




# Validation report form for CDM programme of activities

(version 01.0)

Complete this form in accordance with the attachment: "Instructions for filling out the validation report form for CDM programme of activities" at the end of this form.

## VALIDATION REPORT

<b>Title of the programme of activities (PoA)</b>	Small Hydro Power Programme of Activities in Iran
<b>Version number of the validation report</b>	04
<b>Completion date of the validation report</b>	12/12/2016
<b>Version number of PoA-DD applicable to this validation report</b>	10
<b>Date when PoA-DD was uploaded for global stakeholder consultation</b>	07/10/2015
<b>Coordinating/managing entity (CME)</b>	Mehr Renewable Energy Company (MRE)
<b>Host Party(ies)</b>	Iran (Islamic Republic of)
<b>Sectoral scope(s)</b>	01
<b>Selected methodology(ies)</b>	AMS-I.D Grid connected renewable electricity generation (version 18)
<b>Selected standardized baseline(s)</b>	NA
<b>Name of DOE</b>	Carbon Check (India) Private Ltd.
<b>Name, position and signature of the approver of the validation report</b>	Vikash Kumar Singh, Compliance Officer, 

## SECTION I. Executive summary

&gt;&gt;

### Purpose and general description

Mehr Renewable Energy Company (MRE) (hereafter referred to as 'CME') has commissioned the DOE, Carbon Check (India) Private Ltd. (CC IPL) to perform an independent validation of the small scale PoA "Small Hydro Power Programme of Activities in Iran" in Iran (hereafter referred to as "PoA"). This report summarises the findings of validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. The term "UNFCCC criteria" refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures or the simplified modalities and procedures for small-scale CDM project activities (as applicable) and the subsequent decisions by the CDM Executive Board. This report contains the findings and resolutions from the validation and a validation opinion.

The PoA involves installation and operation of small and microscale hydro power plants across the country of Iran in order to facilitate the growth and further promotion of renewable energy technologies in the country. The PoA will reduce the amount of carbon dioxide emissions to the atmosphere that was occurring prior to the operation of PoA. Thus, the PoA would result in reducing the usage of fossil fuels for power generation. The PoA involves use of methodology AMS-I.D "Grid connected renewable electricity generation", (version 18.0)<sup>B02/</sup>. The PoA results in reductions of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA in accordance with the UNFCCC CDM requirements for additionality.

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

### Location

The PoA will be implemented within the geographical boundary of Iran. The geographical coordinates of the PoA boundary are:

Latitude: 25° – 40°N

Longitude: 44° – 63°5' E

### Scope of the validation

The validation scope is defined as the independent and objective review of the programme of activities design document (PoA-DD<sup>01/</sup>). Relevant criteria (see above) and decisions by the CDM Executive Board, including the approved baseline and monitoring methodology<sup>B02/</sup> are used to review the PoA-DD<sup>01/</sup>. The validation team has, based on the provisions in the Validation and Verification Standard<sup>B01-a/</sup> employed (latest version) a rule-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation 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 project design.

While carrying out the validation, CCIPL determines if the PoA complies with the requirements of para 37 of the CDM M&P, the applicability conditions of the selected methodology<sup>/B02/</sup>, guidance issued by the Board and also assesses the claims and assumptions made in the PoA-DD<sup>/01/</sup> without limitation on the information provided by the project participants.

### Validation Process

The validation consists of the following four phases:

- i. A desk review of the project design documents
  - A review of the data and information;
  - Cross checks between information provided in PoA-DD<sup>/01/</sup> and information from sources with all necessary means without limitations to the information provided by the project proponent;
- ii. On-site visit and follow-up interviews with project stakeholders
  - Interviews with relevant stakeholders in host country with personnel's having knowledge with the project development via telephone, email or direct on-site visits;
  - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent;
- iii. Reference to available information relating to projects or technologies similar projects under validation and review based on the approved methodology<sup>/B02/</sup> being applied of the appropriateness of formulae and accuracy of calculations.
- iv. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The report is based on the assessment of the PoA-DD<sup>/01/</sup> undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, site visit, and stakeholder interviews, review of the applicable/applied methodology<sup>/B02/</sup> and its underlying formulae and calculations.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed PoA thus confirming the project design as document is sound and reasonable and meets the stated requirements and identified criteria.

### Conclusion

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the CDM PoA "Small Hydro Power Programme of Activities in Iran" in Iran, as described in the PoA-DD (version 10, dated 23/11/2016)<sup>/03/</sup>, meets all applicable CDM requirements, including those specified in the Project Standard, relevant methodologies, tools and guidelines and article and article 12 of Kyoto Protocol, paragraph 37 of CDM modalities and procedures and the subsequent decisions by the COP/MOP and CDM Executive Board and Gold Standard Requirements.

The selected baseline and monitoring methodology AMS-I.D (version 18.0)<sup>/B02/</sup> is applicable to the project and correctly applied. Carbon Check (India) Pvt. Ltd., therefore recommends the project to the CDM Executive Board for registration.

**SECTION II. Validation team, technical reviewer and approver****II.1. Validation team members**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	IR	Anand	Amit	CC IPL	X	X	X	X
2.	Validator	IR	Anand	Amit	CC IPL	X	X	X	X
3.	Technical Expert	IR	Anand	Amit	CC IPL	X	X	X	X
4.	Team Member	IR	Sharma	Kranav	CC IPL	X			X
5.	Team Member	IR	Agarwalla	Sanjay Kumar	CC IPL	X			
6.	Local Expert	ER	Mehrani	Neda	CC IPL		X	X	

**II.2. Technical reviewer and approver of the validation report**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Singh	Vikash Kumar	CC IPL
2.	Approver	IR	Singh	Vikash Kumar	CC IPL

**SECTION III. Means of validation****III.1. Desk review**

&gt;&gt;

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

**III.2. On-site inspection**

Duration of on-site inspection: 20/12/2015 to 23/12/2015					
No.	Activity performed on-site	Site location	Date	Team member	
1.	Opening Meeting and brief project description	Client office, Tehran	20/12/2015	Amit Anand and Neda Mehrani	
2.	Review of Technical specifications data and documents	Client office, Tehran	20/12/2015	Amit Anand	
3.	Baseline and Additionality Document review	Client office, Tehran	20/12/2015	Amit Anand	
4.	Physical Inspection of sites	Location sites of Hydro power plants of the CPAs	20/12/2015 to 22/12/2015	Amit Anand and Neda Mehrani	
5.	Interview of representatives of CME/CPA implementers and local stakeholders	Location sites of Hydro power plants of the CPAs	20/12/2015 to 22/12/2015	Amit Anand and Neda Mehrani	
6.	Discussion on monitoring plan	Client office, Tehran	23/12/2015	Amit Anand and Neda Mehrani	

7.	Discussion on PoA-DD and CPA-DD	Client office, Tehran	20/12/2015	Amit Anand and Neda Mehrani
8.	Closing meeting and conclusions	Client office, Tehran	20/12/2015	Amit Anand and Neda Mehrani

### III.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Ahadi	Mohammad Sadegh	Mehr Renewable Energy Company	20/12/2015 to 22/12/2015	<ul style="list-style-type: none"> <li>• Programme Design and Technologies used</li> <li>• Environmental Management Plan/ EIA</li> <li>• Management structure with Roles and Responsibilities</li> <li>• Monitoring Plan and process to be adopted</li> <li>• Baseline Scenarios and alternatives</li> <li>• Emission Reductions</li> <li>• Sustainability impacts</li> </ul>	Amit Anand and Neda Mehrani
2.	Shridel	Elham	Mehr Renewable Energy Company	20/12/2015 to 23/12/2015	<ul style="list-style-type: none"> <li>• Programme Design and Technologies used</li> <li>• Environmental Management Plan/ EIA</li> <li>• Management structure with Roles and Responsibilities</li> <li>• Monitoring Plan and process to be adopted</li> <li>• Baseline Scenarios and alternatives</li> <li>• Emission Reductions</li> </ul>	Amit Anand and Neda Mehrani
3.	Nowdel	Tohid	Mehr Renewable Energy Company	20/12/2015 and 23/12/2015	<ul style="list-style-type: none"> <li>• Grid Emission factor</li> <li>• ER calculation</li> </ul>	Amit Anand and Neda Mehrani
4.	Kianhar	Arezou	Mahabghodss Company	20/12/2015 and 22/12/2015	<ul style="list-style-type: none"> <li>• Feasibility Study</li> <li>• Financial Analysis</li> <li>• Metering and calibration</li> </ul>	Amit Anand and Neda Mehrani
5.	Raeisi	Mohammad Ibrahim	Mahabghodss Company	20/12/2015 and 22/12/2015	<ul style="list-style-type: none"> <li>• Feasibility Study</li> <li>• Financial Analysis</li> <li>• Metering and</li> </ul>	Amit Anand and Neda Mehrani

					calibration	
6.	Khani	Mahsa Mohammad	Iran Water and Power Resources	20/12/2015 and 22/12/2015	<ul style="list-style-type: none"> <li>• Programme Design and Technologies used</li> <li>• Basic Study</li> <li>• Implementation schedule with milestones</li> <li>• Decision Making Process</li> </ul>	Amit Anand and Neda Mehrani
7.	Talebbeidokhti	Mahmoud	Iran Water and Power Resources	20/12/2015 to 22/12/2015	<ul style="list-style-type: none"> <li>• Programme Design and Technologies used</li> <li>• Basic Study</li> <li>• Implementation schedule with milestones</li> <li>• Decision Making Process</li> </ul>	Amit Anand and Neda Mehrani
8.	Heidari	Ali	Iran Water and Power Resources	21/12/2015	<ul style="list-style-type: none"> <li>• Programme Design and Technologies used</li> <li>• Basic Study</li> <li>• Implementation schedule with milestones</li> <li>• Decision Making Process</li> </ul>	Amit Anand and Neda Mehrani

### III.4. Sampling approach

>>

Not applicable

### III.5. Clarification requests, corrective action requests and forward action requests raised

Areas of validation of compliance	No. of CL	No. of CAR	No. of FAR
<b>Part I</b>	-	-	-
General description of the PoA	-	-	-
<ul style="list-style-type: none"> <li>• PoA design document</li> </ul>	01	01	-
<ul style="list-style-type: none"> <li>• Purpose and general description of the PoA               <ul style="list-style-type: none"> <li>○ Generic CPA(s)</li> <li>○ Specific-case CPA(s) submitted with the PoA</li> </ul> </li> </ul>	-	03	-
	-	01	-
	-	-	-
Demonstration of additionality and development of eligibility criteria		-	-
<ul style="list-style-type: none"> <li>• Demonstration of additionality of the PoA</li> </ul>	01	01	-
<ul style="list-style-type: none"> <li>• Eligibility criteria for inclusion of CPA(s) in the PoA</li> </ul>	-		-
Management system	-	-	-
Duration of the PoA	-	-	-
Environmental impacts	-	-	-
Local stakeholder consultation	-	-	-
Approval and authorization	-	-	-
Global stakeholder consultation	-	-	-
Contribution to sustainable development	-	-	-
Modalities of communication	-	-	-
<b>Part II</b>	-	-	-
General description of generic CPA	-	-	-

Application of a baseline and monitoring methodology and standardized baseline	-	-	-
• Applicability of selected methodology(ies) and/or standardized baseline	01	01	-
o Deviation from methodology	-	-	-
o Clarification on applicability of methodology, tool and/or standardized baseline	-	-	-
• Sources and GHGs	-	01	-
• Description of baseline scenario	-	-	-
• Demonstration of eligibility for a generic CPA	01		-
• Estimation of emission reduction or net GHG removals by sinks of the generic CPA	-	-	-
o Explanation of methodological choices	01	-	-
o Data and parameters fixed ex ante	01	-	-
o Ex ante calculation of emission reductions or net GHG removals by sinks	-	-	-
• Application of the monitoring methodology and description of the monitoring plan	-	-	-
o Data and parameters to be monitored by the generic CPA	02	01	-
o Description of the monitoring plan for the generic CPA	-	01	-
<b>Total</b>	<b>08</b>	<b>10</b>	<b>0</b>

## Section I. Internal quality control

>>

The final validation report has passed a technical review and quality reviewer before being submitted to the project participant(s) and UNFCCC Executive Board. A technical reviewer is qualified in accordance with CCIPL's qualification scheme for CDM validation and verification performed the technical review.

## Section II. Validation opinion

>>

The validation team assigned by the DOE - Carbon Check (India) Private Ltd., hereafter referred as CCIPL, has been contracted by "Mehr Renewable Energy Company (MRE)", hereafter referred as CME to perform validation of their PoA "Small Hydro Power Programme of Activities in Iran". The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism. The scope of the validation is defined as an independent and objective review of the PoA-DD<sup>/01/</sup>, the project's baseline establishment and monitoring plan and other relevant documents. CDM Validation and Verification Standard<sup>/B01-a/</sup>, Kyoto Protocol requirements, CDM M&P and subsequent decisions and guidance by the COP/MOP and CDM Executive Board are used to review the information provided in PoA-DD<sup>/01/</sup>.

The report is based on the assessment of the PoA-DD<sup>/01/</sup> undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, site visit, and stakeholder interviews, review of the applicable/applied methodology<sup>/B02/</sup> and its underlying formulae and calculations.

The Validation team confirms the contractual relationship<sup>/11/</sup> signed on the 30/09/2015 between the DOE, Carbon Check (India) Private Ltd. and the CME, (Mehr Renewable Energy Company (MRE)). The team assigned to the validation meets the Carbon Check (India) Private Ltd's internal procedures including the UNFCCC requirements for the team composition and competence. The validation team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

### Validation methodology and process

The validation has been performed as described in the VVS version 09<sup>/B01-a/</sup> and constitutes the following steps:

- Publication of the PoA-DD<sup>/01/</sup> on the UNFCCC website (07/10/2015 to 06/11/2015) for GSC;
- Document review of data and information (PoA-DD<sup>/01/</sup> and the relevant documents including the reference to information relating to projects or technologies similar to the proposed project activity and review based on the approved methodology<sup>/B02/</sup> being applied and the appropriateness of formulae and accuracy of calculations).

- Cross-checks between information provided in the PoA-DD<sup>/01/</sup> and information from other sources.
- Follow up actions for cross checking data and on-site assessment (20/12/2015 to 23/12/2015).
- Reference to available documents
- Issuance of Validation Report

#### Validation criteria

The following CDM requirements have been considered:

- Article 12 of the Kyoto Protocol
- Modalities and procedures for CDM (CDM M & P)
- Subsequent decisions by the COP/MOP and CDM Executive Board
- Host country criteria
- Criteria given to provide for consistent project operations, monitoring and reporting.

The host party for this PoA is Iran and this is a unilateral PoA. The party fulfils the participation requirements and have approved and authorized<sup>/06/</sup> the project and the project participants. The DNA from Iran confirms that the project assists in achieving sustainable development.

The PoA correctly applies the baseline and monitoring methodology AMS-I.D “Grid connected renewable electricity generation” (version 18.0)<sup>/B02/</sup>.

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

The validation did not reveal any information that indicates that the PoA can be seen as a diversion of ODA funding<sup>/08/</sup>.

The PoA-DD<sup>/03/</sup> contains monitoring plan for the monitoring of the emission reductions from the PoA. The monitoring arrangement described in the monitoring plan is feasible within the project design and its CCIPL’s opinion that the project participants will be able to implement the monitoring plan.

By installation and operation of small and microscale greenfield hydro power plants (run-of-river type or reservoir type), the PoA will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and provide long-term benefits to the mitigation of climate change.

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

- 10 Corrective Action Requests (CARs);
- 08 Clarification Requests (CLs);
- 0 Forward Action Requests (FARs);

All findings have been closed satisfactorily.

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the CDM PoA “Small Hydro Power Programme of Activities in Iran” in Iran, as described in the PoA-DD (version 10, 23/11/2016)<sup>/03/</sup>, meets all applicable CDM requirements, including those specified in the Project Standard (version 09.0)<sup>/B01-b/</sup>, relevant methodology<sup>/B02/</sup>, tools and guidelines and article 12 of the Kyoto Protocol, paragraph 37 of the CDM modalities and procedures and the subsequent decisions by the COP/MOP and CDM Executive Board.

The baseline and monitoring methodology AMS-I.D (version 18.0)<sup>/B01/</sup> are applicable to the PoA and correctly applied. Carbon Check (India) Private Ltd. therefore requests the registration of the project activity as a CDM PoA with UNFCCC.



