applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts in the revised PSF. Thus, accepted. CAR is Closed. | | | | |

| **CAR ID** | 07 | **Section no.** | D.12 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| PO requested to review & revise the UN SDGs for the positive and negative impacts. Corrective action sought. | | | | |
| **Project Owner's response** | | | | **Date:** 22/12/2023 |
| UN SDGs for the positive and negative impacts have been revised and the same have been updated in the PSF. | | | | |
| **Documentation provided by Project Owner** | | | | |
| Updated PSF | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** 04/01/2024 |
| PO has revised UN SDGs for the positive and negative impacts and updated the same in the revised PSF. Thus, **CAR is Closed.** | | | | |

| **CAR ID** | 08 | **Section no.** | D.13 | **Date:** 28/07/2023 |
|---|---|---|---|---|
| **Description of CAR** | | | | |

| | |
|---|---|
| PO requested to submit Host Country Attestation on Double Counting related to CORSIA requirements. Kindly submit. | |
| **Project Owner's response** | **Date:** 22/12/2023 |
| CORSIA requirements on Host Country Attestation on Double counting will be submitted along with the submission for a request of the first or subsequent issuance of ACCs as mentioned in the cover page of the PSF. | |
| **Documentation provided by Project Owner** | |
| Updated PSF | |
| **GCC Project Verifier assessment** | **Date:** 04/01/2024 |
| CORSIA requirements on Host Country Attestation on Double counting will be submitted along with the submission for a request of the first or subsequent issuance of ACCs as mentioned in the cover page of the PSF a FAR has been raised for the same. Thus, **CAR is Closed.** | |

Table 3. FARs from this Project Verification

| | | | | |
|---|---|---|---|---|
| **FAR ID** | 01 | **Section no.** | | **Date:** 28/07/2023 |
| **Description of FAR** | | | | |
| Project Owners shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity. | | | | |
| **Project Owner's response** | | | | **Date:** DD/MM/YYYY |
| | | | | |
| **Documentation provided by Project Owner** | | | | |
| | | | | |
| **GCC Project Verifier assessment** | | | | **Date:** DD/MM/YYYY |
| | | | | |

## Appendix 5. Matrix for Identifying Environmental Impacts, Establishing Safeguards and Performing Do-No-Harm Risk Assessments in the PSF and GCC Verifier's conclusion

| **Impact of Project Activity on** | | **Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards** | | | | | | | | **Project Owner's Conclusion** | | **GCC Project Verifier's Conclusion (To be included in Project Verification Report only)** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **Description of Impact** *(positive or negative)* | **Legal/ voluntary corporate requirement / 95roject 9595/ voluntary corporate threshold Limits** | **Do-No-Harm Risk Assessment (choose which ever is applicable)** | | | **Risk Mitigation Action Plans for aspects marked as Harmful** | | **Performance indicator for monitoring of impact** | ***Ex-ante* scoring of environmental impact** | ***Explanation of the Conclusion*** | **3rd Party Audit** |
| | | | | **Not Applicable** | **Harmless** | **Harmful** | **Operational Controls** | **Program of Risk Management Actions** | **Monitoring parameter and frequency of monitoring** | **Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)** | **Ex- Ante description and justification/explanation of the scoring of the environmental impact** | **Verification Process** |
| ***Environmental Aspects on the identified categories 54 indicated below.*** | *Indicators for environmental impacts* | *Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emerg* | *Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified* | *If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be* | *If environmental impacts exist but are expected to be in compliance with applicable national 95roject95 95 /stricter* | *If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requireme* | *Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the* | *Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g.,* | *Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as* | *-1*<br>*0*<br>*+1* | *Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.* | *Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk* |

