



PoA VALIDATION REPORT

Grid Connect SSC Solar PV Power Generation Plant Programme

REPORT No. CDM-VAL-PoA2-0076

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PoA title: Grid Connect SSC Solar PV Power Generation Plant Programme
1st CPA title: Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project
Coordinating/Managing Entity: Union Power Carbon Asset Management (Beijing) Co., Ltd.
Host country: China
Methodology: AMS-I.D. *Grid connected renewable electricity generation*, Version 17
GHG reducing Measure/Technology: renewable energy-solar
Size: ☐ Large Scale ☒ Small Scale
ER estimate of 1st CPA: 14,449 t CO₂e/year
Validation Status:
☐ Corrective Actions Requested
☐ Clarifications Requested
☒ Full Approval and Submission for Registration
☐ Rejected

Summary of the Validation Opinion:

☒ The review of the PoA design documentation and the subsequent follow-up interviews have provided CEPREI with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. In our opinion, the PoA meets all relevant UNFCCC requirements for the CDM. Therefore, CEPREI recommends the PoA for registration by the CDM Executive Board.

☐ The review of the PoA design documentation and the subsequent follow-up interviews have not provided CEPREI with sufficient evidence for the determination of the PoA's fulfillment of all stated criteria. Therefore, CEPREI will not recommend the PoA for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board of this decision.

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Reviewed by: Wei Zhihong	Date: 09/2012- 11/ 2012
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Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-CPA-DD	CDM Component Project Activity Design Document
CDM-PoA-DD	CDM Programme of Activities Design Document
CER	Certified Emission Reduction
CL	Clarification Request
CM	Combined Margin
CME	Coordinating/Managing Entity
CO ₂ e	Carbon Dioxide Equivalent
CPA	Component Project Activity
DNA	Designated National Authority
CEPREI	CEPREI Certification Body
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change Global
LoA	Letter of Approval
MP	Monitoring Plan
NDRC	National Development and Reform Commission
ODA	Official Development Assistance
OM	Operating Margin
PoA	Programme of Activities
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

Carbon Capital Management, Inc. has commissioned CEPREI Certification Body (hereafter called CEPREI) to perform the validation of PoA titled “Grid Connect SSC Solar PV Power Generation Plant Programme” (hereafter called “the PoA”). This report summarizes the findings of the validation of the PoA and the PoA specific small-scale CDM Component Project Activity Design Document with generic information relevant to all Component Project Activities (CPAs) to be included in this PoA. The validation was performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project activities, the procedures for registration of a programme of activities and the subsequent decisions by the CDM Executive Board.

1.1 Objective

The purpose of a validation is to have an independent third party assess the small-scale PoA design document (CDM-SSC-PoA-DD) and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA. In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme's baseline determination, monitoring plan, and the programme's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme and its intended generation of certified emission reductions (CERs).

1.2 Scope

The validation scope is defined as an independent and objective review of the CDM-SSC-PoA-DD and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA. The CDM-SSC-PoA-DD and CDM-SSC-CPA-DD were reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities, the procedures for registration of a programme of activities as a single CDM Programme Project Activity and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology applied.

The validation of the programme has also considered the completed CDM-SSC-CPA-DD for the CPA submitted together with the CDM-SSC-PoA-DD. The validation is based on the

recommendations in the Validation and Verification Manual.

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

2 METHODOLOGY

The validation consisted of the following three phases:

- I Desk review of the CDM-SSC-PoA-DD and the PoA generic and specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA
- II Follow-up interviews with project stakeholders
- III The resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more details.

2.1 Desk Review of the Project Design Documentation

The following table outlines the documentation reviewed during the validation:

Table 2.1 Document List

2.1.1 Methodologies, tools and other guidance by the CDM Executive Board	
/1/	CDM Executive Board: “Validation and Verification Manual”, Version 01.2
/2/	CDM Executive Board: approved methodology, “AMS-I.D. Grid connected renewable electricity generation”. Version 17
/3/	CDM Executive Board: “Tool to calculate the emission factor for an electricity system” Version 02.2.1
/4/	CDM Executive Board: “Guidelines on the demonstration of additionality of small-scale project activities” Version 09 (EB68 Annex 27)
/5/	CDM Executive Board: “Glossary of CDM terms” Version 06
/6/	CDM Executive Board: “CDM small-scale programme of activities design document form (CDM-SSC-PoA-DD)” Version 01
/7/	CDM Executive Board: “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” Version 01.0 (EB65 Annex3)
/8/	CDM Executive Board: “Registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA” Version 04.1 (EB55 Annex38)
/9/	CDM Executive Board: “Clarifications regarding the ‘Procedures for registration of a PoA as a single CDM project activity and issuance of CERs for a PoA’” Version 01 (EB60 Annex26)
/10/	CDM Executive Board: “Guidelines on assessment of debundling for SSC project activities” Version 03 (EB54 Annex13)
2.1.2 Documentation indicating the information of the proposed CDM project	
/11/	CDM-SSC-PoA-DD for PoA titled “Grid Connect SSC Solar PV Power Generation Plant Programme” version 01, 21/03/2012 version 02, 27/08/2012
/12/	Generic CDM-SSC-CPA-DD for PoA titled “Grid Connect SSC Solar PV Power Generation Plant

	Programme” version 01, 21/03/2012 version 02, 03/11/2012
/13/	Specific CDM-SSC-CPA-DD for CPA titled “Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project” version 01, 21/03/2012 version 02, 27/08/2012
/14/	Business license of Union Power Carbon Asset Management (Beijing) Co., Ltd.
/15/	Letter of Approval issued by DNA of Host Country (China) in November, 2012
/16/	Letter of Approval issued by DNA of Annex-1 country (Japan) dated 11/07/2012
/17/	Modalities of communication form, completed by Union Power Carbon Asset Management (Beijing) Co., Ltd. and Carbon Capital Management, Inc.
/18/	The minutes of CME Board meeting to decide on application for PoA registration dated 30/11/2011
/19/	CDM consultancy contract between the buyer (Carbon Capital Management, Inc.) and consulting company (KOE Environment Consultancy, Inc.(Japan)) issued on 22/01/2012
/20/	ERPA between 1 st CPA operator and Carbon Capital Management, Inc. dated 15/01/2012
/21/	Statement by the CPA operator dated 16/05/2012, confirming that the CPA fulfills the inclusion criteria as set out in the PoA-DD
/22/	PoA Management system developed by the CME, Union Power Carbon Asset Management (Beijing) Co., Ltd.

2.1.3 Other documentation used for validation or crosscheck

/23/	China NDRC: Circular on the Establishment of Feed-in Tariffs for On-grid Solar PV Power Generation, issued on 24/07/2011 http://www.sdpc.gov.cn/zcfb/zcfbtz/2011tz/t20110801_426501.htm
/24/	China NDRC: 2011 Baseline Emission Factors for Regional Power Grids in China, published on 20 October 2011, NDRC official website: http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2720.pdf
/25/	China Statistics Press: China Statistical Yearbook 2008-2010
/26/	China Statistics Press: China Energy Statistical Yearbook 2008-2010
/27/	China Electric Power Press: China Electric Power Yearbook 2008-2010
/28/	IPCC 2006

Main changes between the version published for the 30 days stakeholder commenting period and the final version submitted for registration are:

- 1) Revision of eligibility criteria for inclusion of CPA in the PoA
- 2) Details on operational and management plan
- 3) Deeper description of the monitoring plan for a SSC-CPA
- 4) Data processing in case of emergency
- 5) Changes related to the CARs and CLs identified in the CEPREI’s draft validation protocol.

After reviewing the PoA-DD (version 02), generic CPA-DD (version 02) and specific CPA-DD (version 02), CEPREI issued this final validation report and opinion.

2.2 Follow-up Interviews with Project Stakeholders

After GSC for the PoA-DD and CPA-DD of the Project (30/03/2012-28/04/2012), the validation team conducted an on-site visit to the 1st CPA project site on 27/06/2012. Representatives of CME, CPA owner and the project consultant were interviewed to resolve the issues identified during the desk review of the PoA-DD and CPA-DD. Local government officials and stakeholders of CPA were also invited to advance opinions on the proposed project. During the physical inspection, identified documents and information, PoA-DD, CPA-DD, FSR, EIA and additional background documents related to the project design and baseline were effectively assessed as a part of the validation.

The table below provides the information regarding the issues discussed during the site visits:

Table 2.2 Information of Interview

Date	Name	Organization	Topics
2012-06-27	Ms. Yang Lina Mr. Si Xiaoli Mr. Bai Yiping	Union Power Carbon Asset Management (Beijing) Co., Ltd. (as CME) Ningxia Chint Solar PV Power Generation Co., Ltd. (as CPA operator)	<ul style="list-style-type: none"> ➤ Project background information ➤ Project technology, operation, maintenance and monitoring capability ➤ Project additionality. ➤ Project monitoring and management plan. ➤ Project approval status (incl. EIA approval, CDM project approval status) ➤ Stakeholder consultation process
2012-06-27	Ms. Zhang Linxia	KOE Environment Consultancy, Inc. (Japan) (as project consultancy)	<ul style="list-style-type: none"> ➤ Applicability of selected methodology ➤ Baseline determination ➤ Emission reduction ➤ Monitoring plan
2012-06-27	Mr. Wang Zhengdong	Economic Development Bureau of Taiyangshan Development Zone, Wuzhong City	<ul style="list-style-type: none"> ➤ Approval Procedure ➤ ODA ➤ Power Load Factor of solar power plants ➤ Local applicable laws and regulations on solar power Projects ➤ Other similar projects in the region ➤ Sustainable development
2012-06-27	Mr. Yan Jun	Environmental Protection Bureau of Taiyangshan Development Zone, Wuzhong City	<ul style="list-style-type: none"> ➤ EIA Approval ➤ Environmental Impact ➤ Sustainable Development ➤ Monitoring of ecosystem during the implementation of the project
2012-06-27	Mr. Dong Wei	Electric Power Supply Bureau of Wuzhong City	<ul style="list-style-type: none"> ➤ Electricity Tariff ➤ Power Load Factor of solar power plants ➤ Letter of intent on Power Purchase
2012-06-27	Mr. Wang Yonglu	Local residents (from Linxiao Villiage)	<ul style="list-style-type: none"> ➤ Local stakeholder consultation process ➤ Opinion of the proposed project

2.3 Resolution of Outstanding Issues

The objective of this phase of the validation is to resolve any outstanding issues which need be clarified prior to CEPREI's positive conclusion on the project design. In order to ensure transparency a validation protocol is customized for the PoA. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements of a CDM Programme of Activity which are expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of four tables.