## Section III. Validation findings

## PART I. Programme of activities

## SECTION A. General description of the PoA

## A.1. PoA design document

<b>Means of validation</b>	DR, I
<b>Findings</b>	CAR01 and CAR03 were raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	The validation team reviewed the revised PoA-DD <sup>/03/</sup> and confirms that it was completed using the latest CDM-SSC-PoA-DD-FORM <sup>/B03/</sup> available on UNFCCC website and complies with the instructions for completing the CDM-SSC-PoA-DD-FORM <sup>/B03/</sup> and the requirements of VVS (version 09.0) <sup>/B01-a/</sup> .

## A.2. Purpose and general description of the PoA

<b>Means of validation</b>	DR, I
<b>Findings</b>	CAR01, CAR03, CAR04 and CAR05 were raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	<p>The description of the project activity contained in the PoA-DD<sup>/03/</sup> is transparent, detailed and provides a clear overview of the project. Its content was confirmed by means of document review (refer section III.1), interviews with representatives of CME<sup>/i/, /ii/</sup> CPA implementer<sup>/vi/, /vii/, /viii/</sup> and OSV from 20/12/2015 to 23/12/2015 in order to validate the accuracy and completeness of the project description.</p> <p>The main objective of the Programme of Activities (PoA) is installation and operation of small and microscale greenfield hydro power plants (run-of-river type or reservoir type) in Iran to facilitate the growth and further promotion of renewable energy technologies in the country. The PoA will result in reduction in usage of fossil fuels, improvement in air quality and overall social and environmental well-being in the region of application. The Coordinating/Managing Entity implementing the PoA is Mehr Renewable Energy Company (MRE) and the project participants are Mahab Ghodss Consulting Engineering Company and Iran Water and Power Development Company. Upon review of the PoA-DD<sup>/03/</sup>, the LoA<sup>/06/</sup> from the DNA of the host country i.e., Iran for confirming the voluntary participation of the CME. Moreover, the same was also validated through review of a duly signed declaration by CME on voluntary participation in this PoA<sup>/14/</sup>. Therefore, the validation team considers that the PoA is a voluntary action by the CME.</p> <p>The validation team confirms that the PoA-DD<sup>/03/</sup> transparently describes a typical CPA that will be included in the PoA. A typical CPA will involve installation and operation of small/microscale greenfield hydro power plants (run-of-river type or reservoir type) within the geographical boundary of Iran.</p> <p>The PoA-DD<sup>/03/</sup> describes how the PoA contributes to the sustainable development in the host country. The validation team reviewed the LoA<sup>/06/</sup> issued by host party DNA dated 26/09/2015 and confirms that the PoA contributes to sustainable development in the host country of Iran. This is in conformance with the requirements of §32(c) and §83 of PS (version 09.0)<sup>/B01-b/</sup> and §57 and §58 VVS (version 09.0)<sup>/B01-a/</sup>.</p> <p>In accordance with § 267 of VVS (version 09.0)<sup>/B01-a/</sup> the validation team has assessed the geographical boundary of the PoA within which all CPAs to be included in the PoA will be implemented and confirms that geographical boundary of the PoA is within Iran. This was as checked and confirmed by reviewing the PoA-DD<sup>/03/</sup>, interviews with representatives of CME<sup>/i/, /ii/</sup> CPA implementer<sup>/vi/, /vii/, /viii/</sup> and also during the OSV. Review of PoA-DD<sup>/03/</sup> reveals that in establishing the boundary</p>

	<p>of the PoA, the CME has taken into consideration all applicable national and/or sectoral policies and regulations within the host country. This confirms to the requirement of §197 of PS (version 09.0)<sup>/B01-b/</sup> and §267 of VVS (version 09.0)<sup>/B01-a/</sup>.</p> <p>From the site visit interviews and review of PoA-DD<sup>/03/</sup> it is revealed that this programme does not involve any diversion of ODA funding. Thus, the validation team considers no ODA funding from any Annex 1 country has been involved under this programme. This is further confirmed by the declaration<sup>/08/</sup> provided by the CME.</p> <p>As per the PoA-DD<sup>/03/</sup>, the start date of the PoA is 16/02/2015. The start date of the PoA is the date on which a notification of the intention to seek the CDM status by the coordinating/managing entity to the DNA of the host party and the secretariat was sent<sup>/20/</sup>. The same is in accordance with requirements of §222 (a) of PS (version 09.0)<sup>/B01-b/</sup>. Further, the validation team confirms that the justification of the start date meets the requirements of the latest Glossary of CDM Terms (version 08.0)<sup>/B11/</sup>.</p> <p>The length of the PoA is taken as 28 years. Furthermore, in the PoA-DD<sup>/03/</sup> it has been confirmed that no CPA shall be applicable for the inclusion in the PoA if the start date of the CPA is before the start date of PoA. This is in conformity with the requirements contained in §154(a) VVS (version 09.0)<sup>/B01-a/</sup> and §225 of PS (version 09.0)<sup>/B01-b/</sup>.</p>
--	---

#### A.2.1. Generic CPA(s)

Title, identification/reference number and/or version number	Sectoral scope(s)	Selected methodology(ies) and/or standardized baseline(s)
Small Hydro Power Programme of Activities in Iran (version 07) – Generic CPA	1: Energy Industries	AMS-I.D - Grid connected renewable electricity generation (version 18.0) <sup>/B02/</sup>  Tool to calculate the emission factor for an electricity system (Version 5.0) <sup>/B10/</sup>

#### A.2.2. Specific-case CPA(s) submitted with the PoA

Specific-case CPA(s) reference number(s)	Generic CPA title, identification/ reference number and version number	Host Party	Crediting period dates of the specific-case CPA
Absardeh Small Scale Hydro Power	Small Hydro Power Programme of Activities in Iran-Generic CPA (version 07)	Iran (Islamic Republic of)	01/04/2017 to 31/03/2024
Azizabad Small Scale Hydro Power	Small Hydro Power Programme of Activities in Iran-Generic CPA (version 07)	Iran (Islamic Republic of)	01/04/2017 to 31/03/2024
Doplan Small Scale Hydro Power	Small Hydro Power Programme of Activities in Iran-Generic CPA (version 07)	Iran (Islamic Republic of)	01/04/2017 to 31/03/2024
Solehdokal Small Scale Hydro Power	Small Hydro Power Programme of Activities in Iran-Generic CPA (version 07)	Iran (Islamic Republic of)	01/04/2017 to 31/03/2024

## SECTION B. Demonstration of additionality and development of eligibility criteria

### B.1. Demonstration of additionality of the PoA

Means of validation	DR, I
Findings	CL01 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
Conclusion	The Standard “Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” (version

	<p>04.0)<sup>/B06/</sup> is taken into account which refers to the following tools:</p> <ul style="list-style-type: none"> <li>• §9<sup>/B13/</sup>: “Demonstrating additionality of microscale project activities”: For PoAs that consist of one or more microscale projects as CPAs</li> <li>• §10<sup>/B14/</sup>: “Demonstration of additionality of small-scale project activities”: For PoAs that consist of one or more small-scale projects as CPAs</li> </ul> <p>As the PoA envisages inclusion of both small and microscale greenfield hydropower projects (run-of-river type or reservoir type) as CPAs, it has been clearly provided in the PoA-DD<sup>/03/</sup> that demonstration of additionality shall be done at CPA level and will be based on the scale of installed capacity/scale of the hydro power plant as per the following approach:</p> <p><b><u>(a) For CPA ≤ 5MW:</u></b></p> <p>The additionality of CPAs with total installed capacity up to 5 MW can be proved using any one of the following approaches:</p> <ol style="list-style-type: none"> <li>i. Automatic additionality based on approved recommendation of Iran (Islamic republic of) DNA's to UNFCCC<sup>/09/</sup> for additionality of micro-scale renewable energy technologies (if applicable); or</li> <li>ii. Using approach (b) as suggested below.</li> </ol> <p>The choice of approach depends upon CPA implementer and needs to be clearly specified in CPA-DD.</p> <p>Moreover, for CPAs using approach (a) (i) specified above, further assessment of additionality at individual CPA level is not necessary.</p> <p><b><u>(b) For 5MW &lt; CPA ≤ 15MW:</u></b></p> <p>The demonstration of additionality for a particular CPA would be done using the methodological tool “Demonstration of additionality of small-scale project activities (version 10.0)<sup>/B14/</sup>”. Further, for each CPA under this category, Investment barrier shall be demonstrated in accordance with “Tool for the demonstration and assessment of additionality”, (version 07.0.0)<sup>/B07/</sup> in order to show that the implementation and operation of CPA would not be possible without CDM benefits.</p> <p>The approach for demonstrating additionality of the project is justified and is in accordance with the requirements of the methodology, AMS-I.D (version 18.0)<sup>/B02/</sup> and methodological tools “Demonstration of additionality of micro-scale project activities (version 07.0)<sup>/B13/</sup>” and “Demonstration of additionality of small-scale project activities (version 10.0)<sup>/B14/</sup>” and Standard for “Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities” (version 04.0)<sup>/B06/</sup>. This is also in conformance to the requirements of § 49 and § 216 of the PS (version 09.0)<sup>/B01-b/</sup>.</p>
--	---

## B.2. Eligibility criteria for inclusion of CPA(s) in the PoA

No.	Eligibility criteria as set out in the PoA-DD	Means of validation/Findings/Conclusion
1.	The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	The criterion will be checked with GPS Coordinates, maps as per technical reports, proposals and feasibility studies. Several sources (also third party) are utilised to justify the applicability. This is deemed reasonable and sufficient to substantiate the eligibility.
2.	Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Cross-checking of unique GPS Coordinates of CPA or declaration from CPA implementer/owner or through review of available information on UNFCCC website will provide the necessary information for unique identification. The sources are assessed sufficient to avoid double counting in future.

3.	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications	<p>Technical reports, Detailed Project Report, Technology Specification provided by the technology supplier, Purchase order copies, EPC contracts, Power purchase agreement, Project commissioning certificates and feasibility studies will be utilized to show that the CPA will be a small/micro-scale greenfield hydropower (run-of-river type or reservoir type) plants that does not involve any capacity addition, retrofitting or modification of an existing facility. The referenced documents are assessed appropriate to show fulfillment of the criterion.</p> <p>CAR07 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details</p>
4.	Conditions to check the start date of the CPA through documentary evidence;	<p>The start date of the CPA should be on or after the start date of the PoA,</p> <p>For the starting date of the CPA the supply order/ purchase order/ with supplier or documentary evidence for start of construction of project plant or documentary evidence for commitment to implement project will be taken into account in line with the Glossary of CDM terms<sup>/B11/</sup>.</p> <p>The approach is assessed appropriate and the documents considered for the starting date of the CPA are sufficient to justify the start date in line with the CDM Glossary of Terms.</p>
5.	Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	CME provides reference to the applicability justification in section B.2 of Part II of PoA-DD. Reference is correct and CPA has to comply with the requirements. Hence, the validation team assessed the approach as sufficient.
6.	The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as specified in Section 3.1 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 04.0)";	<p>As the PoA envisages inclusion of both small and micro-scale greenfield hydropower projects (run-of-river type or reservoir type) as CPAs, it has been clearly provided in the PoA-DD<sup>/03/</sup> that demonstration of additionality shall be done at CPA level and will be based on the scale of installed capacity/scale of the hydro power plant as per the following approach:</p> <p><b><u>(a) For CPA ≤ 5MW:</u></b></p> <p>The additionality of CPAs with total installed capacity up to 5 MW can be proved using any one of the following approaches:</p> <ol style="list-style-type: none"> <li>Automatic additionality based on approved recommendation of Iran (Islamic republic of) DNA's to UNFCCC<sup>/09/</sup> for additionality of micro-scale renewable energy technologies (if applicable); or</li> <li>Using approach (b) as suggested below.</li> </ol> <p>The choice of approach depends upon CPA implementer and needs to be clearly specified in CPA-DD.</p> <p>Moreover, for CPAs using approach (a) (i) specified above, further assessment of additionality at individual CPA level is not</p>

		<p>necessary.</p> <p><b>(b) For <math>5\text{MW} &lt; \text{CPA} \leq 15\text{MW}</math>:</b> For a hydro CPA with an installed capacity of more than 5MW, up to 15MW, additionality demonstration should be based on the latest guidelines on the demonstration of additionality of small-scale project activities, and investment barrier analysis should be adopted to demonstrate the additionality of the CPA as per the latest guidelines on the assessment of investment analysis<sup>/B08/</sup> and any other relevant guidance from the board pertaining to investment analysis.</p> <p>Validation team assessed that the documents approved FSR or any supporting documents sufficient to justify that the criterion is met.</p>
7.	The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	<p><b>EIA:</b> The Environmental Impact Analysis will be done optionally at the CPA level by the CPA implementer. The Environmental Impact Assessment (EIA) will be conducted in conformity with prevailing legislation in the Host Country, Iran.</p> <p>Based on the environmental regulation of Iran (namely “Human Environmental laws, Regulations, criteria and Standards”, Department of Environment, Govt. of Iran)<sup>/17/</sup>, the Environmental Impact Assessment is not required for run-of-river hydropower plants where the installed capacity is less than 100 MW. However, for reservoir type hydropower plants with a dam height over 15 meters or a reservoir surface area over 400 hectares, the CPA implementer must do EIA and it should be cited in the CPA-DD.</p> <p><b>LSC:</b> For documenting shareholder involvement the CME has proposes the following sources:</p> <ul style="list-style-type: none"> <li>• Questionnaires of stakeholders survey</li> <li>• Invitation notice</li> <li>• Meeting minute and attendees list</li> <li>• Photo/ video evidence of meeting</li> <li>• Summary of comments received and how they have been taken into account.</li> </ul> <p>The validation team assessed these as appropriate.</p>
8.	Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	<p>Criterion will be justified with either a declaration from the CPA implementer affirming that no funding from Annex I parties is used in the CPA or through loan funding documents (if applicable).</p> <p>This is deemed sufficient to ensure that the projects will not be financed with ODA.</p>
9.	Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/ off-grid) and distribution mechanisms (e.g. direct installation);	<p>The PoA envisages installation of grid connected small/micro-scale hydro power plants and power generated from the future CPAs is injected only to the grid system within the host country will be justified through review of either of the following documents:</p> <ul style="list-style-type: none"> <li>• FSR; or</li> <li>• Power purchase agreement; or</li> </ul>

		<ul style="list-style-type: none"> <li>Approval from concerned statutory body</li> </ul> <p>This is deemed sufficient to ensure the fulfillment of this eligibility criterion.</p>
10.	Where applicable, the conditions related to sampling requirements for the PoA in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”	N/A
11.	Where applicable, the conditions that ensure that every CPA (in aggregate if it comprises of independent sub units) meets the small-scale or micro-scale threshold and remains within those thresholds throughout the crediting period of the CPA;	<p>Criterion will be justified with a declaration from the CPA implementer affirming that CPA meets the small-scale (installed capacity over 5MW but up to 15 MW) or micro-scale (installed capacity up to 5MW) threshold criteria and remains within those thresholds throughout the crediting period of the CPA.</p> <p>This is deemed sufficient to ensure the fulfillment of this eligibility criterion.</p>
12.	Where applicable, the requirements for the debundling check, in case the CPA belongs to small-scale or micro-scale project categories.	<p>The CME will analyze this criterion as per the Methodological tool “Assessment of de-bundling for small-scale project activities (Version 04.0)”<sup>B09/</sup> and review of projects shown on the UNFCCC website or declaration obtained from the respective CPA implementer.</p> <p>This is deemed sufficient to ensure the fulfillment of this eligibility criterion.</p>

### SECTION C. Management system

Means of validation	DR, I
Findings	No findings were raised.
Conclusion	<p>The validation team reviewed the PoA-DD<sup>/03/</sup> and CME Management System Manual<sup>/12/,/15/,/16/</sup> and confirms that clear and transparent information about responsibilities, records handling, training, technical review procedures, record keeping, documentation control and measures for continual improvements. The same has been confirmed during on-site interviews.</p> <p>The validation team concludes that the operational and management plan described in the PoA-DD<sup>/03/</sup> is complete and the information provided is in conformance with the requirements of § 21 of the PoA standard<sup>/B06/</sup>, § 210 of the PS (version 09.0)<sup>/B01-b/</sup> and § 271 of the VVS (version 09.0)<sup>/B01-a/</sup>. This is deemed appropriate by the validation team.</p> <p>Due to non-applicability, no sampling plan has been provided in the PoA-DD<sup>/03/</sup>. This is in conformance with the requirements of the applied methodology<sup>/B02/</sup> and deemed appropriate to the validation team.</p>

### SECTION D. Duration of the PoA

Means of validation	DR
Findings	No findings were raised.
Conclusion	<p>The validation team reviewed the PoA-DD<sup>/03/</sup> and found that the duration of the PoA is 28 years. This is in conformance with the requirements of § 223 CDM PS (version 09.0)<sup>/B01-b/</sup>, § 280 of VVS (version 09.0)<sup>/B01-a/</sup> and the Glossary of CDM terms (version 08.0)<sup>/B11/</sup>.</p>

### SECTION E. Environmental impacts

Means of validation	DR, I
Findings	No findings were raised.