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

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *ency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.* | *risks of environmental impacts.* | *indicated as **Not Applicable*** | *voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design and operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Harmless** /If the project has a positive impact on the environment mark it as "harmless" as well.* | *nts or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be 96roject96 as **Harmful*** | *risk of impacts that have been identified as '**Harmful** at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary corporate requirements* | *installation of pollution control equipment ) that will be adopted to reduce or eliminate the risk of impacts that have been identified as **Harmful**.* | *well including the data source.* | | | *Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.* |
| ***Reference to paragraphs of Environmental and Social Safeguards Standard*** | | *Paragraph 12 (a)* | *Paragraph 13 l* | *Paragraph 13 (d) (i)* | *Paragraph 13 (d) (ii)* | *Paragraph 13 (d) (iii)* | *Paragraph 13 l (i)* | *Paragraph 13 l (ii)* | *Paragraph 12 l and Paragraph 13 (f)* | *Paragraph 22* | | |
| **Environment – *Air*** | *$SO_x$ emissions (EA01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *$NO_x$ emissions (EA02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *$CO_2$ emissions (EA03)* | The project is expected to reduce $CO_2$ emissions wrt to baseline scenario of generation of equivalent amount of power in grid connected power plant | The Air (Prevention & Control of Pollution) Act, 198155 | Not Applicable | Harmless The overall impact is positive with respect to the baseline alternative. | Not Applicable | Not Applicable | Not Applicable | Monitoring parameter is GHG emission reductions per year ($tCO_2$/year).<br><br>This parameter is calculated from the quantity of net electricity generated and supplied to the grid multiplied by the combined margin emission factor sourced from the CEA database.<br><br>Net electricity will be monitored through the energy meters installed at the substation.<br><br>This parameter will be continuously monitored and reported on annual basis.<br><br>Please refer to the section B.7.1 for more details on monitoring | +1 | The Overall impact is positive with respect to the baseline and hence the impact is harmless.<br><br>Since the impact is being monitored to demonstrate the positive impact over the lifetime, it is a score as +1 | The project will have a positive impact by Reducing measurable amount of $CO_2$ emissions. This amount of emission reduction will be monitored and calculated as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided in section D.3.7 of the Project Verification Report. |
| | *CO emissions (EA04)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Suspended particulate matter (SPM)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

[55] https://cpcb.nic.in/displaypdf.php?id=aG9tZS9haXItcG9sbHV0aW9uL0dTUi02RS5wZGY=

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *emissions (EA05)* | | | | | | | | | | | |
| | *Fly ash generation (EA06)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Odor (EA08)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Noise Pollution (EA09)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | | | | | | | | | | | | |
| **Environment – *Land*** | *Solid waste Pollution from Plastics (EL-01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Solid waste Pollution from Hazardous wastes (EL02)* | The Solid waste generated from the transformer such as transformer oil/ spent oil during the operation and maintenance of the project activity. Improper treatment of this solid waste will lead to the negative environmental | Hazardous and waste management rules 2016, 56 | Not Applicable | The solid wastes generated during the activity will be collected, sorted, stored and disposed to the licensed vendor as per the regulation pertaining to the | Not Applicable | Not Applicable | Not Applicable | Dedicated O&M team is appointed at the site for operation and monitoring of the project activity.<br><br>O&M team continuously monitors the hazardous waste generated at the project site and records will be maintained. | +1 | The hazardous wastes generated during the project activity will be collected, sorted, stored and disposed to the licensed vendor as per the regulation pertaining to the respective hazardous waste management rules of state and central pollution control board whichever precedes. | Project owner confirms that the used transformer oil or any other hazardous waste will be disposed as per applicable laws and regulations in the host country i.e., |

[56] https://cpcb.nic.in/rules/

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | impact. Hence, the parameter needs to be monitored and mitigation measures to be implemented to mitigate the impact. | | | respective hazardous waste management rules of state and central pollution control board whichever precedes.<br><br>Hence the impact is deemed harmless | | | | The following parameters will be monitored:<br>1. Quantity of waste generated<br>2. Quantity of waste disposed<br><br>These parameters will be monitored and recorded in the log books.<br><br>Data will be continuously monitored and records will be maintained on annual basis.<br><br>Please refer to the section B.7.2 for more details on monitoring | | Since the impact of parameter is within the regulatory limits and is being measured and monitored to demonstrate the impact is harmless this parameter is scored as +1. | India. Hence there is no impact considered for the project activity however to ensure to compliance of the laws and regulations the project owner monitored the same throughout the crediting period by means of records of all the hazardous generated and disposed /replaced from the project activity. The monitoring plan provided is provided in section B.7.2 is appropriate and acceptable to the verification team. |
| | *Solid waste Pollution from Bio-medical wastes (EL03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Solid waste Pollution* | E-Waste generated in the form of | E-Waste Management | Not Applicable - | The E-wastes generated | Not Applicable | Not Applicable | Not Applicable | O&M team continuously monitors the E-waste | +1 | The E-wastes generated during the project activity will be collected, | Project owners |