Table 1: Validation Requirements based on the CDM validation and verification manual (EB55 annex 1);

Table 2: Resolution of GSP Comments;

Table 3: Resolution of Corrective Action and Clarification Requests;

Table 4: Forward Action Requests.

The completed validation protocol for “Grid Connect SSC Solar PV Power Generation Plant Programme” is enclosed in ANNEX A to this report.

Findings established during the validation can either be seen as a non-fulfillment of CDM criteria or where a risk to the fulfillment of project objectives is identified.

A Corrective action requests (CAR) is issued, where:

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

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

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

2.4 Internal Quality Control

The validation report underwent a technical review before requesting registration of the PoA. The technical review was performed by a technical reviewer qualified in accordance with CEPREI's qualification scheme for CDM validation and verification.

2.5 Validation Team

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and one additional team member, was appointed. Furthermore also the personnel for the technical review and the decision making were determined. The validation team composition has been communicated to the PP on 31/03/2012. No rejection from the PP was received hence no changes happened.

The validation team consisted of the following personnel:

Table 2.3 Validation Team information

Name	Function ¹	Role ²	Technical area competence	Type of involvement						Appointment date
				Desk review	On-site visit/interview	Reporting	Supervision of work	Technical review	Expert input	
Li Yingbo	TL	V	--	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			2012-03-31
Chen Jufang	TM	E	X		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	2012-03-31
Wei Zhihong	TR	--	X					<input checked="" type="checkbox"/>		2012-03-31
Wang Xiuci	TCD/FA	--	--							--

¹⁾ Function: TL: Team Leader; TM: Team Member; TR: Technical review; FA: Final Approval TCD: Technical Committee Director

²⁾ Role: V : Verifier; E : Expert; T : Trainee

³⁾ Selection of TR and TR procedural administration

3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of validation and the results from validating the identified criteria are documented in more details in the validation protocol in Annex A.

The final validation findings relate to the project design as documented and described in the PoA-DD version 02 of 27/08/2012.

3.1 Participation Requirements

The project participants include Union Power Carbon Asset Management (Beijing) Co., Ltd. (designated as coordinating/managing entity) of China and Carbon Capital Management, Inc. of Japan.

Host party P.R. China and the Annex I Party Japan meet the requirements to participate in the CDM.

A Letter of Approval (LoA) was issued by the DNA of host country China in November, 2012. The DNA of China approves the precise PoA and the 1st Component Project Activity as titled in the PoA-DD and CPA-DD being submitted for registration. Union Power Carbon Asset Management (Beijing) Co., Ltd. is approved and authorized as China's participant to voluntarily participate in and carry out the PoA as the Coordinating/Managing Entity.

The DNA of the Annex I Party Japan issued a LoA on 11th July, 2012. This LoA refers to the PoA project “Grid Connect SSC Solar PV Power Generation Plant Programme” and approves voluntary participation of Carbon Capital Management, Inc.

The table given as below illustrates the authenticity of both letters of approval which has been validated by the validation team. These LoAs are therefore regarded as valid and as meeting the requirements of VVM (version 01.2) Para 45-48.

Table 3.1 Letter of Approval

BASIC INFORMATION		
Project participants	Union Power Carbon Asset Management (Beijing) Co., Ltd.	Carbon Capital Management, Inc.
Parties involved	People's Republic of China (Host Party)	Japan
APPROVAL		
Date received of LoA	21/11/2012	08/11/2012
LoA Received from	PP	PP
Reference to document	No.4852	120711003
Validation of authenticity	A list of LoAs issued by the DNA of China is available on the DNA's website: http://cdm.ccchina.gov.cn/	The validation team has checked the authenticity of LoA issued by the official emails of DNA of

	WebSite/CDM/UpFile/File2997.pdf The LoA of the Project is on the list.	Japan and does not doubt the authenticity of LoA.
Validity of LoA	Valid	Valid
PARTICIPATION		
Party is party to Kyoto Protocol	Yes	Yes
Voluntary participation	Yes	Yes
Project contribution to sustainable development	Yes	NA
The LoA is unconditional with above	Yes	Yes
Diversion of official development aid towards host country	NA	No

The PoA does not involve public funding, and the validation did not reveal any information that indicates that the project can be seen as a diversion of official development assistance (ODA) funding towards China.

3.2 Project Design

The PoA “Grid Connect SSC Solar PV Power Generation Plant Programme” is a voluntary action, organized and managed by Union Power Carbon Asset Management (Beijing) Co., Ltd., as authorized by China.

The PoA consists of the implementation of grid connected solar photo voltaic (PV) power generation projects, aiming to utilize renewable solar energy and thereby enables replacement of equivalent electricity generated by fossil fuel fired power plants.

The geographic boundary of the PoA lies within the grids that are controlled by State Grid or China Southern Power Grid which contain 30 provinces in China.

The PV solar power plants of each CPA under the PoA shall have an installed capacity of up to 15 MW. The 1st CPA “Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project” involves the installation of a solar PV power plant with output capacity of 10 MWp.

In accordance with Para 6(h) of “Registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA” (EB55 Annex 38, version 04.1), the length of the PoA is designed as 28 years. The starting date of the PoA is the same as that of the 1st CPA. Since the inverter purchase agreement of CPA is the earliest date at which either the implementation or construction or real action of a project activity begins, the date of contract signing (i.e. April 1st, 2012) becomes the starting date of the 1st CPA, as well as the PoA.

The prepared PoA-DD and CPA-DD were published online on 30/03/2012, open for comments up to 28/04/2012 and a desk review was conducted by the validation team. During the following site visit, further inconsistencies were observed relating to project design as compared to details mentioned in webhosted PoA-DD and CPA-DD. CLs related to the design documents have been raised and addressed (see accompanied CLs).

On the basis of desk review, it is concluded that the PoA-DD complies with “Small-scale Programme of Activities Design Document Form (CDM-SSC-PoA-DD)” version 01. The validation team considers the project description of the Programme contained in the PoA-DD to be complete and accurate.

3.3 Criteria for Inclusion of CDM Programme Activities

Eligibility criteria for inclusion of CPA under the proposed PoA have been clearly established, as contained in section A.4.2.2 of PoA-DD, version 02. The validation team has assessed the defined eligibility criteria as below:

Table 3.2 Eligibility criteria assessment

	Eligibility criteria	Opinion of the Validation Team
1	The geographic boundary of a CPA is the grids that are controlled by State Grid or the China Southern Power grid contained the 30 provinces in China and the CPA operator belongs to power generation companies.	It ensures that the geographic boundary of the CPA is within the chosen boundary set in the PoA. It's in line with Para. 14 (a) of EB65 Annex3 .
2	<p>According to the project information database set up by the CME, the CME will confirm that:</p> <ul style="list-style-type: none"> (i) All solar PV power plant to be newly installed under a CPA is not and will not be part of another CDM project or PoA; (ii) All CPA operators involved in the PoA are aware and agree with the inclusion of a CPA to the proposed PoA. (iii) The proposed CPA doesn't registered as a single CDM project and will not be a part of another registered PoA; (iv) The project information including name, geographic coordinates, technology, equipment and end-user of the proposed CPA can be uniquely identified. <p>To ensure the above information, a written statement should be issued by the CPA operators. Meanwhile, CME will search in UNFCCC website or confirm with relevant organization to</p>	Each CPA operator is required to issue a written statement confirming the authenticity of the above information. Besides, the CME will review the features derived from each CPA against publicly available information. These are stipulated in the “PoA Management System” established by the CME. These can be seen as effective condition to avoid double accounting, in accordance with Para. 14 (b) of EB65 Annex3 .

	check the information of the proposed CPA against the information of other similar CDM project activities to ensure that no overlap between CPAs occurs, thereby avoiding double accounting of emission reductions.	
3	Only solar PV power generation technology is involved in the CPA with no solar thermal electricity generation technology included. Such technologies may include, but are not limited to single crystal silicon, polycrystalline silicon and thin film technologies;	This specifies the applied technology/measure of the proposed PoA, in accordance with Para. 14 (c) of EB65 Annex3 .
4	No equipment will be transferred from another project activities, and no technology transfer is involved in the CPA;	Leakage is not considered in the case that no energy generating equipment is transferred from another project as stipulated in AMS-I.D. version 17 . Thus this criterion sticks with ERs calculation process in E.6.2 of PoA-DD.
5	The start date (defined in the Glossary of CDM terms) of the CPA is not prior to the PoA GSC date. The start date of each CPA is determined as the earliest date at which either the implementation or construction or real action of a project activity begins. To determine the project starting date, the documents that will be reviewed includes the Equipment Purchase Contract, the Construction Contract, and the Construction Permit etc;	As per Para. 14 (d) of EB65 Annex3 , conditions are set up to check the start date of the CPA through documentary evidence.
6	An existing Approved CDM Methodology AMS-I.D. (Version 17.0), is applicable to a CPA;	Detailed requirements in PoA-DD section A.4.2.2 are deemed sufficient to ensure complete compliance with AMS-I.D. version 17 and Para. 14 (e) of EB65 Annex3 .
7	A CPA meets following criteria for assessing additionality according to Guidelines on the demonstration of additionality of small-scale project activities (Version 09.0): <ul style="list-style-type: none">(i) Solar technologies;(ii) the installed capacity of no more than 15MW;	<p>As per Para. 2 of EB68 Annex 27, solar power generation projects with an installed capacity up to 15 MW are automatically defined as additional. Thus the validation team confirms that the criterion 7 includes the demonstration of additionality for each CPA with regard to Para. 14 (f) of EB65 Annex3.</p> <p>This criterion also ensures that every CPA in aggregate meets the small-scale threshold criteria and remains within the threshold throughout the crediting period of the CPA, in accordance with Para. 14 (k) of EB65 Annex3.</p> <p>Moreover, it's confirmed that the compliance with this criterion ensures that all the relevant additionality related guidelines, tools or any</p>