<b>Conclusion</b>	<p>The validation team reviewed the PoA-DD<sup>/03/</sup> and confirms that environmental impact analysis will be done optionally at CPA level. This is in conformance with the requirements of § 231 of PS (version 09.0)<sup>/B01-b/</sup> and § 282 of VVS (version 09.0)<sup>/B01-a/</sup>.</p> <p>The Environmental Impact Assessment will be done in conformity with prevailing legislation in the Host Country, Iran.</p> <p>Based on the environmental regulation of Iran (namely “Human Environmental laws, Regulations, criteria and Standards”, Department of Environment, Govt. of Iran)<sup>/17/</sup>, the environmental impact assessment is not required for run-of-river hydropower plants where the installed capacity is less than 100 MW. However, for reservoir type hydropower plants with a dam height over 15 meters or a reservoir surface area over 400 hectares, the CPA implementer must do EIA and it should be cited in the CPA-DD.</p> <p>The validation team has provided its assessment in the appropriate section of the specific case CPA-DD validation report.</p>
-------------------	--

## SECTION F. Local stakeholder consultation

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>The validation team reviewed the PoA-DD<sup>/03/</sup> and confirms that Local stakeholder consultation will be done at CPA level. This is in conformance with the requirements of § 233 of PS (version 09.0)<sup>/B01-b/</sup> and § 284 of VVS (version 09.0)<sup>/B01-a/</sup>.</p> <p>The validation team has provided its assessment in the appropriate section of the specific case CPA-DD validation report.</p>

## SECTION G. Approval and authorization

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>In accordance with §81 of PS (version 09.0)<sup>/B01-b/</sup>, the coordinating/managing has obtained Letter of Approval<sup>/06/</sup> from the DNA of host Party (Iran) dated 26/09/2015 which is involved in the proposed CDM PoA at the time of request for registration of the PoA. This is in conformance to the requirement of §81 and §82 of PS (version 09.0)<sup>/B01-b/</sup>. The CME is Mehr Renewable Energy Company; the project is unilateral involving country of Iran (non-Annex-I host party) for conducting operations in the proposed Programme of Activities.</p> <p>Iran is the Host party and fulfils the requirements to participate in the CDM, having ratified the Kyoto Protocol on 22/08/2005 and establishing a DNA as the “Department of Environment (Iran)” as per the UNFCCC website<sup>/B04/</sup>.</p> <p>The Validation Team can confirm that issued LoA<sup>/06/</sup> from host party refers to the precise proposed PoA title as in the PoA-DD<sup>/03/</sup>. The Validation Team can also confirm that the project participants are listed in tabular form in section A.4 of the PoA-DD<sup>/03/</sup> and this information is consistent with the contact details provided in Appendix -1 of the PoA-DD<sup>/03/</sup> and LoA<sup>/06/</sup> issued. The Letter of Approval was also found to be unconditional with respect to §44 (a) to (d) of VVS (version 09.0)<sup>/B01-a/</sup>.</p>

## SECTION H. Global stakeholder consultation

<b>Means of validation</b>	DR
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>For Global stakeholder consultation of the PoA, the PoA-DD<sup>/01/</sup> along with the four specific case CPA-DDs were published on UNFCCC web site<sup>/B04/</sup> from 07/10/2015 to 06/11/2015 and no comments were received. This is in conformance to the requirements of § 20 of PCP (version 09.0)<sup>/B01-c/</sup>.</p>

## SECTION I. Contribution to sustainable development

<b>Means of validation</b>	DR
<b>Findings</b>	No findings were raised.

<b>Conclusion</b>	<p>Various sustainable development indicators are identified, namely the reduction of GHG and pollutants like SO<sub>x</sub> and NO<sub>x</sub> through substitution of electricity provided by fossil fuel fired power plants. Besides these the projects will provide employment opportunities.</p> <p>This is common for such kind of technologies and it is further confirmed by the LOA<sup>/06/</sup>, which states that implementation of PoA will contribute to sustainable development of Iran.</p> <p>The validation took cognizance of 32(c) of PS (version 09.0)<sup>/B01-b/</sup> and § 57 of VVS (version 09.0)<sup>/B01-a/</sup>.</p>
-------------------	--

## SECTION J. Modalities of communication

<b>Means of validation</b>	DR
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>The validation team confirms that for the MoC<sup>/07/</sup> PP has utilized the latest applicable template. The MoC<sup>/07/</sup> has been received from the CME with whom the DOE has signed contract for the validation service of this proposed project. The personal identity, specimen signatures and employment status of personal who has signed the MoC<sup>/07/</sup> was confirmed through document review and this confirms to the requirements of 86 of PS (version 09.0)<sup>/B01-b/</sup> and § 61 (c) of VVS (version 09.0)<sup>/B01-a/</sup>.</p>

## PART II. Generic component project activity(ies)

### SECTION A. General description of generic CPA

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>After review of part II of PoA-DD<sup>/03/</sup>, the validation team confirms that a typical CPA will involve installation and operation of a grid connected greenfield small/micro-scale hydro power plants (run-of-river type or reservoir type) in Iran (host party). The project will replace the fossil fuel based power generation prevalent in the host country. Thus, each CPA will result in reduction in usage of fossil fuels, improvement in air quality and overall social and environmental well-being in the region.</p> <p>This was further confirmed during the on site visit by conducting physical inspections and interviews with representatives of CME<sup>/i/, /ii/</sup> CPA implementer<sup>/vii/, /viii/</sup>.</p> <p>The description provided for a generic CPA in part II of PoA-DD<sup>/03/</sup> is in conformance to the requirements of § 71 of VVS (version 09.0)<sup>/B01-a/</sup>.</p>

### SECTION B. Application of a baseline and monitoring methodology and standardized baseline

#### B.1. Applicability of selected methodology(ies) and/or standardized baseline

<b>Means of validation</b>	DR, I
<b>Findings</b>	CAR 06, CL 02 and CL 03 were raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	<p>The methodology applied is AMS-I.D <i>Grid connected renewable electricity generation</i>, (Version 18.0)<sup>/B02/</sup>. It is applicable to greenfield grid connected renewable energy projects. Since the generic CPA is implementing a grid connected greenfield small/micro-scale hydro power plants (run-of-river type or reservoir type) the methodology is correctly chosen. By means of interviews with representatives of CME<sup>/i/, /ii/</sup> and CPA implementer<sup>/vii/, /viii/</sup> and document check this could be confirmed.</p>



	The applied methodology is correctly quoted and is identical to the version available on the UNFCCC Website <sup>/B04/</sup> . The applied version of the baseline and monitoring methodology <sup>/B02/</sup> is valid at the time of submission for stakeholder consultation. All applicability criteria in the methodology, the applied tools or any other methodology component referred to therein are fulfilled.
--	--

**B.1.1. Deviation from methodology**

<b>Means of validation</b>	DR
<b>Findings</b>	NA
<b>Conclusion</b>	NA

**B.1.2. Clarification on applicability of methodology, tool and/or standardized baseline**

<b>Means of validation</b>	DR, I
<b>Findings</b>	-
<b>Conclusion</b>	No clarification on applicability of methodology and or tools to the proposed PoA has been issued.

**B.2. Sources and GHGs**

<b>Means of validation</b>	DR, I
<b>Findings</b>	CAR08 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	<p>As per the applied methodology AMS-I.D Grid connected renewable electricity generation (version 18.0)<sup>/B02/</sup>, the boundary of a typical CPA under this PoA confines to 'the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to. The information has been also correctly given in section A.5 of Part I of PoA-DD<sup>/03/</sup>.</p> <p>The methodology indicates CO<sub>2</sub> as the only GHG from baseline activity sources to be included in the boundary and in cases where project activity involves hydropower plants with reservoirs; CH<sub>4</sub> emissions (due to decomposition of plant matter in reservoirs) need to be considered as project emissions (§39(b) of the applied methodology<sup>/B02/</sup>).</p> <p>The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.</p> <p>Validation team also confirms that the project boundary for the potential/future CPAs is based on the applied methodology<sup>/B02/</sup> and the sources and gases within the boundary have been considered appropriately for baseline scenario (CO<sub>2</sub>), the source being conventional usage of fossil fuel based sources for power generation and for project scenario (CH<sub>4</sub>), in cases where project activity involves hydropower plants with reservoirs. This is in conformance with §91 of VVS (version 09.0)<sup>/B01-a/</sup>.</p>

**B.3. Description of baseline scenario**

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>As prescribed by the methodology AMS-I.D (version 18)<sup>/B02/</sup> the baseline scenario for greenfield renewable energy project is '<i>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</i>'. The validation team confirms that the above states description of the baseline scenario is applicable to the PoA.</p> <p>The baseline defined in the PoA-DD<sup>/03/</sup> is that the electricity from the proposed project activity is substituting electricity currently provided by power plants connected to nation grid of Iran. Hence, the baseline is the equivalent amount of electricity supplied to the grid, which would otherwise be provided by power plants serving the grid.</p>

Thus, the above baseline scenario is considered to be accurate and in conformance with the requirements of the applied methodology<sup>/B02/</sup> and 97 of VVS (version 09.0)<sup>/B01-a/</sup>.

#### B.4. Demonstration of eligibility for a generic CPA

No.	Eligibility criteria for the generic CPA	Means for assessment of inclusion of CPA	Means of validation/Findings/Conclusion
1.	The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	The criterion will be checked with GPS Coordinates, maps as per technical reports, proposals and feasibility studies. Several sources (also third party) are utilised to justify the applicability. This is deemed reasonable and sufficient to substantiate the eligibility.	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(a) of the PoA standard <sup>/B06/</sup> .  The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.
2.	Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)	Cross-checking of unique GPS Coordinates of CPA or declaration from CPA implementer/owner or through review of available information on UNFCCC website will provide the necessary information for unique identification. The sources are assessed sufficient to avoid double counting in future.	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(b) of the PoA standard <sup>/B06/</sup> .  The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.
3.	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications	Technical reports, Detailed Project Report, Technology Specification provided by the technology supplier, Purchase order copies, EPC contracts, Power purchase agreement, Project commissioning certificates and feasibility studies will be utilized to show that the CPA will be a small/micro-scale greenfield hydropower (run-of-river type or reservoir type) plants that does not involve any capacity addition, retrofitting or modification of an existing facility. The referenced documents are assessed appropriate to show fulfillment of the criterion.	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(c) of the PoA standard <sup>/B06/</sup> and the applied methodology AMS-I.D (version 18.0) <sup>/B02/</sup> .  CAR07 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
4.	Conditions to check the start date of the CPA through documentary evidence;	The start date of the CPA should be on or after the start date of PoA,  For the starting date of the CPA the supply order/ purchase order/ with supplier or documentary evidence for start of construction of project plant or documentary evidence for commitment to implement	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(d) of the PoA standard <sup>/B06/</sup> .  The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of

No.	Eligibility criteria for the generic CPA	Means for assessment of inclusion of CPA	Means of validation/Findings/Conclusion
		<p>project will be taken into account.</p> <p>The approach is assessed appropriate and the documents considered for the starting date of the CPA are sufficient to justify the start date in line with the CDM Glossary of Terms.</p>	CPAs in the PoA.
5.	Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	<p>Each CPA shall meet the applicability criteria of the baseline and monitoring methodology AMS-I.D (version 18.0). There is no possibility of combination of other methodologies in the POA.</p> <p>For a hydropower CPA with reservoir, it must fulfill one of the following conditions:</p> <ul style="list-style-type: none"> <li>• The project activity is implemented in an existing reservoir with no change in the volume of the reservoir;</li> <li>• The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section of the applied methodology, is greater than 4 W/m<sup>2</sup>;</li> <li>• The project activity is implementing new reservoir and the power density of the power plant, as per definitions given in the project emissions section of the applied methodology, is greater than 4 W/m<sup>2</sup>.</li> </ul>	<p>Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(e) of the PoA standard<sup>/B06/</sup> and relevant applicability conditions of the applied methodology AMS-I.D (version 18.0)<sup>/B02/</sup>.</p> <p>The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.</p>
6.	The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as specified in Section 3.1 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 04.0)";	<p>Any CPA must comply with one of the following additionality tests explained in the PoA-DD:</p> <p>(a) <b>For CPA ≤ 5MW:</b></p> <p>The additionality of CPAs with total installed capacity up to 5 MW can be proved using any one of the following approaches:</p> <ul style="list-style-type: none"> <li>i. Automatic additionality based on approved recommendation of Iran (Islamic republic of) DNA's</li> </ul>	<p>Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(f) of the PoA standard<sup>/B06/</sup> and relevant requirements of the additionality tools.</p> <p>The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.</p>

No.	Eligibility criteria for the generic CPA	Means for assessment of inclusion of CPA	Means of validation/Findings/Conclusion
		<p>to UNFCCC<sup>1</sup> for additionality of micro-scale renewable energy technologies (if applicable); or</p> <p>ii. Using approach (b) as suggested below.</p> <p>The choice of approach depends upon CPA implementer and needs to be clearly specified in CPA-DD.</p> <p>Moreover, for CPAs using approach (a) (i) specified above, further assessment of additionality at individual CPA level is not necessary.</p> <p><b>(b) For 5MW &lt; CPA ≤ 15MW:</b></p> <p>For a hydro CPA with an installed capacity of more than 5MW, up to 15MW, additionality demonstration should be based on the latest guidelines on the demonstration of additionality of small-scale project activities, and investment barrier analysis should be adopted to demonstrate the additionality of the CPA as per the latest guidelines on the assessment of investment analysis and any other relevant guidance from the board pertaining to investment analysis.</p> <p>CPA implementer will have to provide:</p> <ul style="list-style-type: none"> <li>• The approved FSR</li> <li>• Any supporting documents.</li> </ul>	<p>CL 04 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.</p>
7.	<p>The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;</p>	<p><b>EIA:</b> The Environmental Impact Analysis will be done optionally at the CPA level by the CPA implementer. The Environmental Impact Assessment (EIA) will be conducted in conformity with prevailing legislation in the Host Country, Iran.</p> <p>Based on the environmental regulation of Iran (namely “Human Environmental laws, Regulations, criteria and Standards”, Department of</p>	<p>Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(g) of the PoA standard<sup>/B06/</sup>.</p> <p>The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.</p>

<sup>1</sup> <https://cdm.unfccc.int/DNA/submissions/index.html>

No.	Eligibility criteria for the generic CPA	Means for assessment of inclusion of CPA	Means of validation/Findings/Conclusion
		<p>Environment, Govt. of Iran)<sup>/XX/</sup>, the environmental impact assessment is not required for run-of-river hydropower plants where the installed capacity is less than 100 MW. However, for reservoir type hydropower plants with a dam height over 15 meters or a reservoir surface area over 400 hectares, the CPA implementer must do EIA and it should be cited in the CPA-DD.</p> <p><b>LSC:</b> For documenting shareholder involvement the CME has proposes the following sources:</p> <ul style="list-style-type: none"> <li>• Questionnaires of stakeholders survey</li> <li>• Invitation notice</li> <li>• Meeting minute and attendees list</li> <li>• Photo/ video evidence of meeting</li> <li>• Summary of comments received and how they have been taken into account.</li> </ul>	
8.	Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Criterion will be justified with either a declaration from the CPA implementer affirming that no funding from Annex I parties is used in the CPA or through loan funding documents (if applicable).	<p>Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(h) of the PoA standard<sup>/B06/</sup>.</p> <p>The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.</p>
9.	Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/ off-grid) and distribution mechanisms (e.g. direct installation);	<p>The PoA envisages installation of grid connected small/micro-scale hydro power plants and power generated from the future CPAs is injected only to the grid system within the host country will be justified through review of either of the following documents:</p> <ul style="list-style-type: none"> <li>• FSR; or</li> <li>• Power purchase agreement; or</li> <li>• Approval from concerned statutory body</li> </ul>	<p>Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(i) of the PoA standard<sup>/B06/</sup>.</p> <p>The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.</p>
10.	Where applicable, the conditions related to sampling requirements for the PoA in accordance with the "Standard for sampling	N/A	N/A

No.	Eligibility criteria for the generic CPA	Means for assessment of inclusion of CPA	Means of validation/Findings/Conclusion
	and surveys for CDM project activities and programme of activities”;		
11	Where applicable, the conditions that ensure that every CPA (in aggregate if it comprises of independent sub units) meets the small-scale or micro-scale threshold and remains within those thresholds throughout the crediting period of the CPA;	Criterion will be justified with a declaration from the CPA implementer affirming that CPA meets the small-scale (installed capacity over 5MW but up to 15 MW) or micro-scale (installed capacity up to 5MW) threshold criteria and remains within those thresholds throughout the crediting period of the CPA.	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(k) of the PoA standard <sup>/B06/</sup> .  The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.
12.	Where applicable, the requirements for the debundling check, in case the CPA belongs to small-scale or micro-scale project categories.	The CME will analyze this criterion as per the Methodological tool “Assessment of de-bundling for small-scale project activities (Version 04.0) and review of projects shown on the UNFCCC website or declaration obtained from the respective CPA implementer.	Based on the document review the validation team confirms that the eligibility criterion is appropriate and meets the requirements of § 18(l) of the PoA standard <sup>/B06/</sup> and relevant requirements of the methodological tool “Assessment of debundling of small scale activities” (version 04.0) <sup>/B09/</sup> .  The validation team concludes that the eligibility criterion was found to be verifiable and further is sufficiently objective and comprehensive to permit the assessment of inclusion of CPAs in the PoA.