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| | *from E-wastes (EL04)* | damaged electronic and communication equipment; computer accessories and any other electronic components being used in the operation of the project activity.<br><br>Improper treatment of this waste will lead to the negative environmental impact. hence the parameter needs to be monitored and mitigation measures to be implemented to mitigate the impact. | Amendment rules, 201857 | | during the project activity will be collected, sorted, stored and disposed to the authorized vendor for the recycling or to dump at the legacy MSW site s as per the regulation pertaining to the respective E- waste management rules of state and central pollution control board whichever precedes.<br><br>Hence the impact is deemed harmless | | | | generated at the project site and recorded in the plant log books.<br><br>Following parameters will be monitored:<br>1. Quantity of E-waste generated<br>2. Quantity of E-waste disposed<br>These parameters will be monitored and recorded in the plant log books.<br><br>Data will be continuously monitored and records will be maintained on annual basis<br><br>Please refer to the section B.7.2 for more details on monitoring | | sorted, stored and disposed to the licensed vendor as per the regulation pertaining to the respective E-waste management rules of state and central pollution control board whichever precedes.<br><br>Since the impact of parameter is within the regulatory limits and is being measured and monitored to demonstrate the impact is harmless this parameter is scored as +1. | confirms that the e-waste generated such broken solar panels, cables, electrical instruments etc from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country. Hence this parameter will be scored and monitoring plan is provided in section B.7.2 of the PSF to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity which is appropriate and acceptable. |

[57] https://cpcb.nic.in/uploads/Projects/E-Waste/e-waste_amendment_notification_06.04.2018.pdf

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| | *Solid waste Pollution from Batteries (EL05)* | There is a minimal impact due to the pollution from the batteries. | Battery Waste Management Rules, 202058 | Not Applicable | This project does not have any battery storage facility to store the power. However, there are few batteries are used to start the inverters and for the standby power to the used in the lifetime office at the site.<br><br>At the end of lifetime, the batteries will be handed over to the recycler or manufacturer to replace with new batteries.<br><br>Hence the impact is harmless | Not Applicable | Not Applicable | Not Applicable | Following parameters will be monitored:<br>1. Quantity of battery waste generated<br>2. Quantity of battery waste disposed<br><br>This will be continuously monitored and reported on annual basis.<br><br>Please refer to the section B.7.2 for more details on monitoring. | +1 | Though the impact due to the battery usage is insignificant the parameter will be monitored to demonstrate the impact is neutral. Hence the parameter is scored as +1. | Project owners confirms that the Battery waste generated from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country. Hence this parameter will be scored and monitoring plan is provided in section B.7.2 of the PSF to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity which is appropriate and acceptable. |
| | *Solid waste Pollution* | Solar panels, Inverters and transformers are | E-Waste Management | Not Applicable | The average life of the | Not Applicable | Not Applicable | Not Applicable | Following parameters will be monitored: | +1 | The impact is yet to be monitored at the | Project owner confirms |

[58] https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf

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| ndme rules, 359 | | transformers and PV modules are considered as 25 years.<br><br>Transformers will be sent back to the manufacturer or recycler for the recycling and reuse of usable component at the end of the life of the transformer.<br><br>Project owner will dispose the recyclable material to the recycling vendor and dispose the rest of materials to the third-party vendors or return to manufacturers in compliance with the prevailing rules at the end-of-life | | | | 1. Quantity of waste generated<br>2. Quantity of waste disposed<br><br>This will be continuously monitored and reported on annual basis.<br><br>Please refer to the section B.7.2 for more details on monitoring. | | end of lifetime of products.<br><br>Since the impact of the parameter is being monitored to demonstrate the impact is harmless it is scored as +1. | that the in the end of the life of installed solar modules, inverters, and other accessories will be returned to the manufacturer for the disposal as per the host country i.e., India regulations. PO also applied a monitoring parameter 'Solid Waste Pollution from end -of -life products/ equipment' to monitor the waste generated due to project activity under section B.7.2 |

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| | | | | | Hence the impact is harmless. | | | | | | | |
| | *Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *land use change (change from cropland /forest land to project land) (EL08)* | The project activity has minimal impact on the land use change. | Right to fair compensation and transparency in land acquisition Rehabilitation and resettlement act 2013 | Since the acquired land is not suitable for cultivation and also the acquisition was done on Willing seller-willing buyer basis.<br><br>The necessary conversion approvals are obtained and are in place. | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Since the land usage is already changed from crop land to project land, monitoring is not required. | 0 | The impact is unlikely to cause any harm.<br><br>There will not be occurrence of land use change in the project site from the project implementation till the end of project lifetime.<br><br>Hence, monitoring of this parameter is not required and scored as 0. | Since the land usage is already changed from crop land to project land, monitoring is not required.<br><br>The impact is unlikely to cause any harm.<br><br>There will not be occurrence of land use change in the project site from the project implementation till the end of project lifetime.<br><br>Hence, monitoring of this parameter is not required and scored as 0. |