		requirements embedded in the applied methodology AMS-I.D are met.
8	The length of the proposed PoA does not exceed 28 years, as well as the CPA crediting period will not exceed the PoA end date;	This condition is developed in line with requirements from Para. 6 (h) and Para. 7 (c) of EB55 Annex38 .
9	Local stakeholder consultations and environmental impact analysis will be carried out at the CPA level, both of which will be conducted by the operator of each CPA prior to the start date of the CPA and can be clearly identified according to the documentary evidence;	This condition ensures the timing and the level of undertaking local stakeholder consultations and environmental impact analysis, consistent with Para. 14 (g) of EB65 Annex3 .
10	All CPAs will not involve public funding from Annex I Parties;	The criterion ensures the relevant information of the ODA. It is consistent with Para.14 (h) of EB65 Annex 3 .
11	<p>All CPA operators involved in the PoA should confirm in a written statement that the proposed CPA complies with the debundling check as per “Guidelines on assessment of de-bundling for SSC project activities”. The CME will also verify if there is a registered small-scale CDM project activity or an application to register another small-scale CDM project activity:</p> <ul style="list-style-type: none"> • With the same project participants; • In the same project category and technology/measure; and • Registered within the previous 2 years; and • Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point. 	As the proposed PoA is small-scale, requirements for the debundling check are set out as per Para.14 (l) of EB65 Annex 3 . The criterion also conforms to the latest guidelines on debundling check for SSC project activities.

Target group, distribution mechanisms and sampling requirements are not specified in the above conditions as they are not applicable to this Programme. Thus requirements of **Para.14 (i) and (j)** of **EB65 Annex 3** are not included in Table 3.2.

In summary, the above conditions cover a minimum list as stated in “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” Version 01.0 (EB65 Annex3) and conform to relevant requirements.

The validation team determines that these criteria are sufficiently objective and comprehensive to facilitate the assessment of the inclusion of CPAs in the PoA and all CPAs would comply with the CDM requirements applicable to the PoA.

3.4 Operational, Management and Verification Plan

The proposed PoA involves implementation of solar PV power plants in China. Union Power Carbon Asset Management (Beijing) Co., Ltd. is authorized to coordinate and manage all CPAs, acting as the focal point for all CDM related activities.

The operational and management plan developed by the CME is described in section A.4.4.1 of PoA-DD. These arrangements are validated against EB decisions “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” Version 01, shown as following:

a. A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies.

The CME has clearly defined responsibilities and tasks of personnel involved in the PoA for activities including inclusion of CPA, monitoring, data archiving and analysis and CDM application et al.

CME will also review the competencies of participants via documentation review and field survey to guarantee smooth operation and good management. The contents of review are described in the “PoA Management System”, including the following:

- The legal validity of the participating company and nature of occupied business;
- Adequacy of financial funds;
- Whether the participant is experienced in operating solar PV power generation projects;
- Whether the participant has applied for CDM registration before.

b. Records of arrangements for training and capacity development for personnel.

Periodic training sessions will be given by CME to keep up to date with specific CDM requirements of the programme. Once a new CPA is included, the very CPA operator will receive training on data monitoring especially with respect to CDM requirements. New recruits are not allowed to take up the job until they received necessary education and training on CDM monitoring and pass due examinations. The consultant company KOE Environment Consultancy, Inc. (Japan) is obliged to provide technical consulting and technical support, as agreed in the “PoA Management System”.

As for the 1st CPA, documented training records on safety production and operation have been provided, which includes contents of daily operation and maintenance of main equipment and monitoring system.

c. Procedures for technical review of inclusion of CPAs.

Arrangement for technical review is established and elaborated in the “PoA Management System” by CME to assess the eligibility of the proposed CPA, as well as compliance of technical and methodological requirements.

Table 3.3 Arrangements for Technical review

	Contents	Required documents
Qualification assessment	<ul style="list-style-type: none"> ● The legal validity of the participating company and nature of occupied business; ● Adequacy of financial funds; ● Whether the participant is experienced in operating solar PV power generation projects; ● Whether the participant has applied for CDM registration before. 	<ul style="list-style-type: none"> ● Corporate business license ● Tax Registration Certificate ● Audit report ● Certificate for contributed investment ● Operation record for other solar PV power generation projects
Due diligence	<ul style="list-style-type: none"> ● Approval and construction status for the project ● Compliance with the PoA eligibility criteria ● On-site inspection 	<ul style="list-style-type: none"> ● FSR and EIA ● Approval of the project and related contracts ● Loan contract ● Proof of geological coordinates of the project

For the 1st CPA, required materials have been collected by the CME and provided to audit team for validation. It's concluded that the managing entity has performed its function on technical review of inclusion of CPAs.

d. A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA).

A system to avoid double accounting is designed consisting of two parts.

Firstly, as contained in section A.4.2.2 Eligibility Criteria of PoA-DD, a CPA operator confirms the following in the form of written statement:

- (i) All solar PV power plant to be newly installed under a CPA is not and will not be part of another CDM project or PoA;
- (ii) All CPA operators involved in the PoA are aware and agree with the inclusion of a CPA to

the proposed PoA.

- (iii) The proposed CPA doesn't registered as a single CDM project and will not be a part of another registered PoA;

Secondly, the CME will conduct cross-check against information from DNA website and UNFCCC website. A database will be built comprised of project information to facilitate examination of double accounting.

The 1st CPA is deemed eliminating the possibility of double counting after being validated through the above inspection by the validation team.

e. Records and documentation control process for each CPA under the PoA.

A record keeping system is developed, maintained and updated by CME. On the inclusion of a CPA, feature information is extracted and stored in the system, including CPA title, CPA owner, geographical coordinates, monitoring equipment number and project operation status et al. As per the responsibilities and tasks arranged in the "PoA Management System", CPA operator is in charge of collecting all monitoring parameters. Then all the generated data will be reported by CPA operators to the CME periodically and archived in the record keeping system. The CME shall verify input data via receipts or invoices issued by a third party and other project information through field check if necessary.

f. Measures for continuous improvements of the PoA management system.

As elaborated in the PoA-DD and "PoA Management System", measures for continuous improvements are conducted in view of the latest EB requirements and comments from stakeholders, as well as supplement resulted from practical operation during PoA/CPA processing. Any members can request a revision of related procedures in case of deviation/update of a process. The periodic training is also regarded as part of improvement process.

g. The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity.

De-bundling check is an important part of operational and management plan. As stated above, a written statement by CPA operator confirms that the CPA is not a de-bundled component of another CPA or CDM project. Besides, the latest guidelines on assessment of de-bundling for SSC projects will be employed by the CME to guarantee non-debundling of potential CPAs.

For the first CPA, it is confirmed that it's not a de-bundled component of another CDM project

activity by review of the written statement and crosscheck via UNFCCC website¹ and China CDM website².

h. The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA.

One of the eligibility criteria requires a written statement from the CPA operators confirming the awareness and agreement of the CPA inclusion. This has been verified for the 1st CPA after reviewing the statement issued by Ningxia Chint Solar PV Power Generation Co., Ltd.

In conclusion, the validation team considers that the CME has developed clear arrangements for operation, management and verification of the PoA to ensure complete control of all records and information resulted from implementation of each CPA and to guarantee the compliance of specific requirements of the programme. The operational and management plan outlined in PoA-DD fully meets requirements of “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (Version 01) and Para 166 of VVM version 01.2.

3.5 Baseline Determination

The PoA and consequently each CPA correctly quotes and applies the simplified baseline methodology AMS-I.D. *Grid connected renewable electricity generation* (version 17.0).

Table 3.4 Applicability of Applied Methodology

	As per the methodology	As per the CPA
1	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that (a) supplying electricity to a national or a regional grid; or (b) supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	According to eligibility criteria as outlined in the PoA-DD, each CPA under the proposed PoA comprises renewable energy generation units using solar photovoltaic power generation technology and will supply electricity to a national or a regional grid or supply electricity to an identified consumer facility via national/regional grid through a contractual arrangement.
2	This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a	According to eligibility criteria as outlined in the PoA-DD, each CPA under the proposed PoA is a green field solar PV power generation project, which supplies electricity generated to the grid.

¹ <http://cdm.unfccc.int/>

² <http://cdm.ccchina.gov.cn/web/index.asp>

	replacement of (an) existing plant(s).	
3	<p>Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p><input type="checkbox"/><input type="checkbox"/>The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</p> <p><input type="checkbox"/><input type="checkbox"/>The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4W/m²;</p> <p><input type="checkbox"/><input type="checkbox"/>The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m².</p>	Not applicable. The proposed PoA is a solar PV power generation project.
4	If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	According to eligibility criteria as outlined in the PoA-DD, the generation unit of Each CPA under the proposed PoA is a new solar PV power plant with capacity of no more than 15MW.
5	Combined heat and power (co-generation) systems are not eligible under this category.	According to eligibility criteria as outlined in the PoA-DD, each CPA under the proposed PoA is a solar PV based power plant only, and no heat will be generated in this system.
6	In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	According to eligibility criteria as outlined in the PoA-DD, each CPA under the proposed PoA is a green field solar PV power generation project, which doesn't involve the addition of renewable energy generation units at an existing renewable power generation facility.
7	In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	According to eligibility criteria as outlined in the PoA-DD, each CPA under the proposed PoA is a green field solar PV power generation project, which doesn't involve retrofitting or modifying an existing facility for renewable energy generation.