## B.5. Estimation of emission reductions or net GHG removals by sinks of the generic CPA

### B.5.1. Explanation of methodological choices

<b>Means of validation</b>	DR, I
<b>Findings</b>	CL07 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	<p>The project activity is a Greenfield renewable energy project. The baseline emissions according to applied methodology AMS-I.D (version 18.0)<sup>/B02/</sup> are calculated as:</p> $BE_y = EG_{PJ,y} * EF_{grid,y}$ <p>Where:</p> <p><math>EG_{PJ,y}</math> = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)</p> <p><math>EF_{grid,y}</math> = Combined margin CO<sub>2</sub> emission factor of the grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (t CO<sub>2</sub>/MWh)</p> <p><math>EF_{grid,y} = EF_{grid,CM,y}</math>, i.e. the term <math>EF_{grid,y}</math> is equal to <math>EF_{grid,CM,y}</math> since the emission factor is calculated in line with the combined margin approach.</p> <p>The grid emission factor is fixed ex-ante for the crediting period at PoA-level.</p> <p>The grid emission factor has been calculated considering the latest “Tool to</p>

calculate the emission factor for an electricity system" (Version 05.0)<sup>/B10/</sup>. The combined margin (CM) emission factor is calculated based on the weights of the operating margin (OM) and the build margin (BM). The weights chosen are 50/50. The step-wise approach as per the tool has been applied. In the first step the electricity grid of Iran has been chosen. Further only grid-connected power plants are taken into account. The OM has been calculated with the Simple OM approach as defined in section 6.4.1 of the above-mentioned tool<sup>/B10/</sup>. All power plants serving the grid have been taken into account except low-cost must run power plants. The following formula is applied:

$$EF_{grid,OM,year,y} = \frac{\sum_m EG_{m,y} * EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

Where:

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

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

To calculate the parameter  $EF_{EL,m,y}$  Option A1 of Simple OM approach has been chosen since data on net electricity generation and fuel consumption of all power plants is available. The following formula is applied:

$$EF_{EL,m,y} = \frac{\sum_i FC_{i,m,y} * NCV_{i,y} * EF_{CO2,i,y}}{EG_{m,y}}$$

Where:

$FC_{i,m,y}$  = Amount of fossil fuel type  $i$  consumed by power unit  $m$  in year  $y$  (Mass or volume unit)

$NCV_{i,y}$  = Net calorific value (energy content) of fossil fuel type  $i$  in year  $y$  (GJ/mass or volume unit)

$EF_{CO2,i,y}$  = CO<sub>2</sub> emission factor of fossil fuel type  $i$  in year  $y$  (tCO<sub>2</sub>/GJ)

However, for a single power plant (Mes Sarcheshmeh-steam), option A2 is used for calculation of  $EF_{EL,m,y}$  in year 2011-2012 as only data on electricity generation and the fuel type used was available for this power plant. The same is in accordance with §47 (b) of "Tool to calculate the emission factor for an electricity system" (Version 05.0)<sup>/B10/</sup>. The following formula is applied:

$$EF_{EL,m,y} = \frac{EF_{CO2,m,y} * 3.6}{\eta_{m,y}}$$

The OM has been calculated ex ante and remains fixed throughout the crediting period. Same as the BM which is also fixed during the crediting period. The BM has been calculated under consideration of the net electricity generation of the five power plants that start electricity supply to the grid most recently. This set of power units comprises the larger amount of electricity. These power plants started electricity supply within the period 10 years ago. The following formula was applied:

$$EF_{grid,OM,y} = \frac{\sum_m EG_{m,y} * EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

EG is the net electricity generation of power units serving the grid and EF is the respective emission factor of the fuels used. Finally the weighted average CM has been calculated applying the following formula:

$$EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$$

The equations and choices provided in the applied methodology<sup>/B02/</sup> are correctly quoted in the PoA-DD<sup>/01/</sup>. According to applied methodology AMS-I.D (version 18.0)<sup>/B02/</sup>, the emission reductions (ER<sub>y</sub>) of the CPAs of the PoA are calculated as:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

$ER_y$  = Emission reductions in year y (tCO<sub>2</sub>)

$BE_y$  = Baseline Emissions in year y (tCO<sub>2</sub>)

$PE_y$  = Project Emissions in year y (tCO<sub>2</sub>)

$LE_y$  = Leakage Emissions in year y (tCO<sub>2</sub>)

### Project Emissions

The project emissions associated with the PoA are calculated as:

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

Where:

$PE_{FF,y}$  = Project emissions from fossil fuel consumption in year y (tCO<sub>2</sub>e/y)

$PE_{GP,y}$  = Project emission from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO<sub>2</sub>e/y)

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

As the PoA involves installation and operation of hydropower plants there would be no project emissions from fossil fuel consumption and release of non-condensable gases.

Thus, in this case

$$PE_{FF,y} = PE_{GP,y} = 0$$

Project emissions will only be attributable to this PoA in cases where the hydropower plants involve usage of a reservoir for power generation. In this case, the project emissions will be given as per latest version of the large scale methodology ACM0002<sup>B12/</sup>:

- a) For project activity with power density greater than 4 W/m<sup>2</sup> and equal to or less than 10 W/m<sup>2</sup>, the project emissions are given as:

$$PE_{HP,y} = (EF_{Res} \times TEG_y) / 1000$$

Where:

$EF_{Res}$  = Default emission factor for emissions from reservoirs of hydro power plants in year y (kgCO<sub>2</sub>e/MWh)

$TEG_y$  = Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh)

- b) For project activity with power density greater than 10 W/m<sup>2</sup>, the project emissions are given as

$$PE_{HP,y} = 0$$

The power density (PD) is calculated as:

$$PD = (Cap_{PJ} - Cap_{BL}) / (A_{PJ} - A_{BL})$$

Where:

$Cap_{PJ}$  = Installed capacity of the hydro power plant after the implementation of the



	<p>project activity (W)</p> <p><math>Cap_{BL}</math> = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new reservoirs, this value is zero</p> <p><math>A_{PJ}</math> = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (<math>m^2</math>)</p> <p><math>A_{BL}</math> = Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (<math>m^2</math>). For new reservoirs, this value is zero</p> <p><b>Leakage emissions</b></p> <p>There are no leakage emissions associated with the PoA considering the fact that it involves installation and operation of hydropower plants and no biomass resource is involved in power generation. This is in conformance with the requirements of §42 of the applied methodology AMS-I.D (version 18.0)<sup>/B02/</sup>.</p> <p>The approach as provided in section B.6.1. and B.6.3. to calculate the emission reductions has been verified by means of checking the methodology<sup>/B02/</sup> and the tool to calculate the grid emission factor<sup>/B10/</sup>. Input data is derived from figures provided by the National Statistics of Iran Power Industry (2011-2014)<sup>/18/</sup> published by TAVANIR (Ministry of Energy, Govt. of Iran). The whole calculation has been checked by the validation team and could be confirmed.</p>
--	---

### B.5.2. Data and parameters fixed ex ante

Means of validation	DR, I			
Findings	CL08 and CL09 were raised in this regard and subsequently resolved. Refer to Appendix-4 for details.			
Conclusion	Ex-ante parameters provided under Part II, section B.6.2 of the PoA-DD <sup>/03/</sup> are found deemed appropriate and in line with the applied methodology AMS-I.D (version 18.0) <sup>/B02/</sup> .			
	The parameters fixed ex-ante as per the applied methodology are summarised in the table below:			
	Parameter	Data unit	Description	Value
	FC <sub>i,m,y</sub>	1000 m <sup>3</sup> for NG and 1000 liter for Diesel Oil and Heavy Oil	Amount of fossil fuel type 'i' consumed by power plant / unit 'm' in year 'y'	Multiple values have been provided in GEF calculation spread-sheet <sup>/05/</sup> .
	NCV <sub>i,y</sub>	GJ/ m <sup>3</sup> or GJ/ liter	Net calorific value (energy content) of fossil fuel type 'i' in year 'y'	Multiple values have been provided in GEF calculation spread-sheet <sup>/05/</sup> .
	EF <sub>CO2 ,i,y</sub> and EF <sub>CO2,m,i,y</sub>	tCO <sub>2</sub> / GJ	CO <sub>2</sub> emission factor of fossil fuel type 'i' used in power unit 'm' in year 'y'	Multiple values have been provided in GEF calculation spread-sheet <sup>/05/</sup> .
	EG <sub>m,y</sub>	MWh	Net electricity generated by power plant/unit 'm' in year 'y'	Multiple values have been provided in GEF calculation spread-sheet <sup>/05/</sup> .
	η <sub>m,y</sub>	%	Average net energy conversion efficiency of power unit 'm' in year 'y'	Multiple values have been provided in GEF calculation spread-sheet <sup>/05/</sup> .
	EF <sub>grid,y</sub>	tCO <sub>2</sub> /MWh	Combined margin CO <sub>2</sub> emission factor of the grid	0.6909

			connected power generation in year y	
	<p>The values of the above parameters have been derived from figures provided by the National Statistics of Iran Power Industry (2011-2014)<sup>/18/</sup> published by TAVANIR (Ministry of Energy, Govt. of Iran) and have been found to be consistent with the same and thus deemed appropriate by the validation team. This is also consistent with the requirements of the applied methodology<sup>/B02/</sup> and the tool to calculate the grid emission factor<sup>/05/</sup>.</p>			

### B.5.3. Ex ante calculation of emission reductions or net GHG removals by sinks

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>The equations and choices provided in the applied methodology<sup>/B02/</sup> are correctly quoted in the part II of PoA-DD<sup>/03/</sup>. The emission reductions due to the future CPAs will be calculated using the formulae mentioned in the applied methodology AMS-I.D (Version 18.0)<sup>/B02/</sup> and the referenced tool<sup>/B10/</sup>.</p> <p>The validation team conducted assessment of baseline emissions and emission reductions. The parameters and equations presented in the part II of PoA-DD<sup>/03/</sup> have been compared with the information stipulated in the methodology<sup>/B02/</sup>.</p> <p>For further details on formulas applied for calculation of Baseline and project emissions and Emission reduction calculations refer to assessment provided in section B.5.1 of this report.</p>

### B.6. Application of the monitoring methodology and description of the monitoring plan

<b>Means of validation</b>	DR, I
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	The validation team confirms that CME has not chosen to delay the submission for the monitoring plan for the PoA. In addition the validation team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

#### B.6.1. Data and parameters to be monitored by the generic CPA

Means of validation	DR, I			
Findings	CAR09, CL05 and CL06 have been raised in this regard and subsequently resolved. Refer to Appendix-4 for details.			
Conclusion	The parameters to be monitored ex-post are:			
	Parameter	Data unit	Description	Frequency <sup>/01/</sup>
	EG <sub>PJ,y</sub>	MWh/y	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y	Continuous monitoring, hourly measurement and at least monthly recording
	A <sub>PJ</sub>	m <sup>2</sup>	Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full	Annually
	TEG <sub>y</sub>	MWh/yr	Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y	Continuous measurement and at least monthly recording
The validation team reviewed the part II of PoA-DD <sup>/03/</sup> and confirms that the parameters determined ex-post (to be monitored) have been presented correctly according to requirements and are considered in accordance with the applied methodology <sup>/B02/</sup> . This is in conformance with the requirements of §142(b) of VVS (version 09.0) <sup>/B01-a/</sup> .				

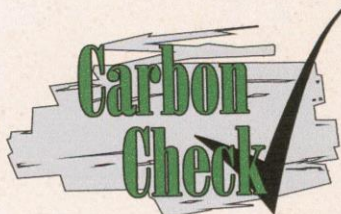
**B.6.2. Description of the monitoring plan for the generic CPA**

<b>Means of validation</b>	DR, I
<b>Findings</b>	CAR10 was raised in this regard and subsequently resolved. Refer to Appendix-4 for details.
<b>Conclusion</b>	<p>The monitoring plan as provided in the generic CPA includes information on objective, the organization, archiving, QA/QC. The arrangements described in the generic CPA are common practice for such kind of power plants. Besides, experienced companies will operate the installed hydropower plants under this PoA. The meter installed will be subject to regular calibration as per the national industrial standard's requirements. The measured data will be available in electronic form. It is recorded and archived using computer software; the records will serve as back-up purpose and archived at Project site. Moreover the data will be archived two year after the crediting period.</p> <p>The monitoring plan content has been checked in the generic CPA and compared against the requirements of the methodology<sup>/B02/</sup>.</p> <p>The generic CPA content has been checked and compared with methodology requirements. Interview conducted could confirm that electricity meter(s) owned by the CPA implementer will be installed at the point of feeding to the grid. The following parameters will be measured:</p> <ul style="list-style-type: none"> <li>(a) The quantity of electricity supplied by the project plant/unit to the grid (Export)</li> <li>(b) The quantity of electricity delivered to the project plant/unit from the grid (Import).</li> </ul> <p>During site visit it could be confirmed by means of interview that QA/QC measure will be implemented especially in line with the grid operators requirements.</p> <p>The monitoring plan is assessed appropriate for the technology type installed. All means of implementing the monitoring plan are in line with the methodology. The validation team has no doubts that the monitoring arrangements as described in the part II of PoA-DD can be implemented properly. This is in conformance with the requirements of §146 and §148 of VVS (version 09.0)<sup>/B01a/</sup>.</p>

## Appendix 1. Abbreviations

Abbreviations	Full texts
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
DOE	Designated Operational Entities
DR	Desk Review
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
FAR	Forward Action Request
FSR	Feasibility Study Report
FVR	Final validation Report
GSC	Global Stakeholder Consultation
GHG	Greenhouse gas(es)
I	Interview
IPCC	Intergovernmental Panel on Climate Change
MWh	Mega Watt Hour
OSV	On Site Visit
QC/QA	Quality control/Quality assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

## Appendix 2. Competence of team member and technical reviewer(s)



**Carbon Check (India) Private Ltd.**

**Amit Anand**

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

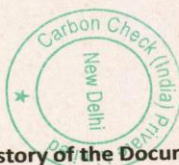
Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input type="checkbox"/>	TA 8.1	<input checked="" type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input checked="" type="checkbox"/>
TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

Mr. Vikash Kumar Singh  
Compliance Officer

Date of Approval  
24/12/2015



Valid Till  
23/12/2016

### Revision History of the Document

26/12/2014  
20/01/2016

Initial Adoption  
Revision to reflect updated office address

<sup>1</sup> India, South Africa

### CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: G 49 & 50, 3<sup>rd</sup> Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 / +91 120 2520027 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in)

e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)





## Carbon Check (India) Private Ltd.

### Sanjay Agarwalla

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input checked="" type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input checked="" type="checkbox"/>	TA 9.2	<input checked="" type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input checked="" type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input checked="" type="checkbox"/>	TA 5.1	<input checked="" type="checkbox"/>	TA 9.1	<input checked="" type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

Mr. Vikash Kumar Singh  
Compliance Officer

Mr. Amit Anand  
CEO



Date of Approval  
24/12/2015

Valid Till  
23/12/2016

#### Revision History of the Document

26/12/2014  
20/01/2016

Initial Adoption  
Revision to reflect updated office address

<sup>1</sup> India

#### CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

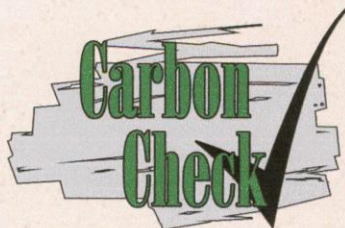
Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: G 49 & 50, 3<sup>rd</sup> Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 / +91 120 2520027 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in)

e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)