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| | *Others (EL09)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Add more rows if required* | - | - | - | - | - | - | - | - | - | - | |
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| **Environment – *Water*** | *Reliability/ accessibility of water supply (EW01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Water Consumption from ground and other sources (EW02)* | The water requirement for the project is minimal. The main consumption of water in the project is for cleaning of the solar modules which is procured from external sources with minimal requirement for domestic usage. | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Generation of wastewater (EW03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Wastewater discharge without/with insufficient treatment (EW04)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Pollution of Surface, Ground and/or Bodies of water (EW05)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| | *Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | | | | | | | | | | | | |
| **Environment – *Natural Resources*** | *Conserving mineral resources (ENR01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Protecting/ enhancing plant life (ENR02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Protecting/ enhancing species diversity (ENR03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Protecting/ enhancing forests (ENR04)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Protecting/ enhancing other depletable natural resources (ENR05)* | This is a renewable energy power project generating power through the solar energy which is renewable source of energy and hence there is no impact | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Conserving energy (ENR06)* | There is no scope for energy conservation since it is a solar power plant generating and supplying electricity through the grid. | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| | | Hence not applicable. | | | | | | | | | | |
| | *Replacing fossil fuels with renewable sources of energy (ENR07)* | The solar power project replaces fossil fuel with the renewable solar energy for the power generation by installing the solar power plant which would have been otherwise generated from the fossil fuel dominant | Not Applicable | Not Applicable | Harmless<br><br>The overall impact is positive compared to the baseline alternative | Not Applicable | Not Applicable | Not Applicable | Considering the occurrence of emission reductions through the electricity generation form the Solar power project. This parameter will be monitored through the monthly Power generation from the Solar Project.<br><br>Monthly electricity generation will be monitored through the energy meters installed at the substation. Energy Generation reports will be provided for the verification of generation. | +1 | The impact is positive compared to the baseline scenario where the grid connected electricity is being generated from the dominated fossil fuels impact during the project lifetime.<br><br>Since the impact is being monitored to demonstrate the positive impact during the project lifetime, the parameter is scored as +1 | The project will have a positive impact by generating measurable amount of electricity generation which leads to $CO_2$ emission reductions. and assessment of the same is provided in section D.3.7 of the Project Verification Report. |
| | *Replacing ODS with non-ODS refrigerants (ENR08)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Net Score:** | | | | **+6** | | | | | | | | |
| **Project Owner's Conclusion in PSF:** | | | | The Project Owner confirms that the Project Activity will not cause any net harm to Environment. | | | | | | | | |
| **GCC Project Verifier's Opinion:** | | | | The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to environment | | | | | | | | |

## Appendix 6. Matrix for Identifying Social Impacts, Establishing Safeguards and Performing Do-No-Harm Risk Assessments in the PSF and GCC Verifier's conclusion

| **Impact of Project Activity on** | | **Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards** | | | | | | | **Project Owner's Conclusion** | | **GCC project Verifier's Conclusion**<br><br>**(To be included in Project Verification Report only)** |
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| | | **Description of Impact** (*positive or negative*) | **Legal requirement /Limit, Corporate policies / Industry best practice** | **Do-No-Harm Risk Assessment**<br><br>**(choose which ever is applicable)** | | | **Risk Mitigation Action Plans (for aspects marked as Harmful)** | **Performance indicator for monitoring of impact.** | **Ex-ante scoring of environmental impact** | **Explanation of the Conclusion** | **3rd Party Audit** |
| | | | | **Not Applicable** | **Harmless** | **Harmful** | **Operational / Management Controls** | **Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)** | **Ex-Ante scoring of social impact of the project** | **Ex- Ante description and justification/explanation of the scoring of social impact of the project** | **Verification Process**<br><br>**Will the Project Activity cause any harm?** |
| ***Social Aspects on the identified categories[60] indicated below.*** | *Indicators for social impacts* | *Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all source during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control* | *Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts* | *If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Not Applicable*** | *If social impacts exist, but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Harmless**),* | *If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits* | *Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as **Harmful**.* | *Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source* | *-1*<br><br>*0*<br><br>*+1* | *Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion* | *Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.*<br><br>*Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.* |