The proposed PoA fully meets the applicability conditions of AMS-I.D. (version 17.0) and the various methodology tools referred to within the methodology.

In regard to baseline determination, the applied baseline and monitoring methodology AMS-I.D.

(version17.0) states the following:

The baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. The validation team judges that the PoA-DD appropriately identified the credible and feasible baseline scenario to the project activity, complying with the selected methodology and all the relevant tools.

Since the geographic boundary of the PoA lies within the grids that are controlled by State Grid or China Southern Power Grid, six regional grids delineated by China DNA are identified as relevant electricity system. As per “Tool to calculate the emission factor for an electricity system” version 02.2.1, the combined margin emission factor is calculated consisting 75% operating margin and 25% build margin approach for the proposed PoA (solar PV projects). The basic parameters used for calculating baseline emissions of the PoA are sourced from “2011 Baseline Emission Factors for Regional Power Grids in China” published by China NDRC on 20 October 2011. This is the latest version of Baseline Emission Factors for Regional Power Grids in China, published by Chinese DNA at the time of PoA validation (See Table 3.5).

Table 3.5 Basic parameters used for calculating baseline emissions

Power Grid	EF _{grid,OM,y} (tCO ₂ /MWh)	EF _{grid,BM,y} (tCO ₂ /MWh)	EF _{grid,CM,y} (tCO ₂ /MWh)
Northern China Power Grid	0.9803	0.6426	0.89588
Northeast China Power Grid	1.0852	0.5987	0.96358
Eastern China Power Grid	0.8367	0.6622	0.79308
Central China Power Grid	1.0297	0.4191	0.87705
Northwest China Power Grid	1.0001	0.5851	0.89635
Southern China Power Grid	0.9489	0.3157	0.79060

The system boundary of the programme has been validated by means of documentation review and physical site observation (for the 1st CPA). In accordance with the applied methodology, the project boundary is delineated by the physical, geographic site of the renewable generation source and all the power plants physically connected to the electricity system that the CPA project power plant is connected to.

The validation team confirms that emission sources and gases included in the project boundary are properly identified as per the applied methodology AMS-I.D. version 17. Descriptions of sources and gases are listed in Table 3.6.

Table 3.6 Description of sources and gases in the boundary

Source		Gas	Included?	Justification / Explanation
Baseline	CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.	CO ₂	Yes	Main emission source
		CH ₄	No	Minor emission source
		N ₂ O	No	Minor emission source
Project activity	For solar PV power plants	CO ₂	No	As per AMS-I.D. Version 17.0, the project emission of solar PV power project is considered as zero.
		CH ₄	No	
		N ₂ O	No	

The validation of the Programme did not reveal other greenhouse gas emissions occurring within the proposed project activity boundary as a result of the implementation of the proposed PoA which are expected to contribute more than 1% of the overall expected average annual emission reduction, which are not addressed by the applied methodology AMS-I.D. version 17.

3.6 Additionality

3.6.1 Additionality of the Programme

Currently there are no national, provincial or local requirements in China for mandatory application of solar PV technology to generate electricity. Hence it is confirmed that the proposed programme coordinated by Union Power Carbon Asset Management (Beijing) Co., Ltd. is a voluntary coordinated action out of a private entity.

As illustrated in the eligibility criteria for inclusion of CPA, the proposed programme involves installation of grid-connected solar power generation projects with output capacity up to 15MW. In accordance with “Guidelines on the demonstration of additionality of small-scale project activities” (version 09, EB68 Annex27), all Component Project Activities under the PoA is automatically defined as additional, without further documentation of barriers.

Additionality of CPA will be conducted by means of the above mentioned eligibility criteria. This is in line with Para 4 of “Clarifications regarding the ‘Procedures for registration of a PoA as a single CDM project activity and issuance of CERs for a PoA’” (version 01, EB60 Annex26).

3.6.2 Additionality of typical CPA

Each CPA has to meet the eligibility criteria threshold before inclusion in the PoA. A typical

CPA is to use solar PV renewable resources in power generation and to deliver electricity to the grid, and the installed capacity shall not exceed the limits for small-scale CDM project activities. Thus the additionality has been demonstrated by fulfillment of various criteria as justified in section 3.6.1 of the validation report.

The fulfillment of criteria regarding additionality is confirmed by documentation such as FSR and its approval, equipment purchase contracts, Power Purchase Agreement (PPA) et al. For the 1st CPA titled “Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project”, the additionality related condition is met, evidenced by FSR approval, solar cell purchase contract and corresponding warehousing warrant, as well as letter of intent on power purchase, which prove the additionality of the CPA.

In summary, additionality of the programme has been well demonstrated. Corresponding criteria are correctly established and stated. Clear thresholds are set up to ensure that each CPA within the PoA meets the requirements for additionality.

3.7 Monitoring

The programme applies the approved monitoring methodology AMS-I.D. version 17, which the validation team considered to be applicable for the programme. The monitoring plan has been designed in line with requirements of AMS-I.D. version 17 and drafted to focus on monitoring the net quantity of electricity delivered to connected power grid by each CPA. The monitoring plan will give opportunity for real measurements of achieved emission reductions and contains principles and concepts on which it is based, operational and monitoring obligations of the CPA operators like resources involved in the monitoring process, training, supportive activities, calibration and data collection, quality assurance procedures, data management, electronic supporting tools, etc.

The application of the monitoring methodology is transparent. The validation team concludes that the monitoring plan as contained in the PoA-DD is designed with feasibility and suitability, which the CPA operators are capable of effective implementation to ensure accuracy of emission reductions data.

3.7.1 Parameters determined ex-ante

Ex-ante emission factor in year y $EF_{CO_2,grid,y}$ (tCO₂ /MWh) is determined as combined margin (CM), which is calculated from operating margin (OM) and build margin (BM) according to the “Tool to calculate the emission factor for an electricity system” (version 02.2.1) and its value will be fixed in the first crediting period. The relevant grid system for each individual CPA is defined as per “2011 Baseline Emission Factors for Regional Power Grids in China” published by China DNA in October 2011. This is the latest version of emission factors for power grids of

China at the time of PoA validation.

By means of review of EB requirements and corresponding official documentation, the validation team is able to confirm the reliability of data sources and correctness of calculation and results.

3.7.2 Parameters monitored ex-post

The parameter $EG_{\text{facility},y}$, defined as net quantity of electricity supplied to the grid as a result of the implementation of the CDM projects in year y , is identified to be monitored ex-post.

Electric energy measuring equipment of the CPAs should be collocated and installed as per national or industry standards.

According to eligibility criterion 4 in PoA-DD, no equipment will be transferred from another project activities, which means no replacement of equipment is involved in the PoA, thus the monitoring of scrapping of replaced equipment is not required to implement.

It is the validation team's view that the monitoring of parameters and data process comply with the applied methodology AMS-I.D. version17.

3.7.3 Management system and quality assurance

The monitoring arrangements for the programme projects have been described in the PoA-DD (version 02, 27/08/2012):

- For the electric meter set for monitoring $EG_{\text{facility},y}$, the accuracy (at least 0.5s), monitoring frequency (continuously) and recording frequency (monthly) have been identified in the PoA-DD appropriately.
- The operation and management structure of the monitoring, as well as the management and storage of monitoring data have been described appropriately.
- The electric meters will be annually calibrated by a qualified third party as per national or industry standards.
- The emergency procedure and the correct action have been identified appropriately.
- QA/QC procedures are clearly defined.
- Training for personnel in respect of CDM specific monitoring will be provided before staff get into actual operation.

In summary, the validation team is convinced that the monitoring plan reflects good monitoring practice appropriate to the project type and the PP is able to implement the monitoring plan.

3.8 Methodological Choices and Equations Used for Calculation of Emission Reduction of a CPA

The validation team has assessed the compliance of steps and equations to calculate project emissions, baseline emissions, leakage and emission reductions with the requirements outlined in the applied methodology. A comparison was made to determine correct application and consistency of equations and parameters between the PoA-DD, the selected approved methodology and applicable tools. As per AMS-I.D. (version17), for a typical SSC-CPA under the programme (greenfield solar PV plant):

- **Project Emission:** $PE_y = 0$

- **Baseline Emission**

$$BE_y = EG_{BL,y} \cdot EF_{CO_2,grid,y}$$

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

- **Leakage**

$LE_y = 0$ (As outlined in the eligibility criteria, no energy generating equipment is transferred from another activity, thus leakage is considered as zero.)

- **Emission Reduction**

$$ER_y = BE_y - PE_y - LE_y = BE_y = EG_{BL,y} \cdot EF_{CO_2,grid,y} = EG_{facility,y} \cdot EF_{CO_2,grid,y}$$

where:

ER_y	Emissions reductions of the project activity during the year y (tCO ₂ e);
BE_y	Baseline emissions during the year y (tCO ₂ e);
PE_y	Project emissions during the year y (tCO ₂ e);
LE_y	Project leakage during the year y (tCO ₂ e).

For the first CPA “Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project”

- Annual average of emissions reductions over the crediting period: 14,449 t CO₂e
- Total Number of 1st Crediting Years: 7

- Total estimated reductions: 101,143t CO₂e

3.9 Environmental Impacts

Environmental Impact Assessment (EIA) for new construction projects is required in China. Prior to inclusion in the programme, EIA for the proposed CPA shall be conducted by a qualified third party, which is stipulated in the eligibility criteria. The EIA report will be reviewed and assessed by local environmental protection agency. Projects are not permitted to start up without approval of EIA. In consideration of project-specific characteristics, environmental impact analysis would be performed at the CPA level. Before inclusion of potential CPA, the CME will conduct due examination against EIA to ensure its eligibility in this aspect.

3.10 Comments by Local Stakeholders

Local stakeholder consultation process is done at the CPA level for the purpose of collecting project-specific comments from local stakeholders.