## Carbon Check (India) Private Ltd.

### Kranav Sharma

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	<input type="checkbox"/>	Team Leader	<input type="checkbox"/>	Technical reviewer	<input type="checkbox"/>
Verifier	<input type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input type="checkbox"/>		

Mr. Vikash Kumar Singh  
Compliance Officer

Mr. Amit Anand  
CEO



Date of Approval  
24/12/2015

Valid Till  
23/12/2016

#### Revision History of the Document

26/12/2014  
20/01/2016

Initial Adoption  
Revision to reflect updated office address

<sup>1</sup> South Africa

#### CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: G 49 & 50, 3<sup>rd</sup> Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 / +91 120 2520027 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in)

e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)





## Carbon Check (India) Private Ltd.

### Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert <sup>1</sup>	<input checked="" type="checkbox"/>

In the following Technical Areas:

TA 1.1	<input type="checkbox"/>	TA 3.1	<input checked="" type="checkbox"/>	TA 5.2	<input type="checkbox"/>	TA 9.2	<input type="checkbox"/>	TA 13.2	<input checked="" type="checkbox"/>
TA 1.2	<input checked="" type="checkbox"/>	TA 4.1	<input checked="" type="checkbox"/>	TA 8.1	<input type="checkbox"/>	TA 10.1	<input type="checkbox"/>	TA 14.1	<input type="checkbox"/>
TA 2.1	<input type="checkbox"/>	TA 5.1	<input type="checkbox"/>	TA 9.1	<input type="checkbox"/>	TA 13.1	<input checked="" type="checkbox"/>		

Mr. Amit Anand  
CEO



Date of Approval  
24/12/2015

Valid Till  
23/12/2016

#### Revision History of the Document

26/12/2014  
20/01/2016

Initial Adoption  
Revision to reflect updated office address

<sup>1</sup> India, South Africa

#### CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

Regd. Off: 2071/38, 2<sup>nd</sup> Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: G 49 & 50, 3<sup>rd</sup> Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 / +91 120 2520027 | URL: [www.carboncheck.co.in](http://www.carboncheck.co.in)

e-mail: [info@carboncheck.co.in](mailto:info@carboncheck.co.in)



## Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	CME	Webhosted PoA-DD: Small Hydro Power Programme of Activities in Iran	Version 02; Dated: 28/09/2015	CME
/02/	CME	Interim versions of PoA-DD: Small Hydro Power Programme of Activities in Iran	Version 03; Dated: 15/03/2016 Version 04; Dated: 15/05/2016 Version 05; Dated: 01/06/2016 Version 06; Dated: 06/06/2016 Version 07; Dated: 15/06/2016 Version 08; Dated: 25/06/2016 Version 09; Dated: 16/11/2016	CME
/03/	CME	Final PoA-DD: Small Hydro Power Programme of Activities in Iran	Version 10; Dated: 23/11/2016	CME
/04/	CME	Grid Emission Factor calculation sheet corresponding to /01/	grid EF-Dec2014.xlsx	CME
/05/	CME	Grid Emission Factor calculation sheet corresponding to /03/	ER calculation-06.xlsx	CME
/06/	DNA	Letter of Approval from Department of Environment, Islamic Republic of Iran – DNA for CDM Projects	Ref. No.: 94-PM38827.r1; Date: 26/09/2015	CME
/07/	CME	Modalities of Communication	27/06/2015	CME
/08/	CME	CME declaration for non-involvement of any public funding from Annex I countries for this CPA	Ref. No.: MRE-FRM-1321; Dated: 15/06/2016	CME
/09/	UNFCCC	List of auto-additional renewable energy technology projects in Iran	20/12/2012	CME
/10/	<b>Certificate of incorporation/legal status for CME &amp; Project participants</b>			CME
	CME	Mehr Renewable Energy Company Ltd.,	N/A	
	MGCE	Mahab Ghodss Consulting Engineering Company	N/A	
	IWPCO	Iran Water and Power Resource Development Comapny	N/A	
/11/	CCIPL	PoA Validation contract between DOE and CME	Dated: 30/09/2015	DOE
/12/	CME	CME Guidelines (Management System)	Ref. No.: MRE-INS-0401; Revision: 01; Dated: May 22 – June 21, 2015	CME
/13/	CME	Template of CPA Inclusion Contract to be signed between CME and CPA Implementers	N/A	CME
/14/	CME	Letter confirming voluntary participation in the PoA by CME, CPA implementer and Project Participants	Ref. No.: 94/B/131; Dated: 15/12/2015	CME
/15/	CME	Training manual: Duties and responsibilities of CME	November 2013	CME
/16/	CME	Manual to evaluate competence of staff involved in PoA management system	Ref. No.: MRE-STD-0201; Revision: 00; Dated: November 2013	CME
/17/	Department of Environment, Govt. of Islamic Republic of Iran	“Human Environmental laws Regulations, criteria and Standards” (Refer page 132)	2012	CME
/18/	<b>Evidence for the data used to calculate Grid Emission factor (GEF) for Iran</b>			CME
	TAVANIR (Ministry of Energy, Govt. of Iran)	National Statistics of Iran Power Industry	2009-2010	
		National Statistics of Iran Power Industry	2010-2011	
		National Statistics of Iran Power Industry	2011-2012	

		National Statistics of Iran Power Industry	2012-2013	
		National Statistics of Iran Power Industry	2013-2014	
/19/	World Bank (Sustainable Development Department Middle East and North Africa Region)	Islamic Republic of Iran: Power Sector Note	Report No.: 38360-IR; Date: 09/01/2007	DOE
/20/	CME	Prior consideration Form for PoA	16/02/2015	UNFCCC
/21/	Ministry of Economic Affairs and Finance	Article 151: Amortization Table of "The Direct Tax Law of Iran"	No.: 74876; Dated: 19/03/2001	CME
/B01/	UNFCCC	a. Validation and Verification Standard, Version 09.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
		b. Project Standard, Version 09.0		
		c. Project Cycle Procedure, Version 09.0		
/B02/	UNFCCC	AMS-I.D.: Grid connected renewable electricity generation, Version 18.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B03/	UNFCCC	Instructions for filling out the program design document form for small-scale CDM programme of activities, Version 05.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B04/	UNFCCC	Websites: <a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B05/	UNFCCC	Guidelines: General guidelines for SSC CDM Methodologies, Version 22.1	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B06/	UNFCCC	Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities, Version 04.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B07/	UNFCCC	Tool for the demonstration and assessment of additionality, Version 07.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B08/	UNFCCC	Methodological Tool: Investment Analysis, Version 06.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B09/	UNFCCC	Methodological Tool: Assessment of debundling for small-scale project activities, Version 4.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B10/	UNFCCC	Methodological Tool: Tool to calculate emission factor of an electricity system, Version 5.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B11/	UNFCCC	Glossary of CDM Terms, Version 08.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B12/	UNFCCC	ACM0002: Grid-connected electricity generation from renewable sources, Version 17.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B13/	UNFCCC	Methodological Tool: Demonstration of additionality of microscale project activities, Version 07.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others
/B14/	UNFCCC	Methodological Tool: Demonstration of additionality of small-scale project activities, Version 10.0	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>	Others

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

Table 1. CL from this validation

<b>CL ID</b>	01	<b>Section no.</b>	B.1 of Part-I	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
CME needs to clarify whether Small Scale Additionality Tool or Large scale Additionality tool is being used for demonstration of additionality for the PoA/CPAs.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
It has been added in Part II, section B.1 of the PoA DD (on page 15) as a reference.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that Small Scale Additionality Tool will be used to demonstrate additionality for PoA/CPAs. In order to demonstrate investment barrier PP will use the large scale additionality tool and all the relevant tools contained therein.				
CL is closed.				
<b>CL ID</b>	02	<b>Section no.</b>	A.1 of Part I	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
In section B.4 of the PoA-DD, the date of completion of application of methodology has been stated as 26/09/2013. CME needs to clarify.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
In section B.4 of the PoA DD, the date of completion of application of methodology has been corrected as 30/11/2015.(page 10 of PoA DD).				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The date of completion of study on application of methodology has been revised to 30/11/2015 and is deemed appropriate to the validation team.				
CL is closed.				
<b>CL ID</b>	03	<b>Section no.</b>	B.1 of Part-II	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
On page 15 of the PoA DD, version 04 of the grid emission factor tool has been referred whereas on page 16, version 03 is referred.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
Version 04 of the grid emission factor tool has been used. We corrected it on page 18.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
Considering that the emission factor tool has been revised in EB87 meeting the reference to the latest version of the same has not been made in revised PoA-DD. Further, PP has not stated the latest version no. in other references to the tool made throughout the PoA-DD.				
CL is open.				
<b>CME response</b>				<b>Date:</b> 02/05/2016
The latest version of "Tool to calculate the emission factor for an electricity system (version 05.0.0)" are used. It has been corrected throughout the PoA-DD.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/05/2016
Reference to the latest version of the above tool has not been consistently provided throughout the PoA-DD. CL is open.				
<b>CME response</b>				<b>Date:</b> 31/05/2016

We checked the PoA-DD and the latest version number of the tool (05) has been mentioned. We did not find any inconsistency. Please mention the page.	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 02/06/2016
Upon review, the validation team confirms that the latest version of the emission factor tool has been used consistently used throughout the PoA-DD.	
CL is closed.	

<b>CL ID</b>	04	<b>Section no.</b>	B.4 of part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
PoA-DD under section B.5, generically explains the type of financial indicator for the CPAs under the PoA. However, it is not transparently stated about the type of benchmark approach, which can be used by the future CPAs. Furthermore, it is also not clear as how the benchmark would be derived for the future CPAs and also the type of financial indicator. The PoA-DD mentions project IRR as financial indicator where as during discussion with the CME it was revealed that equity IRR may also be used by the future CPAs. CME to clarify.				
<b>CME response</b>				<b>Date:</b> 11/05/2016
The type of benchmark and financial indicators have been explained transparently in section B.5, step 2, on page 21, of PoA-DD. The pre-tax IRR is considered as financial indicator for investment analysis. Based on the type of investment assessment the equity IRR or project IRR could be used. For project IRR the lending rate for civil and construction from central bank shall be the benchmark.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/05/2016
The validation team reviewed section B.5 of the PoA-DD (part-II) and confirms that the response provided therein is acceptable. CME has clearly provided information regarding the possible benchmark approaches and the corresponding types of financial indicators that can be used. This is deemed appropriate to the validation team.				
CL is closed.				

<b>CL ID</b>	05	<b>Section no.</b>	B.6.1 of part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
Although "TEGy" has been used in the equation for ex-ante calculation of project emissions on page 29 of the PoA DD, but this parameter is not a part of monitoring plan in section B.7.1 of the PoA DD.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
This parameter has been added in section B.7.1 of the PoA DD as a monitoring plan for reservoir type hydro power project activities with a power density greater than 4 W/m <sup>2</sup> and less than or equal to 10 W/m <sup>2</sup> .				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that the parameter "TEGy" has been included as part of the monitoring plan and is as per the requirements of the referenced methodology ACM0002 (version 17.0).				
CL is closed.				

<b>CL ID</b>	06	<b>Section no.</b>	B.6.1 of part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
CME needs to clarify whether the monitoring parameter "EG <sub>PJ,y</sub> " will be directly monitored or calculated from the monitored values of the export and import electricity.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
"EG <sub>PJ,y</sub> " will be directly monitored. Please refer to the revised PoA-DD.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016

As per section B.7 of PoA-DD, bi-directional energy meters will be installed in the project activity and will monitor on continual basis the following: (i) The quantity of electricity supplied by the project to the grid (ii) The quantity of electricity delivered to the project from the grid”
Net electricity supplied to the grid by the project activity ( $EG_{PJ,y}$ ) will be calculated using the measured values for electricity exported to/imported from the national grid.
CL is closed.

<b>CL ID</b>	07	<b>Section no.</b>	B.5.1 of part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
CME is requested to clarify the data vintage used for the calculation of grid emission factor. On page 21 of the PoA DD, 2009-2012 has been stated, whereas in Appendix 3, data from 21 March 2011 to 20 March 2014 has been provided.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
It has been corrected. The correct period is 21 March 2011 to 20 March 2014 (page 23).				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The data vintage used for calculation of grid emission factor is now consistent with the data provided in Appendix-3 of the PoA-DD. The calculation of grid emission factor has been done using the data from 21 March 2011 to 20 March 2014 (or 2011-2014).				
CL is closed.				

<b>CL ID</b>	08	<b>Section no.</b>	B.5.2 and B.6.1 of part-II	<b>Date:</b> 25/11/2015
<b>Description of CL</b>				
The grid emission factor parameter has neither been stated in section B.6.2 nor B.7.1 of the PoA DD.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
The grid emission factor parameter has been added in section B.6.2.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The grid emission factor has been duly included under 'parameters fixed ex-ante section of the PoA-DD and is as per the requirements of the applied methodology AMS-I.D and the latest emission factor tool.				
CL is closed.				

Table 2. CAR from this validation

<b>CAR ID</b>	01	<b>Section no.</b>	A.1 and A.2 of Part I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
The following CARs have been raised in case of non-conformance with the requirements of latest version of “Instructions for filling out the programme design document form for small-scale CDM programmes of activities”:				
<p>a) The date format on the cover page of the PoA-DD is not accordance with the “Instructions for filling out the programme design document form for small-scale CDM programmes of activities”.</p> <p>b) As per the SSC PoA DD completing guidelines, in Appendix I, “For each organisation listed in sections A.4 and B.4 above, complete the table below...”. CME needs to confirm the compliance of the above.</p> <p>c) Appendix 4, 5 and 6 of the PoA DD have been left blank. As per the SSC PoA DD completing guidelines, “If a section of the CDM-SSC-PoA-DD-FORM is not applicable, explicitly state that the section is left blank intentionally”.</p> <p>d) In part II, section B.2 of the PoA DD, as per the SSC PoA DD completing guidelines, CME needs</p>				

to “Demonstrate that the CPA qualifies as Type I, II, and/or III during every year of the crediting period in accordance with applicable provisions for project activity eligibility in the Project standard”.

- e) In section D.1 of the PoA-DD, CME is requested to provide the start date of the PoA.

<b>CME response</b>	<b>Date:</b> 08/03/2016
<p>a) The date format on the cover page of the PoA DD has been corrected accordance with the “Instructions for filling out the programme design document form for small-scale CDM programmes of activities”.</p> <p>b) As per the SSC PoA DD completing guidelines, in Appendix I, “For each organization listed in sections A.4 and B.4 above, complete the table below...”. We completed the table for all project participants that has been mentioned in section A.4 and B.4.</p> <p>c) For Appendix 4, 5 and 6 of the PoA DD explicitly states that the section is left blank intentionally.</p> <p>d) The demonstration of the CPA qualification( type I) have been mentioned in section B.2 of PartII PoA DD (page 17).</p> <p>e) The start date of PoA has been mentioned in section D.1 of the PoA DD.</p>	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 16/03/2016
<p>a) The validation team reviewed the revised PoA-DD and observed that the date format on the cover page is now in accordance with the form filling guidelines. However, the cover page responses have not been provided in the appropriate space (column) provided. This finding is open.</p> <p>b) The validation team reviewed the revised PoA-DD and confirms that Appendix-I has been filled in accordance with the form filling guidelines and contains details of all the organizations listed in sections A.4 and B.4. This is deemed acceptable. This finding is closed.</p> <p>c) The validation team reviewed the revised PoA-DD and confirms that Appendix- 4, 5 and 6 are not applicable and under these sections it has been clearly stated ‘This section is left blank intentionally’. This is deemed acceptable. This finding is closed.</p> <p>d) The validation team reviewed the revised PoA-DD and observed that section B.2 of part-II clearly mentions all CPAs being qualified as type I project activities. However, confirmation has not been provided whether the CPAs will remain as type I for the entire duration of the crediting period. This finding is open.</p> <p>e) The validation team reviewed the revised PoA-DD and confirms that section D.1 clearly mentions the start date of the PoA-DD along with a valid justification for choosing the same. Start date of the PoA has been stated as 16/02/2015 (the date on which the prior consideration of CDM notification was sent to DNA of the host party and UNFCCC secretariat by CME). This is in conformance with the requirements of the paragraph 222 (a) of PS, version 09.0 and hence deemed acceptable. This finding is closed.</p>	
CAR is open.	
<b>CME response</b>	<b>Date:</b> 02/05/2016
<p>a) It has been corrected.</p> <p>d) A sentence has been added to confirm the CPA will remain in type I throughout crediting period. (page 17)</p>	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE Assessment</b>	<b>Date:</b> 16/05/2016
<p>a) Responses have been appropriately provided and deemed acceptable to the validation team. This finding is closed.</p> <p>b) In section B.2 of part-II of the PoA-DD the CME has confirmed that the CPAs will remain as type I for the entire duration of the crediting period. This is deemed appropriate to the validation team. This finding is closed.</p>	
This CAR is closed.	