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

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| | | | | | *project having positive impact on society wrt. To the BAU / baseline scenario must also mark their aspect as **"harmless"*** | *then the Project Activity is likely to cause harm and shall be indicated as **Harmful*** | | | | | |
| **Social – *Jobs*** | *Long-term jobs (> 10 year) created/ lost (SJ01)* | *The project activity generates long term job opportunities during the operation the project activity.* | Regulations on Minimum Wage for Employees working by Labor Contract[61] | Not Applicable | Harmless<br><br>As the impact is positive in nature | Not Applicable | Not Applicable | The number of people employed by the project activity will be monitored through checking employee records or the Pension contribution acknowledgement. | +1 | There is no mandatory law to generate permanent employment from the project activity, however, project Owner has been decided to provide training to the local people & generate permanent employment for local people. Therefore, this parameter will be scored. | The impacts being monitored throughout crediting period by parameter 'Long-term jobs (> 10 year) created/ lost (SJ01)' and is verified under section D.3.7 of this report. The employment was verified during the audit and by interviews and it was accepted by the VVB and confirmed that the project activity created long term jobs. Assessment team found appropriate monitoring plan is going to be implemented. |
| | *New short-term jobs (< 1 year) created/ lost (SJ02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Sources of income generation increased / reduced (SJ03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people* | Project Owner establishes the policy to ensure that there is no discrimination based on gender, racism, religion etc. during the | Company policy on non-discrimination | Not Applicable | Harmless<br><br>Project Owner establishes the policy to ensure that there is no | Not Applicable | Not Applicable | Monitoring parameters.<br><br>1.Company policy on non-discrimination practices. | +1 | Project owner strictly avoid any discrimination practices while hiring people from different race, gender, ethnics, religion, marginalized | PO has submitted the HR Policy for Recruitment. The HR policy states that the recruitment process of the company follows the commitment to equality, diversity and inclusion. PO has a Grievance Management Mechanism |

[61] https://clc.gov.in/clc/sites/default/files/MinimumWagesact.pdf

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| | *with disabilities (SJ04)*<br><br>*(human rights)* | recruitment process. | | | discrimination based on gender, racism, religion etc. during the recruitment process.<br><br>Grievance redressal committee will be formed to address any complaints/ grievance received on discrimination practices.. | | | 2.Number of complaints received on discrimination practices.<br><br>The data will be monitored on continuous basis, and recorded annually.<br><br>Please refer to section B.7.2 for more details | | groups, people with disabilities.<br><br>Project owner ensures that equality of opportunity and treatment of all individuals to fully develop their talents and skills according to their aspirations and preferences, and to enjoy equal access to employment as well as equal working conditions | set up at project site. A Grievance Management Register is made available at site to note down the grievances of the local population. VVB has seen the Grievance Management Register and verified the company level HR policy and confirm it during the interview with the stakeholders that the company does not discriminate when hiring people and also has the process of record grievances of local community. This establishes the communal harmony between the PO and the local community. PO has considered +1 score for this parameter and, it is verified as +1. |
| **Social – *Health & Safety*** | *Disease prevention (SHS01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Occupational health hazards (SHS02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Reducing / increasing accidents/Incidents/fatality (SHS03)* | There is a possibility of accidents/incidents/ near miss in project sites due to human intervention or technical failure or emergency. | The Factories Act, 1948[62] & EHS policy of company | Not Applicable | Harmless<br><br>By establishing EHS policy guidelines, and imparting periodic trainings and providing PPE kits to employees and visitors | Not Applicable | Establishing EHS Guidelines<br><br>Imparting Trainings,<br><br>Keeping Sign boards<br><br>Providing PPE Kits. | Project Owner monitors the following parameters.<br><br>1.Number of accidents/ incidents reported.<br><br>This parameter will be continuously monitored and accidents/incident registers will be maintained on annual basis. | +1 | The project owner will provide regular safety training to their workers about the accident hazards and risk related to specific works and preventive measures for avoiding accidents at site. Since this a mandatory to provide safety measures at site<br><br>Since the parameter is | PO has well onsite established Contractor Management System and Code of Conduct Policy under HSE Policy and explicitly described the roles and responsibilities of representative of company and contractor. VVB has cross checked the same and also established it as harmless during the remote audit by interviewing the stakeholders. VVB has also cross checked the annual HSE plan provided by the PO and confirmed that there is a well-established safety procedure available at |