For the first CPA “Ningxia Chint Taiyangshan Phase I 10MWp Grid Connect Solar PV Power Plant Project”, comments on the CDM project activity were invited in the form of questionnaires. It turned out that no adverse comments were received. This has been verified by means of on-site interview and evidence reviewed.

3.11 Comments by Parties, Stakeholders and NGOs

The PoA-DD (version 1.0) of 21/03/2012 was made publicly available on UNFCCC’s website (<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/34ZFY89OH4JNEIQ2F2UOKDDLERN0X3/view.html>) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 30/03/2012 to 28/04/2012.

The comment period is over for the PoA and 1st CPA. Comments are not available yet.

4 VALIDATION OPINION

CEPREI Certification Body (CEPREI) has performed a validation of the small-scale programme of activity (PoA) titled “Grid Connect SSC Solar PV Power Generation Plant Programme” in China and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA.

The validation was performed on the basis of UNFCCC criteria for programme of activities under the Clean Development Mechanism (CDM) and host Party criteria, as well as criteria given to provide for consistent programme operations, monitoring and reporting.

The review of the programme design documentation and the subsequent follow-up interviews have provided CEPREI with sufficient evidence to determine the fulfillment of stated criteria.

The host Party is People’s Republic of China and Annex I Party is Japan. Both Parties fulfill the participation criteria. The DNA from People’s Republic of China issued the Letter of Approval of the project activity confirming that the Programme assists in achieving sustainable development, approved the Programme and the 1st CPA, and authorized Union Power Carbon Asset Management (Beijing) Co., Ltd. to act as the coordinating/managing entity for the Programme.

The programme correctly applies AMS-I.D “Grid Connected renewable energy generation”, version 17.

The programme utilizes solar PV power to produce renewable energy in the form of electricity and supplies to the grid which results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the programme is not a likely baseline scenario. Emission reductions attributable to the programme are hence additional to any that would occur in the absence of the programme of activity.

The total emission reductions from the first CPA are estimated to be 14,449 tCO_{2e} on average per year over the selected renewable 7 years crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training and monitoring procedures have been described.

In summary, it is CEPREI’s opinion that the PoA titled “Grid Connect SSC Solar PV Power Generation Plant Programme” in China, as described in the CDM-SSC-PoA-DD of 27/08/2012, meets all relevant UNFCCC requirements for a PoA under the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AMS-I.D, version 17.

CEPREI thus requests the registration of the PoA titled “Grid Connect SSC Solar PV Power

Generation Plant Programme” as a PoA under the CDM.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: *Wang Xiuci*

Name: **Wang Xiuci**

Date: 22/11/2012

CEPREI CERTIFICATION BODY

ANNEX A: CDM PROJECT VALIDATION PROTOCOL
VALIDATION PROTOCOL

Table 1-1: validation requirements based on the CDM validation and verification manual (EB55 Annex 1)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
1.Approval Have All Parties involved approved the Programme Project Activity?	VVM44	DR	Country A (China)	Country B (Japan)		
1.1 Has the DNA of each Party indicated as being involved in the proposed CDM Programme Project Activity in section A.3 of the PoA-DD provided a written letter of approval?(If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participant or directly from the DNA)	VVM45		CAR 1: LoAs from host country and Annex I country have not been provided to the validation team. CAR 1 is closed after LoA of China is provided and verified through the official website of NDRC. Refer to section 3.1 for details.	CAR 1: LoAs from host country and Annex I country have not been provided to the validation team. CAR 1 is closed after LoA of Japan is provided and verified to be valid. Refer to section 3.1 for details.	Pending	OK
1.2. Does the letter of approval from DNA of each Party involved:	VVM45					
i. Confirm that the Party is the Party of the Kyoto Protocol?			Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
ii. Confirm that participation is voluntary?			Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
iii. Confirm that, in the case of the host Party, the proposed CDM Programme Project Activity contributes to the sustainable development of the country?			Pending on CAR 1. Yes.	N.A.	Pending	OK
iv. Refers to the precise proposed CDM Programme Project			Pending on CAR 1.	Pending on CAR 1.	Pending	OK

*MoV=Means of Verification, DR=Document Review, I=Interview

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
Activity title in the PoA-DD being submitted for registration?			Yes.	Yes.		
1.3 Is (are) the letter(s) of approval unconditional with respect to (a) to (d) above?	VVM46		Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
1.4 Has (have) the letter(s) of approval has been issued by the respective Party's designated national authority (DNA)? The letter of approval is valid for the proposed CDM Programme Project Activity under validation?	VVM47		Pending on CAR 1. Yes. The validation team verified the authenticity of LoA through official website.	Pending on CAR 1. Yes. The authenticity of Japan LoA is verified.	Pending	OK
2.Participation						
2.1 Have all project participants been listed in a consistent manner in the project documentation?	VVM51		Pending on CAR 1. Yes. Union Power Carbon Asset Management (Beijing) Co., Ltd. as the Coordinating/Managing Entity has been listed in the project documentation in a consistent manner.	Pending on CAR 1. Yes. Carbon Capital Management, Inc. as the project participant has been listed in the project documentation in a consistent manner.	Pending	OK
2.2 Has the participation of the PPs in the Programme Project Activity been approved by a Party to the Kyoto Protocol?	VVM51		Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
2.3 Are the project participants listed in tabular form in section A.3 of the PoA-DD?	VVM52		Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
2.4 Is this information consistent with the contact details provided in annex 1 of the PoA-DD?	VVM52		Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
2.5 Has the participation of each project participant been approved by at least one Party involved, either in a letter of	VVM52		Pending on CAR 1. Yes. The participation in the PoA of	Pending on CAR 1. Yes. The participation in the PoA	Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
approval or in a separate letter specifically to approve participation?			Union Power Carbon Asset Management (Beijing) Co., Ltd. is approved in the China LoA.	of Carbon Capital Management, Inc. is approved in the Japan LoA.		
2.6 Are any entities other than those approved as project participants included in these sections of the PoA-DD?	VVM52		Pending on CAR 1. No.	Pending on CAR 1. No.	Pending	OK
2.7 Has the approval of participation been issued from the relevant DNA?	VVM53		Pending on CAR 1. Yes.	Pending on CAR 1. Yes.	Pending	OK
3. project design document						
3.1 Is the PoA-DD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM55		CAR 2: The CDM-SSC-PoA-DD version 01 is applied. However the footer “This template shall not be altered. It shall be completed without modifying/adding headings or logo, format or font.” is missing from the submitted PDD version by the project participants. The PoA-DD formatting shall be revised accordingly. CAR 6: As per CDM-SSC-PoA-DD Form, E.5.1 and E.5.2 is missing. Please revise accordingly. CAR 2 is closed after the PoA-DD has been revised to be consistent with the latest template. CAR 6 is closed after E.5.1 and E.5.2 have been added and verified to be applicable in PoA-DD version 02.		Pending	OK
3.2 Is the PoA-DD is in accordance with the applicable requirements for completing PoA-DD?			CL 2: Description presented in section A.4.2.1 is not sufficient and transparent in specifying technology or measures employed by the CPA. Detailed information (e.g. possible range of installed capacity, CPA operator, and equipment procurement) needs to be provided. CL 3: Description presented in section A.4.2.1 is not sufficient and transparent in specifying technology or measures employed by the CPA. Detailed information (e.g. possible range of installed capacity,		Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			CPA operator, and equipment procurement) needs to be provided. CL 2 and CL 3 were closed after detailed information is added.			
4. Description of the Programme						
4.0.1 Does the CDM-PoA-DD set a general framework for the operating and implementing of the PoA and defines unambiguously a CPA under the PoA?	PoA Procedures		CL 1: The aim of the proposed project and CME are provided in section A.2. However, the description has not provided sufficient information regarding framework for operating and implementation of the PoA. Further clarification is requested. CL 1 is closed after general description on the PoA operation and implantation is specified.	Pending		OK
4.0.2 Does the coordinating/managing entity clearly identified?			Yes. The coordinating/managing entity is Union Power Carbon Asset Management (Beijing) Co, Ltd, which is clearly identified in A.2 of PoA-DD.	OK		OK
4.0.3 Is 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 defined?			CAR 3: The geographic boundary stipulated in “Eligibility criteria” for CPA is inconsistent with that set for the PoA in A.4.1.2. CAR 3 is closed after the geographic boundary of the PoA is consistently defined in the PoA-DD.	Pending		OK
4.0.4 Is the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA described? In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA, is there a transparent system defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA?			As indicated in A.4.4.2 of PoA-DD, no sampling method/procedure is to be used for verification. CL 4: As per CDM-SSC-PoA-DD version 01, “a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA”. Explanation on this issue is deemed insufficient. Please provide related information. CL 4 is closed after the CME has set up proper arrangements to avoid double counting and to monitor the status of verification in PoA-DD version 02.	Pending		OK
4.1 Physical/ Geographical boundary						