<b>CAR ID</b>	02	<b>Section no.</b>	-	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
The following CARs have been raised on account of reference to outdated standards/tools/guidelines:				
<ul style="list-style-type: none"> <li>a) The references of EB 47, paragraph 73 and Annex 11 of EB 51 on page 5 of the PoA DD does not seems to be the latest one.</li> <li>b) Version 09.0 of the SSC Additionality Tool referred in the PoA DD is not the latest one.</li> <li>c) Version of the Debundling tool referred in the PoA DD is not the latest one.</li> <li>d) The PoA Standard version number referred in the PoA DD is not the latest one.</li> <li>e) On page 26 of the PoA DD, the reference of ACM 0002 is not the latest one.</li> </ul>				
<b>CME response</b>				<b>Date:</b> 08/03/2016
<ul style="list-style-type: none"> <li>a) All these references are replaced by "Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" Version 04.0 on page 5.</li> <li>b) Latest version of additionality tools "Demonstration of additionality of small-scale project activities(version 10.0) and "Tools for the demonstration and assessment of additionality (version 07.0.0)" have been replaced with old ones.</li> <li>c) The latest version of "Guidelines on assessment of debundling for SSC project activities (version 04)" have been corrected on page 8 and 20.</li> <li>d) "Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 04.0) have been used as latest version.</li> <li>e) ACM 0002 (version 17.0) has been used as the latest version on page 27.</li> </ul>				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2015
<ul style="list-style-type: none"> <li>a) The validation team reviewed the revised PoA-DD and observed that although reference to the current version of the PoA standard has been provided to in this section, PP has not made this reference consistent throughout the PoA-DD. Also, the reference to paragraph 9 of the same is incorrect as the information contained in paragraph 9 of the latest PoA standard is inconsistent with the quoted information provided in this section of the PoA-DD. Furthermore, PP has not indicated the applicable version number of the "Guidelines for demonstrating additionality of small-scale project activities" and "Methodological tool for Investment analysis". This finding is open.</li> <li>b) PP has not made the reference to the current version of the additionality tool consistent throughout the PoA-DD. This finding is open.</li> <li>c) The validation team reviewed the revised PoA-DD and confirms that the same now refers to the latest version of the debundling tool. This finding is closed.</li> <li>d) PP has not made the reference to the current version of the PoA standard consistent throughout the PoA-DD. This finding is open.</li> <li>e) The validation team reviewed the revised PoA-DD and confirms that reference to the latest version of the methodology ACM0002 has now been provided in this section. However, PP has not made reference to the current version of the methodology ACM0002 consistent throughout the PoA-DD. This finding is open.</li> </ul>				
CAR is open.				
<b>CME response</b>				<b>Date:</b> 02/05/2016
<b>Documentation provided by CME</b>				
Revised PoA-DD				
a) , b) and d) was checked and has been corrected throughout the PoA-DD.				
<b>DOE assessment</b>				<b>Date:</b> 16/05/2016

- a) Section B.2 (pg. no. 6) still refers to the outdated version of the PoA standard. This finding is open.
- b) The reference to the current version of the additionality tool has now been made consistent throughout the PoA-DD. This is deemed appropriate to the validation team. This finding is closed.
- d) Section B.2 (pg. no. 6) still refers to the outdated version of the PoA standard. This finding is open.

CAR is open.

<b>CME response</b>	<b>Date:</b> 31/05/2016
These two items was checked and corrected.	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 02/06/2016
<ul style="list-style-type: none"> <li>a) The validation team reviewed the revised PoA-DD and confirms that the Section B.2 now refers to the latest version of the PoA standard. This finding is closed.</li> <li>d) The validation team reviewed the revised PoA-DD and confirms that the Section B.2 now refers to the latest version of the PoA standard. This finding is closed.</li> </ul>	
This CAR is closed.	

<b>CAR ID</b>	03	<b>Section no.</b>	A.1 of Part-I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
On page 2 of the PoA-DD, CME needs to correct the CPA full form.				
<b>CME response</b>				<b>Date:</b> 02/05/2016
It has been corrected.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 15/05/2016
The full form of 'CPA' has now been rectified in the revised PoA-DD.				
This CAR is closed.				

<b>CAR ID</b>	04	<b>Section no.</b>	A.2 of Part-I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
CME is requested to clarify whether the two entities (Iran Water and Power Development Company and Mahab Ghodss Consulting Engineering Company) are PPs to the PoA or not? In section A.4 of the PoA DD, CME needs to confirm whether the host party "Iran" is a PP (considering that Iran Water and Power Development Company is a Public entity).				
<b>CME response</b>				<b>Date:</b> 08/03/2016
Project participants are clarified in section A.4. Please clarify the comment " In section A.4 of the PoA DD, CME needs to confirm whether the host party "Iran" is a PP (considering that Iran Water and Power Development Company is a Public entity)." Iran is host country however Iran Water and Power Development Company is Public company and only IWPC is considered as a PP.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2015
The response provided is inconsistent with the information provided in section A.4 of the PoA-DD which states that "Iran Water and Power Development Company and Mahab Ghodss Consulting Engineering Company are project participants in this project". PP is requested to clarify on the inconsistency.				
CAR is open.				
<b>CME response</b>				<b>Date:</b> 02/05/2016
Section A.4 has been corrected.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/05/2015



In response dated 08.03.2016 above CME states that "...only IWPC is considered as a PP" however section A.4 of the PoA-DD (part-I) both IWPC and Mahab Ghodss Consulting Engineering Company have been considered as PP. CME is required to clarify on the above inconsistency.

CAR is open.

<b>CME response</b>	<b>Date:</b> 31/05/2016
In our statement on "Iran is host country however Iran Water and Power Development Company is Public company and only IWPC is considered as a PP.", we mean that IWPC is project participant, however it is public company. So Iran as a country is not one of project participant. Project participants are: Iran Water and Power Development Company(IWPC); Mahab Ghodss Consulting Engineering Company and Mehr Renewable Energy Company(MRE).	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 02/06/2015
The response provided by CME is now consistent with the information provided in the PoA-DD. The validation team deems it to be appropriate.	
CAR is closed.	

<b>CAR ID</b>	05	<b>Section no.</b>	A.2 of Part-I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
In section A.5 of the PoA DD, only the physical / geographical boundary of the PoA needs to be provided (and not the methodological boundary).				
<b>CME response</b>				<b>Date:</b> 08/03/2016
the physical / geographical boundary of the PoA is the geographical boundary of Iran and the methodological boundary were removed in section A.5(page 3).				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that it clearly mentions the physical/geographical boundary of the PoA, which is the host country of Iran. The response is deemed acceptable as it is consistent with the on-site inspections and information contained within the PoA-DD and supporting documents.				
CAR is closed.				

<b>CAR ID</b>	06	<b>Section no.</b>	A.2.1 of Part-I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
CME needs to demonstrate the compliance of para 3 of the applied meth in the PoA DD.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
A provision and its justification has been added to section B.3 part I(page 9) and B.2 part II(page 16) that shows how the project fulfil paragraph 3 of methodology AMS-I-D(version 18).				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that section B.2 now contains appropriate information to justify compliance with paragraph 3 of the applied methodology (AMS-I.D). As the project involves supply of electricity to the national grid of Iran through operation of small scale hydro power projects, the applicable methodology is AMS-I.D. This is based on the review of information contained in the PoA-DD and the supporting technical documents and deemed acceptable.				
CAR is closed.				

<b>CAR ID</b>	07	<b>Section no.</b>	B.2 of Part-I of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				

In section B.2 of PoA-DD (version 2; dated 28/09/2015), the eligibility criterion provided with regards to "the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications" doesn't comply with the requirements stated in footnote 7 and 8 of the Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (version 04.0, EB 87)	
<b>CME response</b>	<b>Date:</b> 08/03/2016
Base on footnote 7 of Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (version 04.0, EB 87), it has been mentioned in section B.2 (c " The technology/measure allowed under PoA is grid connected hydropower (run-of-river type or reservoir type) based generation systems which will displace equivalent quantity of electricity from the national grid in Iran" that is baseline scenario. Also based on footnote 8 of Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (version 04.0, EB 87), we explained provision related to stakeholder consultations and environmental impact analysis.	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and observed that compliance with footnote 7 of the PoA standard has not been sufficiently demonstrated as description of the baseline scenario (as per applied methodology) is incomplete for an appropriate comparison and further establishing a 'level of service'. The compliance with footnote 8 has been demonstrated in eligibility criteria G and is deemed appropriate.  CAR is open.	
<b>CME response</b>	<b>Date:</b> 02/05/2016
A sentence has been added to confirm the CPA will remain in type I throughout crediting period. (page 17)	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 16/05/2016
In response to this particular eligibility criteria, the description of baseline scenario (provided in bold below) is given by CME as:  "The technology/measure allowed under PoA is grid connected hydropower (run-of-river type or reservoir type) based generation systems <b>which will displace equivalent quantity of electricity from the national grid in Iran.</b> "  The above description of the baseline scenario, to allow for a suitable comparison with the project scenario's 'level of service' (which is required as per footnote 7 of the PoA standard for this eligibility criteria) is incomplete in regards to the description provided in §19 of the applied methodology.  CAR is open.	
<b>CME response</b>	<b>Date:</b> 31/05/2016
All CPAs must be a new (greenfield) grid-connected renewable small scale hydropower plant generating electricity and must not involve capacity addition, retrofitting or modifying of an existing facility for renewable energy generation. Also the total capacity of each CPA will not exceed 15MW. Connection of each CPA to the national grid will be verify by power purchase agreement or other relevant documents on verification time.	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 02/06/2016
The response provided by CME above does not provide resolution of the finding raised.  CAR is open.	
<b>CME response</b>	<b>Date:</b> 06/06/2016
First part of eligibility criteria(c) has been corrected to " The technology/measure allowed under PoA is grid connected hydropower (run-of-river type or reservoir type) based generation systems which will displace equivalent quantity of electricity generated by grid-connected power plants and by the addition of new generation sources into the grid." In PoA-DD part I on page 6 and part II on page 19.	
<b>Documentation provided by CME</b>	
Revised PoA-DD	
<b>DOE assessment</b>	<b>Date:</b> 07/06/2016

The validation team reviewed the revised PoA-DD and confirms that the eligibility criteria (C) now complies with the requirements stated in footnote no. 7 of the Standard for Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (version 04.0, EB 87).

CAR is closed.

<b>CAR ID</b>	08	<b>Section no.</b>	B.2 of Part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
Project boundary has not been stated in compliance with paragraph 18 of the applied methodology in section B.3, Part II of the PoA DD.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
It has been corrected by mention of project boundary in section B.3 part II (page 17) of PoA DD.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that appropriate description of the project boundary has now been given which is consistent with the requirements of the applied methodology.				
CAR is closed.				

<b>CAR ID</b>	09	<b>Section no.</b>	B.6.1 of Part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
Monitoring frequency of the parameter “EG <sub>PJ,y</sub> ” has not been stated in line with the methodology AMS I.D, version 18.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
It has been corrected based on methodology AMS I.D version 18 . Also more explanation has been added in additional comment row on page 31.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that the monitoring frequency of the parameter “EG <sub>PJ,y</sub> ” has now been stated in line with the applied methodology.				
CAR is closed.				

<b>CAR ID</b>	10	<b>Section no.</b>	B.6.2 of Part-II of VR	<b>Date:</b> 25/11/2015
<b>Description of CAR</b>				
On page 32 of the PoA DD, data archiving period has not been stated in line with para 65 (b) of PS, v 09 which states “Provisions to ensure that data monitored and required for verification and issuance be kept and archived for two years after the end of the crediting period or the last issuance of CERs, whichever occurs later”.				
<b>CME response</b>				<b>Date:</b> 08/03/2016
Data archiving period has been corrected based on para 65 (b) of PS, v 09. It has been mentioned in second item of Responsibility of Statisticians on page 33.				
<b>Documentation provided by CME</b>				
Revised PoA-DD				
<b>DOE assessment</b>				<b>Date:</b> 16/03/2016
The validation team reviewed the revised PoA-DD and confirms that the data archiving period has now been stated in line with para 65 (b) of PS, v 09.				
CAR is closed.				

**Table 1. FAR from this validation**

<b>FAR ID</b>	xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
No FAR was raised.				
<b>CME response</b>				<b>Date:</b> DD/MM/YYYY
-				
<b>Documentation provided by CME</b>				

-	
DOE assessment	Date: DD/MM/YYYY
-	

## Appendix 5. PoA Validation Protocol

Table 1: CDM-SSC-POA-DD Requirements Checklist ((based on § 37 of the CDM Modalities and Procedures and on VVS , Project Standard and Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities))				
Checklist	Comment	Ref.	Draft Conclusion	Final Conclusion
<b>PART I. Programme of activities (PoA)</b>				
<b>SECTION A. General description of PoA</b>				
<b>A.1. Title of the PoA</b>				
A.1.1.Are title, version number and the date of completion of PoA-DD given in section A.1 of the PoA-DD?	Yes, the validation team during document review of the PoA-DD <sup>/01/</sup> and PoA-DD template <sup>/B03/</sup> compared the two documents and further verified from UNFCCC website to confirm that the project title, current version number and the date of the PoA-DD <sup>/01/</sup> has been provided correctly in the section A.1 of the PoA-DD <sup>/01/</sup> .	/01/, /B03/	OK	OK
<b>A.2. Description of the PoA</b>				
A.2.1. Has PoA-DD in section A.2 contains the description of the policy/measure or stated goal that the PoA seeks to promote in a transparent manner with sufficient reference of the policy/measure/stated goal if any?	Yes, the information provided in section A.2 of the PoA-DD <sup>/01/</sup> appropriately and transparently describes the policy/measure or stated goal that the PoA seeks to promote.	/01/, /B03/	OK	OK
A.2.2. Has PoA-DD in section A.2 contains a sufficient description of Framework for the implementation of the proposed PoA.?	Yes, the information contained provides a sufficient description of the framework for the implementation of the proposed PoA.	/01/, /B03/	OK	OK
A.2.3.Has a confirmation been given that the proposed PoA is a voluntary action by the coordinating/managing entity?	Yes, the CME has provided confirmation with valid evidence <sup>/11/</sup> that the proposed PoA is a voluntary action.	/01/, /B03/, /11/	OK	OK

**CDM-PoA-VAL-FORM**

A.2.4. Does the PoA-DD in section A.2 contains a brief description of how the proposed PoA contributes to sustainable development	Yes, the description of how the project contributes to the sustainable development of the host country of Iran has been appropriately described. The same can be concluded after review of the LoA <sup>/03/</sup> from host party DNA.	/01/, /03/, /B03/	OK	OK
A.2.5. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II?	Yes, the project qualifies as a small scale CDM PoA in regards to the requirements of decision 4 / CMP.1 annex II and Glossary of CDM terms <sup>/B11/</sup> .	/01/, /B11/	OK	OK
A.2.6. Has the latest version of the CDM-POA-DD form been applied?	Yes, the latest version of the CDM-SSC-PoA-DD-FORM <sup>/B03/</sup> has been used for drafting the PoA-DD <sup>/1/</sup> . This has been confirmed by comparing the CDM-SSC-POA-DD-FORM <sup>/B03/</sup> with the webhosted PoA-DD <sup>/01/</sup> .	/01/, /B03/	OK	OK
A.2.7. Has the CDM-POA-DD been duly filled in accordance with the latest guidance(s) and procedures and all information are consistently described?	No, the validation team compared the webhosted PoA-DD <sup>/1/</sup> and CDM-SSC-PoA-DD-FORM <sup>/B03/</sup> and found certain sections of PoA-DD <sup>/1/</sup> have not been filled in accordance with the form filling guidance. CAR01 has been raised in this context. In addition, certain sections in the PoA-DD do not refer to the latest versions of the tools/guidelines etc. CAR02 has been raised in this context.	/01/, /B03/	CAR01 and CAR02	OK
A.2.8. Does the PoA-DD contains information that the CME wish to treat as confidential /proprietary?  Has the proprietary information been provided in two different versions and considered as per CCIPL's procedures	No, POA-DD does not contain information that the CME wish to treat as confidential or proprietary.	/01/	OK	OK
<b>A.3. CME and Participants of PoA and</b>				
A.3.1 Has the CME and all project participants been listed in section A.3 of the PoA-DD?  Note: The CME of the proposed PoA, as the entity which communicates with the Board; Project participants to the PoA	Yes, the validation team reviewed the PoA-DD <sup>/01/</sup> and found in this section All project participants have been appropriately listed.	/01/	OK	OK