[62] https://labour.gov.in/sites/default/files/factories_act_1948.pdf

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| | | | | | | | | Please refer to section B.7.2 for more details. | | having the impact on the employees this parameter is being considered for monitoring to demonstrate that impact is neutral during the project operational period | site. PO has considered +1 score for this parameter and, it is verified as +1. |
| | *Reducing / increasing crime (SHS04)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Reducing / increasing food wastage (SHS05)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Reducing / increasing indoor air pollution (SHS06)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Efficiency of health services (SHS07)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Sanitation and waste management (SHS08)* | Project will generate domestic waste during construction and operation of the project. | Solid Waste Management Rules, 2016[63] | Not Applicable | Harmless<br><br>The project will have proper sanitation facilities (during construction portable toilets, during operation permanent toilets) as per factories act and domestic waste generated will be disposed as per local regulations. | Not Applicable | Not Applicable | The parameter will not be monitored as the toilets and soak pits at the site are already constructed and are maintained regularly | 0 | Project owner will ensure proper disposal of sanitary Waste through actual user, waste collector or operator of the disposal facility, in accordance with the Central Pollution Control Board guidelines. Septic tank and soak pits will be provided onsite for treatment and disposal of sewage, thereby minimizing the | In the solar power plant sanitation and waste management is very less. However, PO has Health and Safety ("EHS") Management Policy for the project site and same is strictly followed.<br><br>VVB has verified the same during the on-site audit and found appropriate and shall not cause harm to the environment & society. PO has not score for this parameter and, it is verified as harmless. |

[63] https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf

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| | | | | | | | | | | impacts of wastewater discharge. Planning of toilets, soak pits and septic tanks, waste collection areas will be away from natural drainage channels Therefore this parameter will not be scored. | |
| | *Other health and safety issues (SHS09)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Social – *Education*** | *specialized training / education to local personnel (SE01)* | The employees will receive on job training as per training needs.<br><br>It imparts a positive impact by helping employees in all-round development. | There is no legal requirement from local authority to provide training to local people | Not Applicable | Harmless<br><br>It is a positive impact. | Not Applicable | Not Applicable | The following parameters will be monitored.<br><br>1.Number of trainings provided to the site employees.<br><br>This will be monitored on annual basis and the details will be recorded in training logbooks.<br><br>Please refer to section B.7.1 for more details. | +1 | The project Owner will provide regular job-related training to their workers. Hence, this parameter will be scored. | The job-related training provided to the project personnel are the routine training program for daily operation & maintenance and safety practices to be followed as per industry norms. Therefore, this parameter shall be scored however monitoring plan is provided in section B.7.1 of the PSF to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity which is appropriate and acceptable |
| | *Educational services improved or not (SE02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Project-related knowledge dissemination effective or not (SE03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Other educational issues (SE03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| | *Add more rows if required (SE04)* | - | - | - | - | - | - | - | - | - | |
| **Social – *Welfare*** | *Improving/ deteriorating working conditions (SW01)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Community and rural welfare (indigenous people and communities) (SW02)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Poverty alleviation (more people above poverty level) (SW03)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Improving / deteriorating wealth distribution/ generation of income and assets (SW04)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Increased or / deteriorating municipal revenues (SW05)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Women's empowerment (SW06)*<br><br>*(human rights)* | The project owner has the nondiscrimination policy on recruitment and remuneration. (i.e right of equal pay). This ensures there is no impact. | Equal Remuneration Act 1976[64]; Company HR Policy | Not Applicable | Not Applicable | Not Applicable | Not Applicable | The following parameter will be monitored.<br><br>1. Number of jobs provided to women.<br><br>This parameter will be monitored through the Employment records.<br><br>The data will be monitored on annual basis. | +1 | Project Owner ensures that there is no gender inequality while providing the job opportunities for the project operations. Will maintain and enforce the organizational policy to avoid any gender discrimination in the company. | Project owner ensures that there is no discrimination in providing the employment or remuneration or growth opportunities for the women employee in the organization, This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report. |