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
4.1.1 Are the programme's spatial boundaries (geographical) clearly defined?			Pending on CAR 3. CAR 3 is closed. The special boundary of the Programme is within P.R. China except Tibet Autonomous Region.	Pending		OK
4.2 Duration of the Programme of Activities, Crediting Period						
4.2.1 Are the programme starting date and length of the programme clearly defined and evidenced?			CAR 7: Since the equipments and construction contracts have been signed, the starting date of the proposed PoA shall be determined. Please correct the statement in corresponding section of PoA-DD and CPA-DD. CAR 7 is closed after the revision has been made. The start date is deemed to be 1 st April 2012, evidenced by the equipment purchase contract. The length of the Programme is 28 years, in accordance with relevant requirements.	Pending		OK
4.2.2 Does the PoA design documentation confirm that the length of the PoA does not exceed 28 years?			Yes. The length of the Programme is 28 years, in accordance with relevant requirements.	OK		OK
5. Eligibility criteria for CPA inclusion of the Programme						
5.1 Does the programme establish eligibility criteria for inclusion of a project as a CPA under the PoA?			Yes. Eligibility criteria for inclusion of CPA in the PoA are specified in A.4.2.2 of PoA-DD.	OK		OK
5.2 Does the DOE determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements will include inter alia the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.	167		CAR 4: The following issues shall be clearly stated as part of eligibility criteria for inclusion of CPA: a. CPA crediting period not exceed the PoA end date; b. The timing for local stakeholder consultation and environmental impact assessment of CPA; c. The level and type of service offered by the employed technology/measures;	Pending		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			d. Requirements for debundling check. CAR 4 is closed. a. Related criterion is added. It is in line with requirements from Para. 6 (h) and Para. 7 (c) of EB55 Annex38. b. Related criterion is added. It ensures the timing and the level of undertaking local stakeholder consultations and environmental impact analysis, consistent with Para. 14 (g) of EB65 Annex3. c. Related criterion is added. It specifies the applied technology/measure of the proposed PoA, in accordance with Para. 14 (c) of EB65 Annex3. d. Related criterion is added. As the proposed PoA is small-scale, requirements for the debundling check are set out as per Para.14 (l) of EB65 Annex 3. The criteria also conform to the latest guidelines on debundling check for SSC project activities.			
5.3 Does the eligibility criteria defined for inclusion of CPA under the PoA include criteria covering as a minimum the following? (a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA; (b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo); (c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications; (d) Conditions to check the start date of the CPA through documentary evidence;	EB65 Annex3		Pending on CAR 4. Yes. The validation team deems that the defined eligibility criteria conform to EB 65, Annex 3 after revision in response to CAR 4.		Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
<p>(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;</p> <p>(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;</p> <p>(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;</p> <p>(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;</p> <p>(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);</p> <p>(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;</p> <p>(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;</p> <p>(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.</p>						

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
6. Operational, management and monitoring plan for the programme						
<p>6.1 Does the DOE determine whether the arrangements are sufficient to ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme?</p> <p>In case the DOE considers the arrangements to be unsatisfactory or insufficient a CAR shall be raised and a request for registration shall not be submitted until the CAR has been resolved to the satisfaction of the DOE.</p>	VVM166		<p>CAR 5: The operational and management arrangement listed in section A.4.4.1 is not sufficient to ensure that the CME will have control of all records and information related to CPA implementation. Clarification is necessary especially in the following points:</p> <ul style="list-style-type: none"> a. information or documents required from each CPA to fill in the record keeping system; b. formation of CPA operator and related personnel training to ensure proper application of CDM implementation; c. measure for the CME to verify the accuracy of reported data by CPA operator; if sampling of monitored data is involved, sampling plan should be included; d. In Table 1, the responsible entity for monitoring and data archiving and analysis is missing; furthermore, task description is not comprehensive; e. approaches for reviewing competencies of participants; f. measure to avoid double counting g. in point (iii), technical review should be further elaborated. Besides, “technical manual” is mentioned. Please provide details of the technical manual for validation ; h. debundling check for each potential CPA by CME before inclusion; i. measures as outlined in point (vii) is deemed insufficient for continuous improvement of PoA management system. <p>Besides, information on how the CME will review CPA against fulfillment of these criteria has to provide to the validation team.</p> <p>CAR 5 is closed. Corresponding descriptions are revised or added in the</p>		Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			PoA-DD and "PoA Management System". The validation team has confirmed them to be in accordance with Para. 166 of VVM ver.1.2. Refer to section 3.4 of the validation report for more details.			
6.2 Do the operational and management arrangements established by the coordinating entity include a record keeping system for each CPA under the programme?			Yes. A record keeping system is established for each CPA under the PoA.	OK		OK
6.3 Do the operational and management arrangements established by the coordinating entity include a system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA?			Yes. A system/procedure to avoid double accounting has been set up and the validation team deems applicable.	OK		OK
6.4 Do the operational and management arrangements established by the coordinating entity include provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA?			This requirement has been incorporated in the eligibility criteria.	OK		OK
7. Baseline and monitoring methodology						
7.1 General requirement						
7.1.1 Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM65		Yes. The applied methodology is AMS.I.D. complying with methodologies previously approved by the CDM Executive Board.	OK		OK
7.2 Applicability of the selected methodology to the Programme of Activity						
7.2.1 In CDM-PoA-DD section E.1, are any methodologies or tools which the above approved methodology draws upon and their version number indicated?	E.1 of PoA-DD		Yes. Applied methodology and tools and their version number are indicated.	OK		OK
7.2.2 Is the methodology correctly quoted and applied by	VVM70		Yes. The applied methodology AMS-I.D. is the latest and valid version (ver.	OK		OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
comparing it with the actual text of the applicable version of the methodology available on the UNFCCC CDM website.			17.0).			
7.2.3 Are the applicability conditions of the methodology are met? Does the Programme not expected to result in emissions other than those allowed by the methodology?	VVM71		Yes. The applicability conditions of the methodology are met. The Programme does not expected to result in emissions other than those allowed by the methodology AMS-I.D version 17.	OK	OK	OK
7.2.4 Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PoA-DD? If yes, do the DOE cross check the PoA-DD against the other sources to confirm that the Programme meets the applicability conditions of the methodology?	VVM71		Yes. The validation team has employed other information source for crosscheck to confirm the applicability of the PoA to the methodology AMS-I.D.	OK	OK	OK
7.2.5 Are the applicability criteria in the baseline methodology all fulfilled?			Yes. This has been fully demonstrated in E.2 of PoA-DD.	OK	OK	OK
7.2.6 Can a determination regarding the applicability of the selected methodology to the proposed CDM Programme of Activity be made? If no, clarification of the methodology was request in accordance with the guidance provided by the CDM Executive Board.	VVM72		Yes. The validation team concludes that the proposed CDM Programme of Activity meets the applicability of the selected methodology AMS-I.D.	OK	OK	OK
7.2.7 If the applicability conditions of the methodology are not met, is revision or deviation from the methodology requested in accordance with the guidance provided by the CDM Executive Board?	73		N.A.	N.A.	N.A.	N.A.
7.3 Description of sources and gases included in the CPA boundary						
7.3.1 Is the delineation in the PoA-DD of the project boundary correct?	78		CL 7: The included sources and gases in the CPA are specified. However, the defined boundary for CPA is missing.	Pending	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			CL 7 is closed. The project boundary is delineated by the physical, geographic site of the renewable generation source and all the power plants physically connected to the electricity system that the CPA project power plant is connected to.			
7.3.2 Does the delineation in the PoA-DD of the project boundary meet the requirements of the selected baseline methodology?	78		Pending on CL 7. Yes. The delineation in the PoA-DD of the project boundary meets the requirements of AMS-I.D.	Pending		OK
7.3.3 Have all sources and GHGs required by the methodology been included within the project boundary?	VVM79		Yes.	OK		OK
7.4 Baseline identification						
7.4.1 Does the PoA-DD identify the baseline for the proposed CDM Programme of Activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed Programme?	VVM81		Yes. The baseline scenario is as follows: Electricity delivered to the grid by each CPA would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in Tool to calculate the emission factor for an electricity system.	OK		OK
7.4.2 Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM82		N.A. The proposed programme is the installation of a new grid-connected renewable power plant, thus the methodology AMS-I.D. prescribes the baseline scenario.	OK		OK
7.4.3 Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionally” and the “Combined tool to identify the baseline scenario and demonstrate additionally”) to establish the baseline scenario? If yes, is the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	82		No. The methodology AMS-I.D. prescribes the baseline scenario.	OK		OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
7.4.4 Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario? If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology, reasonable in the context of the proposed Programme? If yes, has any unreasonable alternative scenario been excluded?	83		No. The methodology AMS-I.D. prescribes the baseline scenario.	OK	OK	OK
7.4.5 Are documents and sources referred to in the PoA-DD correctly quoted and interpreted?	VVM84		Yes. The validation team checked all the documents and sources referred to in the PoA-DD and confirmed they were correctly quoted and interpreted.	OK	OK	OK
7.4.6 Is the information provided in the PoA-DD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM84		Yes. The information has been cross checked with the applied methodology and the valid official EF data issued on NDRC website at the time of validation and found consistent.	OK	OK	OK
7.4.7 Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM Programme of Activity, including “relevant national and/or sectoral policies and circumstances?”	VVM85		Yes. The methodology AMS-I.D. prescribes the baseline scenario.	OK	OK	OK
7.4.8 Have all relevant policies and circumstances been identified and correctly considered in the PoA-DD, in accordance with the guidance by the CDM Executive Board?	VVM85		Yes. The methodology AMS-I.D. prescribes the baseline scenario.	OK	OK	OK
7.4.9 Does the PoA-DD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM Programme of Activity?	VVM86		Yes. The methodology AMS-I.D. prescribes the baseline scenario.	OK	OK	OK
7.5 Algorithms and/or formulae used to determine						