(project participants may or may not be involved in one of the component project activities (CPAs) related to the PoA).				
<b>A.4 Party(ies)</b>				
A.4.1.1 Have all host countries been correctly listed?	Yes, the current PoA only involves country of Iran which is the host party and correctly listed in this section.	/01/, /03/	OK	OK
A.4.1.2 Is there any Party directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD?	The validation team has raised a corrective action requested based on the information provided in this section. CAR04 has been raised in this context.	/01/	CAR04	OK
A.4.1.3 Has the coordinating/managing entity obtained letters of approval for the implementation of the PoA from each Host Party and Annex I Party involved in the PoA?  <i>Note: Letters of approval shall be issued in accordance with the guidance provided by the CDM Executive Board (EB16, Annex 6).</i>	Yes, Letter of Approval has been obtained from the DNA of the host party (Iran) and was found to be appropriate.	/01/, /03/	OK	OK
A.4.2. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	Yes, the validation team reviewed the LoA <sup>/03/</sup> and the UNFCCC website <sup>/B05/</sup> and confirms that corresponding host party (Iran) is a party to the Kyoto Protocol.	/03/, /B05/	OK	OK
A.4.3. Are the approvals issued from organizations listed as DNAs on the UNFCCC CDM website?  Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.	Yes, the validation team reviewed the LoA <sup>/03/</sup> and confirms that approval has been issued by an organization listed as DNA of Iran (Department of Environment, Iran) on the CDM website.	/03/	OK	OK
A.4.4. Do the written approvals confirm that the participation is voluntary?	Yes, the validation team reviewed the LoA <sup>/03/</sup> and affirmation provided by CME <sup>/11/</sup> and found that they both provide a confirmation that the participation is voluntary.	/03/, /11/	OK	OK
A.4.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the /PoA-DD/country?	Yes, the validation team reviewed the LoA <sup>/03/</sup> and confirms that the approval mentions that the project contributes to the sustainable development in the host country.	/03/	OK	OK
A.4.6. Do the written approvals refer to the precise project title in	Yes, the validation team reviewed the	/03/	OK	OK

the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number?	LoA <sup>/03/</sup> and confirms that the approval refers to the precise project title as listed in the webhosted PoA-DD <sup>/01/</sup> .			
A.4.7. Are the written approvals unconditional with regard to A.3.2, A.3.4 to A.3.6?	Yes, the validation team reviewed the LoA <sup>/03/</sup> and confirms that the approval is unconditional with regards to A.3.2, A.3.4 to A.3.6.	/03/	OK	OK
A.4.8. Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each Host Party?  <i>The authorizations for the coordination of the PoA can be granted vide the letters of approval from each Host Party.</i>	The validation team confirms that there is only one host party (Iran) of the PoA and the LoA <sup>/03/</sup> has been obtained from the DNA of the same.	/03/	OK	OK
A.4.9. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PoA-DD internally consistent to each other?	Refer to section A.4.1.2.	/01/	CAR04	OK
A.4.10. Has the participation to the PoA of each project participant listed in the PoA-DD been approved by at least one Party involved?  <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol. Describe the means of validation employed to draw this conclusion.</i>	Refer to section A.4.1.2.	/01/	CAR04	OK
A.4.11. Are there any other project participants approved but not listed in the PoA-DD?	Refer to section A.4.1.2.	/01/	CAR04	OK
<b>A.5 Location of PoA</b>				
A.5.1. Has the location (in terms of a geographical area for e.g. municipality, region within a country, country or several countries within which all CPAs to be included of the PoA been correctly described?	Yes, the validation team confirms that the host country (Iran) is listed in section A.5 of the webhosted PoA-DD <sup>/01/</sup> as the location of the PoA.	/01/, /B03/	OK	OK
A.5.2 Does the CDM-PoA-DD include a definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented?	Yes, the validation team confirms that PoA-DD <sup>/01/</sup> has included the national boundary of Islamic Republic of Iran within all future CPAs shall be implemented. The same was confirmed during site visit. However, this section includes information (methodological description of the PoA boundary) that is not relevant. CAR05 has been raised in this context.	/01/, /B03/	CAR05	OK



A.5.3 Are all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of the baseline?	Yes, the validation team confirms that all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of baseline	/01/	OK	OK
<b>A.6. Technologies/measures of the PoA</b>				
A.6.1 Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used?	Yes, this section of the PoA-DD <sup>/01/</sup> clearly describes the CPAs to be included under the PoA and the technologies/measure to be employed. Each CPA will involve renewable electricity generation through a small scale hydro power plant.	/01/	OK	OK
A.6.2 Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	Yes, the project is replacing fossil fuel based power generation with renewable (small hydro) based power generation. The technology results in a significantly better environmental performance and contributes more to sustainability than any commonly used technologies in the host country.	/01/	OK	OK
<b>A.7. Public funding of PoA</b>				
A.7.1 Is the PoA involves public funding?	Yes, the validation team reviewed the PoA-DD <sup>/01/</sup> and Declaration on public funding <sup>/07/</sup> and confirms that PoA does not involve public funding from Annex-I parties.	/01/, /07/	OK	OK
A.7.2 Is there a confirmation that official development assistance has not been diverted to the implementation of the PoA in case public funding is used?	Yes, in the form of Declaration on public funding <sup>/20/</sup> it is evident that official development assistance has not been diverted to the implementation of the PoA.	/01/, /07/	OK	OK
<b>SECTION B. Demonstration of additionality and development of eligibility criteria</b>				
<b>B.1. Demonstration of additionality for PoA</b>				
B.1.1 Has it been demonstrated by the CME that describe how in the absence of CDM, none of the implemented CPAs would occur.  Note: Refer to "Standard for demonstration of additionality,	No, as CME has not clearly identified applicable the additionality tool to be employed to demonstrate additionality. CL01 has been raised in this context.	/01/	CL04	OK

development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, annex 03, EB 65" for additionality requirement for the PoA.				
<b>B.2. Eligibility criteria for inclusion of a CPA in the PoA</b>				
<p>B.2.1. Has the eligibility criteria for inclusion of a CPA under the PoA included in the PoA-DD as per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, annex 03, EB 65.</p> <p>Note: Validation team based on its expertise in the sectoral scope and any PoA specific requirement can confirm the requirement of any other eligibility criteria.</p>	No, eligibility criteria (C) does not comply with requirements of latest version of Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities <sup>/B07/</sup> . CAR 07 has been raised in this context.	/01/, /B07/	CAR07	OK
<b>B.3. Application of methodologies</b>				
B.3.1 Does the PoA-DD contains description of the technology/measures and indicated the methodology chosen?	<p>The validation team reviewed the PoA-DD<sup>/01/</sup> and confirms that description of the technologies/measures as appropriate and in conformance with the requirements of the PoA-DD form filling guidelines<sup>/B03/</sup>. However, CME has not demonstrated compliance with § 3 of the applied methodology<sup>/B02/</sup>. CAR06 has been raised in this context. In addition, the validation team has also issued two clarifications in this section. CL02 and CL03 have been raised in this context.</p>	/01/, /B02/	CAR06, CL02 and CL03	OK
B.3.2 In cases of multiple technologies/measures or multiple methodologies are being applied, does the PoA-DD list all the combinations of technologies/measures and methodologies that will be used in the PoA?	NA	-	OK	OK
B.3.3 In case of sampling plan(If applicable), does the PoA-DD provide a description to demonstrate how it meets applicable provisions in the Standard for sampling and surveys for CDM project activities and programme of activities.	NA	-	OK	OK
<b>SECTION C. Management system</b>				
C.1 Does the PoA-DD contains the description of the CME's	Yes, the description of management	/01/, /B07/	OK	OK

management system in line with § 17 of annex 3, EB 65?	system provided by CME in section C of the PoA-DD <sup>/01/</sup> is appropriate and complete in regards to the requirements of §17 of latest version of the PoA standard <sup>/B07/</sup> .			
<b>SECTION D. Duration of PoA</b>				
<b>D.1. Starting Date of the PoA</b>				
D.1.1. What is the starting date of the PoA? Is it Reasonable and does the PoA-DD provides how the start date was determined?	Yes, CME has provided the start date of the PoA in conformance with the requirements of Glossary of CDM terms <sup>/B11/</sup> and PoA-DD form filling guidelines <sup>/B03/</sup> .	/01/ /B03/ /B11/	OK	OK
<b>D.2. Length of the PoA</b>				
<i>The length of the PoA shall be assessed</i>	The validation team confirms that the length of the PoA, as mentioned in section D.2 of the webhosted PoA-DD <sup>/1/</sup> , is 28 years and in conformance with the requirements stipulated in § 223 of CDM PS version 09 <sup>/B01b/</sup> .	/01/ /B01b/	OK	OK
D.2.1. What is the length/lifetime of the PoA? Is it reasonable?  <i>PoA duration should not exceeding 28 years (60 years for A/R)</i>	The validation team confirms that the length of the PoA, as mentioned in section D.2 of the webhosted PoA-DD <sup>/1/</sup> , is 28 years and deemed to be reasonable. This is and in conformance with the requirements stipulated in § 223 of CDM PS version 09 <sup>/B01b/</sup> .	/01/ /B01b/	OK	OK
<b>E. Environmental Analysis</b>				
<b>E.1. Level of Analysis</b>				
<i>The analysis shall be carried out either on PoA or CPA level</i>				
E.1.1.Has it been clearly indicated on which level i.e. PoA or CPA an environmental Analysis has been carried out or will be carried out?	Yes, it has been clearly stated in section E of the PoA-DD <sup>/1/</sup> that the environmental analysis will be carried out at CPA level. The validation team deems it to be appropriate and in conformance with the requirements of § 231 of the CDM PS (version 09) <sup>/B01b/</sup> .	/01/ /B01b/	OK	OK
<b>E.2. Documentation on the analysis of the environmental impacts</b>				
C.2.1. Has an environmental analysis of the PoA as per requirements of the CDM modalities and procedures been	Refer to comments in section E.1	/01/ /B01b/	OK	OK

undertaken and described in the CDM-POA-DD?				
<b>E.3 Environmental impact Analysis Requirements</b>				
E.3.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?	Refer to comments in section E.1	/01/, /B01b/	OK	OK
E.3.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved?	Refer to comments in section E.1	/01/, /B01b/	OK	OK
E.3.3. Are trans boundary environmental impacts considered in the analysis?	Refer to comments in section E.1	/01/, /B01b/	OK	OK
<b>F. Stakeholders' comments</b>				
<b>F.1. Level of Analysis</b>				
F.1.1. Has it been clearly indicated on which level i.e. PoA or CPA stakeholder comments have been or will be invited?	Yes, it has been clearly stated in section E of the PoA-DD <sup>1/</sup> that the local stakeholder consultation will be carried out at CPA level. The validation team deems it to be appropriate and in conformance with the requirements of § 233 of the CDM PS (version 09) <sup>/B01b/</sup> .	/01/, /B01b/	OK	OK
<b>F.2. Brief description how comments by local stakeholders have been invited and compiled.</b>				
F.2.1. With regard to the PoA, how have local stakeholders' comments been invited prior to the publication of the PDDs and summarized? If applicable, was due account taken of the comments received?	Refer to comments in section F.1	/01/, /B01b/	OK	OK
<b>F.3. Summary of the comments received</b>				
F.3.1. With regard to the PoA, can the summary provided assessed as adequate?	Refer to comments in section F.1	/01/, /B01b/	OK	OK
<b>F.4. Report on how due account was taken of comments received</b>				
F.4.1. With regard to the PoA, can the report provided assessed as adequate?	Refer to comments in section F.1	/01/, /B01b/	OK	OK
F.4.2. With regard to the PoA, can the local stakeholder	Refer to comments in section F.1	/01/,	OK	OK

consultation process in general be assessed as adequate?		/B01b/		
<b>SECTION G. Approval and authorization</b>				
G.1 Does the PoA-DD indicates and included the letter(s) of approval from Party (ies) which wishes to be involved in the PoA, and whether it is available at the time of submitting the PoA-DD to the validating DOE.  Note: CME letters of authorization of its coordination of the PoA from each Party shall also been included.	Yes, LoA <sup>/03/</sup> has been received from host party DNA of Iran which wishes to be involved in the PoA, and is available at the time of submitting the PoA-DD to the validating DOE.	/01/, /03/	OK	OK
<b>PART II. Generic component project activity (CPA)</b>				
<b>A.1. Purpose and general description of generic CPAs</b>				
A.1.1 Has PoA-DD in section A.1 contains the description of the description of each generic CPA within the PoA?	Yes, section A.1 of the part-II of the PoA-DD <sup>/01/</sup> CME provides the clear and appropriate description of the generic CPA to be included in the PoA. Each CPA would involve renewable energy power generation by operation of small (or micro) scale hydro power plants within the host country of Iran.	/01/	OK	OK
<b>SECTION B. Application of a baseline and monitoring methodology</b>				
B.1.1. Does the PoA apply an approved and applicable CDM methodology and a valid version thereof?	Yes, the validation team confirms that the PoA-DD <sup>/1/</sup> refers to an approved and valid version of the applicable CDM methodology <sup>/B02/</sup> . However, a clarification has been raised in this section regarding the applicable version of the grid emission factor tool <sup>/B11/</sup> . CL03 has been raised in this context.	/01/, /B02/	CL03	OK
B.1.2. Does the typical CPA apply one of the approved small scale categories and any methodology and tool referred therein?	Yes, the validation team confirms that a typical CPA applies the approved small-scale methodology i.e. AMS-I.D (version 18) <sup>/B02/</sup> "Grid connected renewable electricity generation" and the methodology and tools referred therein.	/1/, /B02/	OK	OK
<b>B.2. Justification of the choice of the methodology</b>				
B.2.1. Is the justification of the choice of an approved baseline and monitoring methodology for the typical CPA sufficient?	Refer to section B.3.1 in part-I of PoA-DD above.	/01/, /B02/	CAR06	OK

B.2.2. Does a typical CPA apply a combination of approved methodologies? If so, has such combination been approved only once in accordance with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, annex 03, EB 65"?	NA	/01/	OK	OK
B.2.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? Has the CME Justified the choice of the selected methodology (ies) by showing that each generic CPA meets each applicability condition of the methodology (ies)? Does documentation that has been used as a basis of justification provided or referenced in the PoA-DD. If applicable, does the PoA-DD provide a general description of the sampling plan?	NA	/01/,	OK	OK
<b>B.3. Description of the sources and gases included in the boundary</b>				
B.3.1. Are the CPA's spatial boundaries (geographical) of the CPAs to be included are clearly defined?	No, the project boundary has not been stated in compliance with the applied methodology <sup>B02/</sup> . CAR 08 has been raised in this context.	/01/, /B02/	CAR08	OK
B.3.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?	Refer to section B.3.1 above.	/01/, /B02/	CAR08	OK
B.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?	NA	/1/	OK	OK
<b>B.4. Description of how the baseline scenario is identified and description of baseline scenario</b>				
<i>The description shall be assessed</i>				
B.4.1. Does the PoA-DD make provisions to identify possible baseline scenarios to be considered for CPAs?	Yes, the baseline scenario has not been demonstrated in conformance with the appropriate requirements of the applied methodology <sup>B02/</sup> .	/01/, /B06/	OK	OK
B.4.2. Does the PoA-DD make provisions to identify the list of all the alternatives? Is the list of alternatives complete?	NA	/01/, /B02/	OK	OK
B.4.3. Does the PoA-DD make provisions to identify the baseline scenario for each CPA?	NA	/01/, /B02/	OK	OK
B.4.4. Does the PoA-DD make provisions to identify the baseline scenario according to the methodology for each CPA?	NA	/01/, /B02/	OK	OK

B.4.5. Does the PoA-DD make provisions that any plausible alternative scenario is not excluded?	NA	/01/, /B02/	OK	OK
B.4.6. Does the baseline alternatives sufficiently take into account relevant national and/or sectoral policies?	NA	/01/, /B02/	OK	OK
B.4.7. Are the provisions for the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	NA	/01/, /B02/	OK	OK
<b>B.5. CPA additionality</b>				
B.5.1. Assessment and demonstration of CPA additionality	No, the demonstration of additionality is not sufficient as per the requirements of the applied methodology <sup>/B02/</sup> and relevant tools. The type of benchmark approach and its determination has not been clearly stated. CL 04 has been raised in this context.	/01/, /B02/, /B07/	CL04	OK
B.5.1.1. Does the PoA-DD makes provisions to describe the additionality demonstration approach for each generic CPA to meet the eligibility criteria of the PoA including confirmation of additionality of the generic CPA for its inclusion into the PoA.  Does the demonstration follows the requirements of the applied methodology and/or other methodological tools?  <b>Note:</b> Refer to “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, for additionality requirement for the PoA. In case of PoA of having small scale CPAs, the demonstration compliance shall be checked against the requirement of attachment A to appendix B. For PoAs utilizing large scale methodology, additionality tool shall be referred.	Refer to section B.5.1	/01/, /B02/, /B07/	CL04	OK
B.5.1.2. Which criteria have been established to assess the additionality of CPA under this PoA?	Refer to section B.5.1	/01/, /B02/, /B07/	CL04	OK
<b>Investment Analysis</b>				
B.5.1.3. Does the PoA-DD provide criteria to assess that the proposed CPA of the PoA would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?	Refer to section B.5.1	/01/, /B02/, /B07/	CL04	OK