[64] https://labour.gov.in/womenlabour/equal-remuneration-acts-and-rules-1976

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| | | | | | | | | Please refer to section B.7.1 for more details. | | Project owner also priorities the women employee at the project operation from the local community to empower them by providing the income sources which would not have been happened in the absence of the project activity. This parameter will not be scored. | |
| | *Reduced / increased traffic congestion (SW07)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Exploitation of Child labour (human rights) (SW08)* | Project activity provides employment in the region. However, project owner adheres to the Child Labour (prohibition and regulation) Act, 1986, under article 24 of the Indian constitution ensuring there is no exploitation of child labour | The child labour (prohibition and regulation) Act, 1986[65] | Not Applicable | Harmless<br><br>Child Labour and forced labour are strictly prohibited by law | Not Applicable | Not Applicable | Project owner monitors and ensures that no child labour is working at the site.<br><br>Monitoring Parameter:<br><br>Zero (0) Child labour is working at the site.<br><br>This parameter will be monitored on continuous basis and reported annually.<br><br>This data will be monitored through employment records and interview with site people. | +1 | The project owner will not encourage or promote the child labor in the project activity. In addition, project management promotes avoidance of child labor in the project region and promotes child education to the local households and educate them by explaining the value of education.<br><br>This parameter is scored as +1. | As per the Child Labour (Prohibition and Regulation) Act, 1986 and as per section 67 of Factories Act, 1948 (Page 7 of Child Labour Act) it is prohibited to provide employment to children below 14 years in any factory. The HR department of PO also abide by these rules and regulation of India. VVB team has cross checked the HR policy and also through the onsite audit confirms that there is no child labour working at the project site. PO has considered +1 score for this parameter and, it is verified as +1. |

[65] https://labour.gov.in/sites/default/files/act_2.pdf

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| | | | | | | | | Please refer to section B.7.2 for more details. | | | |
| | *Minimum wage protection*<br><br>*(human rights) (SW09)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Abuse at work place.(with specific reference to women and people with special disabilities / challenges )*<br><br>*(human rights) (SW10)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Other social welfare issues (SW11)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Avoidance of human trafficking and forced labour*<br><br>*(human rights)*<br><br>*(SW12)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs*<br><br>*(human rights)*<br><br>*(SW13)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | *Provisions of resettlement and human settlement displacement*<br><br>*(human rights)* | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| | *(SW14)* | | | | | | | | | | |
| | *Social Inequality* | Social inequality in work place effects the employees working at the site. | Company HR Policy | Social inequality is strictly avoided as per company HR policy.<br><br>All the employees at the work site will be treated equally without any discrimination based on gender, community, racism, disability, height and weight.<br><br>All the employees will be treated on equal basis and provided with equal minimum wages, working conditions and growth opportunities. | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Project owner ensures that there will not be any inequality in line with the company HR policy and everyone has an equal chance at developing their abilities and skills in line to employment opportunities and favorable working conditions as the same has been addressed in Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04). Hence this parameter is not scored. | Not Applicable |
| | *Threatened Livelihood* | Increased economic and infrastructure activity may leads to increase levels of pollution to air, | Not Applicable | The proposed project is a clean energy project | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | There is no loss or threat to the local livelihood or endangered species or environment due | Not Applicable |

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| | | water, and land, and consume finite resources in a manner that may threaten people and the environment. | | and will not have major pollution sources associated with it. Since the lands procured are not much productive for agricultural farming there is no loss of livelihood due to the loss of land. More over since the land is procured on lease basis this will create the sustained income to the farmers who has given the land for lease. | | | | | | to the implementation of the project activity.<br><br>Since the impact is neutral compared to the baseline scenario this parameter will not be scored. | |
| | *Communal Harmony* | The project activity has several positive impacts such as improving living conditions and promote community involvement via economic development, revenue generation and improved infrastructure | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Since the impact is neutral and addressed in the following parameters such as Threatened Livelihood, Community and rural welfare (indigenous people and communities) (SW02) and compared to the baseline | Not Applicable |

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| **Net Score:** | **+6** |
| **Project Owner's Conclusion in PSF:** | The Project Owner confirms that the Project Activity will not cause any net harm to society. |
| **GCC Project Verifier's Opinion:** | The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society. |