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
emission reductions						
7.5.1 Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring methodology?	VVM89		CL 8: The calculation process and formula of Emission Factor of the Grid are needed to provide as it is part of baseline emission calculation. CL 8 is closed after calculation process of emission factor has been added and verified to be in line with related CDM tools.	Pending		OK
7.5.2 Have the equations and parameters in the PoA-DD been correctly applied by comparing them to those in the selected approved methodology?	VVM90		Yes. The validation team confirms the equations and parameters are in accordance with the selected approved methodology AMS-I.D. (version17) and “Tool to calculate the emission factor for an electricity system” (version 02.2.1).	OK		OK
7.5.3 Does the methodology provide for selection between different options for equations or parameters? If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM Programme of Activity and other evidence provided)? If yes, have the correct equations and parameters been used, in accordance with the methodology selected?	VVM90		Options are provided for determination of emission factors. The justification has been provided and the equations and parameters are correct and in accordance with AMS-I.D.and Tool-Grid EF. The correct equations and parameters have been used in accordance with the methodology selected.	OK		OK
7.5.4 Will data and parameters be monitored throughout the crediting period of the proposed CDM Programme of Activity? If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions: i. Appropriate and correct? ii. Applicable to the proposed CDM Programme of Activity? iii. Resulting in a conservative estimate of the emission reductions?	VVM91		The emission factor $EF_{CO_2,grid,y}$ is determined ex ante and remains fixed throughout the first crediting period. The equations and parameters are consistent with the official calculation of baseline emission factor, “2011 Baseline Emission Factors for Regional Power Grids in China”, issued on 20/10/2011 by China DNA. They are in accordance with the methodology selected and applicable to the Programme. The parameter is applied resulting in a conservative estimate of emission reductions.	OK		OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
7.5.5 Will data and parameters be monitored on implementation and hence become available only after validation of the Programme of Activity?	VVM90		The parameter $EG_{\text{facility},y}$ is monitored throughout the crediting period, in accordance with AMS-I.D. version 17 and applicable to the Programme.	OK	OK	OK
8. Demonstration of Additionality						
8.1 Additionality of a Programme Project Activity						
8.1.1 Are all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality, reliable and credible?	95		Yes.	OK	OK	OK
8.1.2 Does the CDM-PoA-DD state the latest version of the additionally tool being used?	96		CL 11: Tool for demonstration of additionality of SSC projects has been updated to version 09. Please revise the PoA-DD accordingly. CL 11 is closed after additionality tool has been updated into “Guidelines on the demonstration of additionality of small-scale project activities” (version 09).	Pending	OK	OK
8.1.3 Is additionality of the programme demonstrated in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.			As illustrated in the eligibility criteria for inclusion of CPA, the proposed programme involves installation of grid-connected solar power generation projects with output capacity up to 15MW. In accordance with “Guidelines on the demonstration of additionality of small-scale project activities” (version 09, EB68 Annex27), all Component Project Activities under the PoA is automatically defined as additional, without further documentation of barriers.	OK	OK	OK
8.1.4 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?			Yes. It's demonstrated in A.4.3 of PoA-DD. Currently there are no national, provincial or local requirements in China for mandatory application of solar PV technology to generate electricity. Hence it is confirmed that the proposed programme coordinated by Union Power Carbon Asset Management (Beijing) Co., Ltd. is a voluntary	OK	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			coordinated action out of a private entity.			
8.1.5 If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is being enforced? If it is enforced, has it been demonstrated that the Programme will lead to a higher level of enforcement?			N.A. At present there are no national, provincial or local requirements in China for mandatory application of solar PV technology to generate electricity.	OK		OK
8.2 Additionality of CPAs						
8.2.1 Is the approach described for demonstrating additionality of a CPA in accordance with the using the procedure provided in the baseline and monitoring methodology applied?			Yes. Additionality of CPA will be conducted by means of the eligibility criteria while no full assessment is required. This is in line with Para 4 of “Clarifications regarding the ‘Procedures for registration of a PoA as a single CDM project activity and issuance of CERs for a PoA’” (version 01, EB60 Annex26).	OK		OK
8.2.2 Are specific criteria for demonstrating the additionality of a specific CPA included in the PoA?			Yes. According to “Clarifications regarding the ‘Procedures for registration of a PoA as a single CDM project activity and issuance of CERs for a PoA’” (version 01, EB60 Annex26), the additionality of CPA will be conducted by means of the eligibility criteria while no full assessment is required.	OK		OK
8.2.3 Is the additionality of a typical CPA demonstrated?			Yes. Detailed description is stated in 3.6.2 of the validation report.	OK		OK
9. Monitoring plan						
9.1 Does the PoA-DD include a monitoring plan? Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM Programme of Activity?	VMM122		Yes. A monitoring plan is included in the PoA-DD, fully conforming to the applied methodology AMS-I.D.	OK		OK
9.2 Does the monitoring plan include a description of a proposed statistically sound sampling method and procedure to be used by designated operational entities for			Sampling method is not applied for the Programme. A transparent system to avoid double counting has been specified in the “Operational and management plan”.	OK		OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
verification of GHG emission reductions by CPAs under the programme? OR If the programme does not use verification method that applies a statistical method for sampling, has a system been defined to avoid double counting of CERs, and is the system transparent?						
9.3 Are the list of parameters required by the selected methodology identified?	VVM123		Yes. In E.7.1 of PoA-DD, EG _{facility,y} is identified.	OK	OK	OK
9.4 Does the monitoring plan contain all necessary parameters?	VVM123		Yes. In E.7.1 of PoA-DD, EG _{facility,y} is identified.	OK	OK	OK
9.5 Are the parameters clearly described?	VVM123		Yes.	OK	OK	OK
9.6 Do the means of monitoring described in the plan comply with the requirements of the methodology?	VVM123		CL 9: Please specify the parameter EG_{facility,y} regarding measuring method and QA/QC procedures. CL 9 is closed. The calibration frequency and accuracy of meters, as well as data crosschecking are specified.	Pending	OK	OK
9.7 Are the monitoring arrangements described in the monitoring plan are feasible within the project design?	VVM123		Yes.	OK	OK	OK
9.8 Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM Programme of Activity can be reported ex post and verified? i. data management procedures? ii. quality assurance procedures? iii. quality control procedures?	VVM123		CL 10: a. Please clarify the reference to “project participant” as stated in the 1st Paragraph and the relationship between project operator and CPA operator; c. Data processing in case of emergency is not clear; d. Frequency for data reporting to CME is to be provided. e. Details on how CME will justify the appropriateness of data and implementation. CL 10 is closed after corresponding descriptions have been revised or	Pending	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
			added. Refer to section 3.7 of the validation report for detailed validation.			
10. Sustainable development						
10.1 Do CDM project activities assist Parties not included in Annex I to the Convention in achieving sustainable development?	125		Pending on CAR 1.	Pending		
10.2 Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM Programme Project Activity to the sustainable development of the host Party?	126		Pending on CAR 1.	Pending		
11. Local stakeholder consultation						
11.1 Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM Programme Project Activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM Programme of Activity prior to the publication of the PoA-DD on the UNFCCC website?	128		CL 6: The justification on why the local stakeholder consultation is done at CPA level is not sufficiently described in section D.1 of the PoA-DD. CL 6 is closed after justification on why the local stakeholder consultation is done at CPA level is deemed sufficient. The local stakeholder consultation is conducted at CPA level.	Pending		OK
11.2 Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM Programme of Activity, been invited?	129		N.A. The local stakeholder consultation is conducted at CPA level.	N.A.		N.A.
11.3 Is the summary of the comments received as provided in the PoA-DD complete?	129		N.A. The local stakeholder consultation is conducted at CPA level.	N.A.		N.A.
11.4 Have the project participants taken due account of any comments received and described this process in the PoA-DD?	129		N.A. The local stakeholder consultation is conducted at CPA level.	N.A.		N.A.
12. Environmental impacts						
12.1 Have project participants submitted documentation to	131		CL 5: It is not clearly indicated in section C.1 for justification on the	Pending		OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
CEPREI on the analysis of the environmental impacts of the Programme of Activity?			choice of level chosen at which the environmental analysis is undertaken. CL 5 is closed after justification on the choice of level chosen at which the environmental analysis is undertaken is deemed sufficient. The environmental impact assessment is conducted at CPA level. Thus no EIA report of the Programme is submitted for validation.			
12.2 Have the project participants undertaken an analysis of environmental impacts?	132		N.A. The environmental impact assessment is conducted at CPA level.	N.A.		N.A.
12.3 Does the host Party require an environmental impact assessment?	132		Yes. Environmental impact assessment for new projects is required by government of host country (China).	OK		OK
12.4 If yes, have the environmental impact assessment approved by local government?	132		N.A. The environmental impact assessment is conducted at CPA level.	N.A.		N.A.
13. Stakeholder consultation process						
13.1 Have Parties, stakeholders and UNFCCC accredited NGOs been invited to comment on the validation requirements for minimum 30 days? (large A/R project for minimum 45 days) Have the project design document and comments been made publicly available?	40-42		Yes. The PoA-DD (version 1.0) of 21/03/2012 was made publicly available on UNFCCC's website (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/34ZFY89OH4JNEIQ2F2UOKDDLERN0X3/view.html) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 30/03/2012 to 28/04/2012.	OK		OK
13.2 Has due account been taken of any stakeholder comments received?			N.A. The comment period is over for the PoA and 1st CPA. Comments are not available yet.	N.A.		N.A.
14. Requirements for small-scale CDM project activities						
14.1 Does the Programme of Activity fall within the thresholds of the three possible types of Small-scale project activities?	136		Yes. All the CPA under the PoA is renewable grid-connected power plant with installed capacity up to 15MW, falling within the thresholds of three possible types of Small-scale project activities.	OK		OK
14.2 Does the Programme of Activity conform to one of the	136		Yes. The Programme conforms to small-scale category I.D. and applies	OK		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Draft Concl.	Final Concl.
approved small-scale categories and applies the relevant tool or methodology?			AMS-I.D. version 17.			
14.3 Is the CPA under the PoA a de component of a large-scale project?	136		No. A de-bundling check will be conducted as one of the eligibility criteria to make sure that no de-bundled component will be included in the PoA.	OK		OK
14.4 Does the additionality of small scale project activities conform to relevant specific requirements of additionality?			Yes. The demonstration of additionality of the CPA under the PoA is done as per “Guidelines on the demonstration of additionality of small-scale project activities” (version 09, EB68 Annex27).	OK		OK

Table 2: Resolution of GSP comments

Table 2: List of GSP comments and resolution

No.	Comments	Summary of project owner response	Other information source	Validation team conclusion
1	N.A.			