B.5.1.4. Is the type of investment analysis selected correctly?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
B.5.1.5. Is the selected financial indicator chosen and applied correctly, if applicable?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
B.5.1.6. If applicable, were the input values used in the investment analysis valid and applicable at the time of the investment decision and justified?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
B.5.1.7. If CME proposes to use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
B.5.1.8. Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have lead to a change in the benchmark?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
B.5.1.9. Is the Investment Analysis prepared in compliance with the latest version of the "Guidance on the Assessment of Investment Analysis" as provided by the CDM EB?	Refer to section B.5.1	/01/ /B02/ /B07/	CL04	OK
<b>Barrier Analysis</b>				
B.5.1.10. If applicable, are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	NA	/01/ /B02/ /B07/	OK	OK
B.5.1.11. If applicable, Do the listed barriers exist and is their existence substantiated? Note: (a) by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics and/or (b) by interviews with relevant individuals: including members of industry associations, government officials or local experts if necessary?	NA	/01/ /B02/ /B07/	OK	OK
B.5.1.12. Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?	NA	/01/ /B02/ /B07/	OK	OK
<b>Common Practice Analysis</b>				
B.5.1.13. Are the geographical boundaries for the common		/01/	OK	OK



practice analysis identified correctly?	NA	/B02/ /B07/		
B.5.1.14. Does the PoA-DD provides an explanation why this region was selected and deemed more appropriate and is this explanation traceable and reliable?	NA	/01/ /B02/ /B07/	OK	OK
B.5.1.15 Are there similar operational project activities, other than CDM activities, “widely observed and commonly carried out” in the defined region? Note: Use official sources and local and industry expertise?	NA	/01/ /B02/ /B07/	OK	OK
B.5.1.16. In case there are similar commercially operated project activities, other than CDM activities, already “widely observed and commonly carried out” in the defined region, are there essential distinctions between the CDM project activity and the other similar activities?	NA	/01/ /B02/ /B07/	OK	OK
<b>B.6. Estimation of Emission Reductions of CPA</b>				
<b>B.6.1. Explanation of methodological choices</b>				
B.6.1.1. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	NA	/01/ /B02/	OK	OK
<b>B.6.2. Equations, including fixed parametric values used for ER calculation</b>				
B.6.2.1. Are the equations applied correctly according to the applied approved methodology?	Yes, the validation team reviewed the PoA-DD <sup>/01/</sup> and after comparing it with the applied methodology <sup>/B02/</sup> confirms that the equations provided in section B.6.1 have been appropriately applied and in conformation with the applied methodology <sup>/B02/</sup> .	/01/ /B02/	OK	OK
B.6.2.2. Have conservative assumptions been used when calculating the project emissions?	Yes, the validation team confirms that conservative assumptions been used to calculate project emissions, as applicable.	/01/, /B02/	OK	OK
<b>B.6.3. Data and parameters to be reported in the CPA-DD form</b>				
B.6.3.1. Are provisions made to identify all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	No, not all data and parameters which remain fixed throughout the crediting period have been identified in this section. CL08 and CL09 have been raised in this regard.	/01/ /B02/	CL08 and CL09	OK

B.6.3.2. Does the PoA-DD mention reasonable values for all ex-ante calculation / monitoring parameters?	Refer to section 6.3.1 above.	/01/, /B02/	CL08 and CL09	OK
<b>B.7. Application of the monitoring methodology and description of the monitoring plan</b>				
<b>B.7.1. Data and parameters to be monitored by each CPA</b>				
B.7.1.1. Has the PoA-DD contains monitoring parameters for the CPAs? Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?	No, in this section not all monitoring parameters have been included as per the requirements of the methodology. In addition, the validation team has sought clarifications CAR09, CL05 and CL06 have been raised in this context.	/01/, /B02/	CAR09, CL05 and CL06	OK
B.7.1.2. Has the PoA-DD provides all monitoring parameters as required by the applied methodology required to be implemented by CPA monitoring plan?	Refer to section B.7.1.1.	/01/, /B02/	CAR09, CL05 and CL06	OK
<b>B.7.2. Description of the monitoring plan for a SSC-CPA:</b>				
B.7.2.1 Has PoA-DD contains monitoring plan for a CPA in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?	The data archiving period has not been stated in line with the requirements of CDM PS. CAR10 has been raised in this regard.	/01/, /B02/, /B01b/	CAR10	OK
B.7.2.2. Are the QA/QC procedures described under monitoring appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified?	Refer to sections B.7.1.1 and B.7.2.1.	/01/, /B02/	CAR10	OK
B.7.2.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?	Refer to sections B.7.1.1 and B.7.2.1.	/01/, /B02/	CAR10	OK

## Appendix 6. Assessment of Grid Emission Factor

Reference to the methodological tool <sup>/B10/</sup>	Approach Provided in PoA-DD <sup>/03/</sup>	Assessment by DOE						
<b>Step 1: Identify the relevant electricity system.</b>  <b>(Section 6.1: From § 15-24)</b>	<b>Project Electricity System (PES)</b>							
	The National Grid of Iran (NGI), so the spatial extent of the project boundary is the NGI.	The relevant PES is the electricity grid of the Islamic Republic of Iran. The validation team could confirm that the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system through relevant document review and site-visit inspection.						
	<b>Connected Electricity Systems (CES)</b>							
	<p>The distribution network of the NGI has interconnections with electricity systems of Armenia, Azerbaijan, Turkey, Nakhichevan, Pakistan, Afghanistan, Turkmenistan and Iraq. These connections are operating both for import and export of electricity.</p> <p>In recent 3 years (2011-2014), the electricity has been imported only from Armenia, Azerbaijan, Nakhichevan and Turkmenistan, while electricity has been exported to all of the connected countries, except Azerbaijan.</p>	<p>The validation team could review the latest National Statistics of Iran Power Industry published by TAVANIR (Ministry of Energy, Govt. of Iran) for 2011-2014<sup>/18/</sup>. According to these Statics, we checked the interconnection countries and its imported electricity and these all information was provided to the validation team as GEF calculation spread-sheet<sup>/05/</sup> and the validation team validated it.</p>						
<b>Step 2: Choose whether to include off-grid power plants in the project electricity system (optional);</b>  <b>(Section 6.2: From § 25-34)</b>	<p>As per provisions of § 22(a) of the tool:</p> <ul style="list-style-type: none"><li>For electricity imports from CES i.e., Armenia, Azerbaijan, Nakhichevan and Turkmenistan, the most conservative emission factor (0 tCO<sub>2</sub>/MWh) has been used, because of the lack of required data.</li></ul>	<p>The validation team confirmed that for electricity imported from CES viz., Armenia, Azerbaijan, Nakhichevan and Turkmenistan, the most conservative emission factor (0 tCO<sub>2</sub>/MWh) has been used and it is in accordance with the §22 (a) of 'Tool to calculate emission factor for an electricity system'<sup>/B10/</sup>. Also, that electricity exports were not subtracted from electricity generation data used for the calculation of EF in line with the requirement of § 24 of the tool<sup>/B10/</sup>.</p>						
	<b>Option I:</b> Only grid power plants are included in the calculation.	PP has chosen to only include grid-connected power plants for calculation of Operating & Build Margin. The same is in accordance with §26 of the applied tool <sup>/B10/</sup> .						
<b>Step 3: select a method to determine the operating margin (OM)</b>  <b>(Section 6.3: From § 35-42)</b>	<b>Option a: Simple OM:</b> It will be calculated Ex-ante with using the data vintage as 3-year generation- weighted average based on the most recent data	<p>The validation team checked that Low-cost/must-run resources constitute less than 50% of total grid generation in average of the five most recent year and its value were confirmed through the National statistics of Iran power industry for 2009-2014<sup>/18/</sup>.</p> <table><tr><th>Year</th><th>Share of low cost/must run (%)</th></tr><tr><td>2009-10</td><td>3.47</td></tr><tr><td>2010-11</td><td>4.31</td></tr></table>	Year	Share of low cost/must run (%)	2009-10	3.47	2010-11	4.31
Year	Share of low cost/must run (%)							
2009-10	3.47							
2010-11	4.31							

		<table><tr><td>2011-12</td><td>5.44</td></tr><tr><td>2012-13</td><td>5.89</td></tr><tr><td>2013-14</td><td>7.58</td></tr></table> <p>According to the information of TAVANIR, it has confirms that only solar, hydro and wind power plants constituted low-cost/must-run resources. This is also substantiated by the World Bank Iran Power Sector Note (p.70)<sup>/19/</sup>, which shows that the hydro and wind power plants have zero variable costs even though gas is available as a relatively low cost fuel in Iran.</p> <p>For the Simple OM, the emission factor can be calculated using 2 options of ex-ante or ex-post and the PP selected the ex-ante option. The validation team checked that simple OM emission factor has been correctly calculated in GEF calculation spread-sheet<sup>/05/</sup> using the data vintage as 3-year generation-weighted average based on the most recent data at the time of validation (published in 20011~2014).</p>	2011-12	5.44	2012-13	5.89	2013-14	7.58
2011-12	5.44							
2012-13	5.89							
2013-14	7.58							
<p><b>Step 4: calculate the OM emission factor according to the selected method;</b></p> <p><b>(Section 6.4: From § 35-42)</b></p>	<p><b>Option A:</b> Based on the net electricity generation and a CO2 emission factor of each power unit.</p> $EF_{\text{generation}} = \frac{\sum EG_{m,y} \cdot EF_{EL,m,y}}{\sum EG_{m,y}}$ <p><b>Option A1:</b></p> $EF_{EL,m,y} = \frac{\sum FC_{m,y} + NEFC_{m,y} \cdot EF_{FC,m,y}}{EG_{m,y}}$ <p><b>Option A2:</b></p> $EF_{EL,m,y} = \frac{EF_{FC,m,y} \cdot 3.5}{\eta_{m,y}}$	<p>Since detailed and credible data is available for nation grid of Iran, Option A is used for the project.</p> <p>Under Option A, simple OM emission factor is calculated based on the net electricity generation of each power unit (<math>EG_{m,y}</math>) and an emission factor for each power unit (<math>EF_{EL,m,y}</math>).</p> <p>• <b>Determination of <math>EF_{EL,m,y}</math>:</b></p> <p>For determination of <math>EF_{EL,m,y}</math> Option A1, A2 and Option A3 are available according to the Tool<sup>/B10/</sup> and the PP selected the Option A1 and Option A2 for 1 power plant in Iran.</p> <p>In case of the project, the data on fuel consumption and electricity generation is available for every power plant except in one power plant (Mes Sarcheshmeh-steam) from the National Statistics of Iran power industry (2011-2014). Thus, Option A1 is used.</p> <p>In case of one power plant (Mes Sarcheshmeh- steam), data on fuel consumption in 2011-12 is not available from the Statistics. Thus, only for this power plant, Option A2 is used for the calculation of <math>EF_{EL,m,y}</math> in 2011 and thus in the calculation, average net energy conversion efficiency of power plant in 2011-12 (<math>\eta_{m,y}</math>) is correctly applied from the National Statistics of Iran power industry<sup>/18/</sup>.</p> <p>The validation team confirms that the PP has applied all credible and accessible data from the National</p>						

		<p>Statistics and the audit team through review of GEF calculation spread-sheet<sup>/05/</sup> checked its value.</p> <p>• <b>Determination of EG<sub>m,y</sub></b></p> <p>As per the Tool, EG<sub>m,y</sub> for grid power plants is determined by the data from the National Statistics of Iran Power Industry from 2011-14<sup>/18/</sup>. From this reference, the data on net electricity generation, fuel types and amount of fuels consumed in each power plant and the net calorific values of the fuels are obtained.</p> <p>Also, the emission factor of the fuels is obtained from national documents provided by Ministry of Energy of Iran.</p> <p>Validation team through review of GEF calculation spread-sheet<sup>/05/</sup> checked all the values. As a result, the latest 3 years Simple OM was calculated as below:</p> <table><tr><th>Year</th><th>EF<sub>grid,OM,Simple,y</sub> tCO<sub>2</sub>/MWh</th></tr><tr><td>2011-12</td><td>0.7308</td></tr><tr><td>2012-13</td><td>0.7359</td></tr><tr><td>2013-14</td><td>0.7568</td></tr></table> <p>So, EF<sub>grid,OM,Simple,y</sub>: <b>0.7412 tCO<sub>2</sub>/MWh.</b></p>	Year	EF <sub>grid,OM,Simple,y</sub> tCO <sub>2</sub> /MWh	2011-12	0.7308	2012-13	0.7359	2013-14	0.7568
Year	EF <sub>grid,OM,Simple,y</sub> tCO <sub>2</sub> /MWh									
2011-12	0.7308									
2012-13	0.7359									
2013-14	0.7568									
<p><b>Step 5: calculate the BM emission factor</b></p> <p><b>(Section 6.5: From § 70-78)</b></p>	<p>Option 1 (Ex-ante calculation in 1<sup>st</sup> crediting period) and using on the data of sample group SET<sub>Sample</sub></p> $EF_{grid,OM,y} = \frac{\sum_{m=1}^M EG_{m,y} \cdot EF_{m,y}}{\sum_{m=1}^M EG_{m,y}}$	<p>As per the §70 of the applied tool<sup>/B10/</sup>, the PP selected the Option 1 and it does not require monitoring the emission factor during the crediting period.</p> <p>• <b>Determination the sample group of power unit m:</b></p> <p>As per applied tool<sup>/B10/</sup>, sample group of power unit should be determined as compared between §73 (a) and (b);</p> <p>(a) Identify the set of five power units (SET<sub>5units</sub>) that have been built most recently and their annual electricity generation (AEG<sub>SET-5units</sub> in MWh)</p> <p>(b) Identify the set of power capacity additions in the electricity system that comprise 20% of the system generation (SET<sub>≥20 percents</sub>) and that have been built most recently and their annual electricity generation (AEG<sub>SET≥20% in MWh</sub>).</p> <p>As a result, the validation team checked the data on net electricity generation in 2014 (refer to GEF calculation spread-sheet<sup>/05/</sup>) and it shows that AEG<sub>SET≥20%</sub> is larger than AEG<sub>SET-5units</sub>. Thus, SET<sub>≥20percents</sub> was selected SET<sub>sample</sub>.</p> <p>• <b>Calculation of BM emission factor</b></p> <p>BM emission factor is the generation-weighted average emission factor</p>								

		<p>(tCO<sub>2</sub>/Mwh) of all power units and its calculation is also determined as per the calculation method of Step 4- the Simple OM.</p> <p>Validation team through review of GEF calculation spread-sheet<sup>/05/</sup> checked all the values.</p> <p>Accordingly, <b>EF<sub>grid,BM,y</sub>: 0.6406 tCO<sub>2</sub>/MWh</b> in 2013-14.</p>
<p><b>Step 6: Calculate the CM emission factor.</b></p> <p><b>(Section 6.5: From § 79-85)</b></p>	<p><b>Option (a): Weighted average CM</b></p> $EF_{CM,y} = EF_{grid,y} \cdot W_{OM} + EF_{grid,BM,y} \cdot W_{BM}$	<p>The CM has been calculated in line with the provisions of §84 (b) of the applied tool<sup>/B10/</sup> using a 50/50 OM/BM weight.</p> <p>Thus, it was correctly determined by using OM and BM emission factor calculated from above steps.</p> <p>Accordingly, <b>EF<sub>grid,CM,y</sub>: 0.6909 tCO<sub>2</sub>/MWh</b> in 2013-14.</p>

The resulting combined margin emission factor 0.7153 tCO<sub>2</sub>/MWh is fixed ex-ante for the first crediting period.

CL 03, 07 and 08 was raised in this regard and was successfully closed (ref Appendix -4).

- - - - -

## Document information

Version	Date	Description
01.0	4 May 2015	Initial publication.
<p>Decision Class: Regulatory</p> <p>Document Type: Form</p> <p>Business Function: Registration</p> <p>Keywords: programme of activities, validation report</p>		