## Appendix 7. Matrix for Demonstration of Contribution of Project to Sustainable Development

| UN-level SDGs | UN-level Target | Declared Country-level SDG | Defining Project-level SDGs | | | | | GCC Project Verifier's Conclusion (To be included in Project Verification Report only) | |
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| | | | Project-level SDGs | Project-level Targets/Actions | | Contribution of Project-level Actions to SDG Targets | Monitoring | Verification Process | Are Goal/ Targets Likely to be Achieved ? |
| ***Describe UN SDG targets and indicators***<br><br>***See:*** ***https://unstats.un.org/sdgs/indicators/indicators-list/*** | *Describe the UN-level target(s) and corresponding indicator no(s)* | *Has the host country declared the SDG to be a national priority? Indicate Yes or No* | *Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.* | *Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).* | | *Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets* | *Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source* | *Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).* | *Describe whether the project-level SDG target(s) is likely to be achieved by the target date*<br><br>*(Yes or no)* |
| **Goal 1: End poverty in all its forms everywhere** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| **Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 3. Ensure healthy lives and promote well-being for all at all ages** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 5. Achieve gender equality and empower all women and girls** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 6. Ensure availability and sustainable management of water and sanitation for all** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all** | 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.<br><br>7.2.1<br><br>Renewable energy share in the total energy consumption | Yes | Quantity of net electricity supplied to the grid by project activity in year y. | 157,792 MWh/ year | Renewable energy share in the total energy consumption Amount of renewable energy supplied to grid for consumption | Contribute renewable energy share in total grid energy consumption | The net electricity supplied to the grid by the project activity is continuously monitored through energy meter (main and check meter) installed at the sub-station. The meters remain under the custody of state utility | This project is renewable solar power project and installations started operations and same was verified with the commissioning certificates provided by the project owner. The generated power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF. | Yes |
| **Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all** | 8.5<br><br>By 2030, achieve full | Yes | Project activity supports creation of | Project creates new employme | Project creates new employme | 1. Employment as per the national | Project owner monitors the implementati | This is an indirect positive impact of the project activity. | Yes |

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| | 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<br><br>8.5.1<br><br>Average hourly earnings of female and male employee, by occupation, age and persons with disabilities | | short term and long-term job opportunities for men and women during the construction and operation of the project activity. | nt and generates income for people during the project lifetime<br><br>Through Project activity economic development has been achieved in the project location by creating employment opportunities to the other allied services and indirect employment for men and women. Create employment for minimum of 10 people with minimum wages as per the minimum wages act of host country | nt and generates income for minimum 10 number of people including men and women during the project lifetime | labour and company law including national gender policy<br><br>2. Maintains company HR policy to create standard operating procedures (SOPs) to follow and maintain safe and secure work environment<br><br>3. paying the wages as per the minimum wages act of the country. Create employment for minimum of 10 people with minimum wages as per the minimum wages act of host country | on of the policies and employee grievances if any, through the separate HR manager and site in charge.<br><br>Quantity of employment for both men and women will be monitored through employment records which will include Name, Gender,etc.<br><br>The organizations PF challan is the proof that the employees were being paid the wages as per the host country requirements. | This parameter is verifiable during the monitoring period.<br><br>Average earning of the employees will be monitored through salary records and Records for the accidents/incidents will be maintained by the project owner will be monitored. | |
| **Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| **Goal 10. Reduce inequality within and among countries** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 12. Ensure sustainable consumption and production patterns** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 13. Take urgent action to combat climate change and its impacts** | 13.2 Integrate climate change measures into national policies, strategies and planning<br><br>13.2.2<br><br>Amount of emission reduction achieved by project | Yes | Amount of emission reductions achieved by project ($tCO_2e$) | 146,903 $tCO_2e$ per year over the crediting period for the project | Reductions in Emissions ($tCO_2e$) per unit of product due to project | Achieve annual emission reductions of 146,903$tCO_2e$ over the crediting period for the project | Measurement of monthly energy generation from the project.<br><br>Calculation of amount of actual emission reductions achieved by the project. | This is direct positive impact of the project which will avoid around 146,903 $tCO_2$ during the crediting period of 10 years. The generated power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF. | Yes |
| **Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| **Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |

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| **Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development** | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable | Not Applicable |
| | | | | | | | | | |

| **SUMMARY** | **Targeted** | **Likely to be Achieved** |
|---|---|---|
| **Total Number of SDGs** | **+3** | **+3** |
| **Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF** | **Silver** | **Silver** |

## DOCUMENT HISTORY

| Version | Date | Comment |
|---|---|---|
| **V 3.1** | 31/12/2020 | ▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs. |
| **V 3.0** | 23/08/2020 | ▪ Revised version released on approval by the Steering Committee as per the GCC Program Process;<br>▪ Revised version contains the following changes:<br>o Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC);<br>o Considered and addressed comments raised by the Steering Committee:<br>➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and<br>➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020).<br>▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[66]; |
| **V 2.0** | 25/06/2019 | ▪ Revised version released for approval by the GCC Steering Committee.<br>▪ This version contains details and information to be provided, consequent to the latest worldwide developments (e.g., CORSIA EUC). |
| **v1.0** | 01/11/2016 | ▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1 |

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

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