Table 3: Resolution of CARs and CLs

Table 3.1: List of Requests for Corrective Action (CAR)

No.	CAR	Reference	Summary of project owner response	Validation team conclusion
1	LoAs from host country and Annex I country have not been provided to the validation team.	PoA-DD	LoAs from host country and Annex I country will be provided before submission for registration.	The LoAs from DNA of China and Japan have been provided and verified. Hence CAR 1 is closed.
2	The CDM-SSC-PoA-DD version 01 is applied. However the footer “This template shall not be altered. It shall be completed without modifying/adding headings or logo, format or font.” is missing from the submitted PDD version by the project participants. The PoA-DD formatting shall be revised accordingly.	PoA-DD	The footer “This template shall not be altered. It shall be completed without modifying/adding headings or logo, format or font.” has been added in the revised CDM-SSC-PoA-DD. The CPA-DD has also been revised accordingly.	The PoA-DD has been revised to be consistent with the latest template. Hence CAR 2 is closed.
3	The geographic boundary stipulated in “Eligibility	A.4.2.2 of	The geographic boundary stipulated in	The geographic boundary of the PoA is

	criteria” for CPA is inconsistent with that set for the PoA in A.4.1.2.	PoA-DD	“Eligibility criteria” has been revised as the whole P.R.China except for Tibet Autonomous Region, which is consistent with that set for the PoA in A.4.1.2. Please refer to section A.4.2.2 of the revised PoA-DD.	consistently defined in the PoA-DD. Hence CAR 3 is closed.
4	<p>The following issues shall be clearly stated as part of eligibility criteria for inclusion of CPA:</p> <p>a. CPA crediting period not exceed the PoA end date;</p> <p>b. The timing for local stakeholder consultation and environmental impact assessment of CPA;</p> <p>c. The level and type of service offered by the employed technology/measures;</p> <p>d. Requirements for debundling check.</p>	A.4.2.2 of PoA-DD	<p>The following issues have been clearly stated as part of eligibility criteria for inclusion of CPA, including:</p> <p>a. The length of the proposed PoA does not exceed 28 years, as well as the CPA crediting period will not exceed the PoA end date;</p> <p>b. The timing for local stakeholder consultation and environmental impact analysis will be prior to the state date of the CPA and can be clearly identified according to the documentary evidence;</p> <p>c. The service offered by the employed technology/measures may include, but are not limited to single crystal silicon, polycrystalline silicon and thin film technologies.</p> <p>d. CME will conduct the debundling check according to “Guidelines on assessment of de-bundling for SSC project activities”. Detailed process has been provided in</p>	<p>a. Related criterion is added. It is in line with requirements from Para. 6 (h) and Para. 7 (c) of EB55 Annex38.</p> <p>b. Related criterion is added. It ensures the timing and the level of undertaking local stakeholder consultations and environmental impact analysis, consistent with Para. 14 (g) of EB65 Annex3.</p> <p>c. Related criterion is added. It specifies the applied technology/measure of the proposed PoA, in accordance with Para. 14 (c) of EB65 Annex3.</p> <p>d. Related criterion is added. As the proposed PoA is small-scale, requirements for the debundling check are set out as per Para.14 (l) of EB65 Annex 3. The criteria also conform to the latest guidelines on debundling check for SSC project activities.</p>

			section A.4.4.1 of the revised PoA-DD.	
5	<p>The operational and management arrangement listed in section A.4.4.1 is not sufficient to ensure that the CME will have control of all records and information related to CPA implementation. Clarification is necessary especially in the following points:</p> <p>a. information or documents required from each CPA to fill in the record keeping system;</p> <p>b. formation of CPA operator and related personnel training to ensure proper application of CDM implementation;</p> <p>c. measure for the CME to verify the accuracy of reported data by CPA operator; if sampling of monitored data is involved, sampling plan should be included;</p> <p>d. In Table 1, the responsible entity for monitoring and data archiving and analysis is missing; furthermore, task description is not comprehensive;</p> <p>e. approaches for reviewing competencies of participants;</p> <p>f. measure to avoid double counting</p> <p>g. in point (iii), technical review should be further elaborated. Besides, “technical manual” is mentioned. Please provide details of the technical</p>	A.4.4.1 of PoA-DD	<p>The operational and management arrangement listed in section A.4.4.1 has been revised , including:</p> <p>a. Detailed information required from each CPA to fill in the record keeping system has been provided in the PoA management system;</p> <p>b. Related training for CME and CPA operator will be carried out to ensure proper application of CDM implementation. Detailed information regarding to formation of CPA operator and related personnel training to ensure proper application of CDM implementation has been provided in the PoA management system;</p> <p>c. CME will verify the accuracy of reported data through relevant proofs from 3th entity, such as receipts or invoices as well as conduct field check if necessary;</p> <p>d. The responsible entity for monitoring and data archiving and analysis has been clearly clarified in Table 1 of the revised PoA-DD;</p> <p>e. CME is responsible for reviewing competencies of participants. More details</p>	<p>Corresponding descriptions are revised or added in the PoA-DD and “PoA Management System”. The validation team has confirmed them to be in accordance with Para. 166 of VVM ver.1.2. Refer to section 3.4 of the validation report for more details.</p> <p>Hence CAR 5 is closed.</p>

	<p>manual for validation ;</p> <p>h. debundling check for each potential CPA by CME before inclusion;</p> <p>i. measures as outlined in point (vii) is deemed insufficient for continuous improvement of PoA management system.</p> <p>Besides, information on how the CME will review CPA against fulfillment of these criteria has to provide to the validation team.</p>		<p>please refer to the PoA management system;</p> <p>f. Measure to avoid double counting has been discussed in section A.4.2.2 (eligibility criteria) of the revised PoA-DD;</p> <p>g. Detailed information about full directions of technical review will be provided in the PoA management system;</p> <p>h. CME will conduct debundling check according to “Guidelines on assessment of de-bundling for SSC project activities” before the inclusion of each CPA, which has been specified in section A.4.4.1 of the revised PoA-DD;</p> <p>i. Continuous improvements of the PoA management system must consider not only latest EB decisions and changing monitoring requirement but also the comments from the whole stakeholders of the PoA. More details please refer to the PoA management system.</p> <p>Please refer to the revised PoA-DD or the PoA management system to see the clarification about all of the above points.</p> <p>As for the information on how the CME will review CPA against fulfillment of these criteria, please refer to the PoA management system.</p>	
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6	As per CDM-SSC-PoA-DD Form, E.5.1 and E.5.2 is missing. Please revise accordingly.	E.5 of PoA-DD	E.5.1 and E.5.2 have been revised as per CDM-SSC-PoA-DD Form. Please refer to section E.5 of the revised PoA-DD.	In PoA-DD version 02, E.5.1 and E.5.2 have been added and verified to be in accordance with “Guidelines on the demonstration of additionality of small-scale project activities” version 09. Hence CAR 6 is closed.
7	Since the equipments and construction contracts have been signed, the starting date of the proposed PoA shall be determined. Please correct the statement in corresponding section of PoA-DD and CPA-DD.	B.1 of PoA-DD, A.4.2.1 of specific CPA-DD	The starting date has been revised as 01/04/2012, when the Inverter Purchase Contract signed. Please refer to section B.1 of the revised PoA-DD and section B.2 of the revised CPA-DD.	The start date of the first CPA is determined to be 1 st Apr, 2012. Revision has been made in PoA-DD and CPA-DD. Hence CAR 7 is closed.

Table 3.2: List of Requests for Clarification (CL)

No.	CL	Reference	Summary of project owner response	Validation team conclusion
1	The aim of the proposed project and CME are provided in section A.2. However, the description has not provided sufficient information regarding framework for operating and implementation of the PoA. Further clarification is requested.	A.2. of PoA-DD	The aim of the proposed PoA is to establish a CDM framework to which solar PV power generation projects can be included in the proposed PoA as CPAs, as well as the CME is responsible for managing all CPAs, coordinating all the entities involved in the PoA, CPA inclusion and selling CERs in the international market, which have been further clarified in section A.2 of the revised PoA.	General description on the PoA operation and implantation is specified. Hence CL 1 is closed.

2	Please indicate whether all applicable national and/or sectoral policies and regulations within the chosen boundary will be taken into consideration in the project design and determination of baseline in section A.4.1.2.	A.4.1.2 of PoA-DD	The statement, all applicable national and/or sectoral policies and regulations within the chosen boundary have been taken into consideration, is added in section A.4.1.2 of the revised PoA-DD.	It's clear that all applicable national and/or sectoral policies and regulations within the chosen boundary are taken into consideration in the design of PoA. Hence CL 2 is closed.
3	Description presented in section A.4.2.1 is not sufficient and transparent in specifying technology or measures employed by the CPA. Detailed information (e.g. possible range of installed capacity, CPA operator, and equipment procurement) needs to be provided.	A.4.2.1 of PoA-DD	Technologies applied by each CPA may include, but are not limited to single crystal silicon, polycrystalline silicon and thin film technologies, which have been specified in section A.4.2.1. The range of installed capacity has also been provided. Please refer to section A.4.2.1 of the revised PoA-DD.	Detailed information is added. Hence CL 3 is closed.
4	As per CDM-SSC-PoA-DD version 01, “a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA”. Explanation on this issue is deemed insufficient. Please provide related information.	A.4.4.2 of PoA-DD	The issue of “a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA” has been further explained in section A.4.2.2. Please refer to the revised PoA-DD.	The CME has set up proper arrangements to avoid double counting and to monitor the status of verification, as specified in PoA-DD version 02. Hence CL 4 is closed.
5	It is not clearly indicated in section C.1 for justification on the choice of level chosen at which the environmental analysis is undertaken.	C.1. of PoA-DD	Due to the difference of geographical and ecological environment, environmental analysis will be conducted for each solar PV power generation project at CPA level according to the applicable environmental policies. The justification on the choice of level has been clearly indicated in section C.1 of the revised	Justification on the choice of level chosen at which the environmental analysis is undertaken is deemed sufficient. Hence CL 5 is closed.



			PoA-DD.	
6	The justification on why the local stakeholder consultation is done at CPA level is not sufficiently described in section D.1 of the PoA-DD.	D.1 of PoA-DD	In order to collect essential project specific information and all affected local stakeholder comments, stakeholder consultation will be conducted at CPA level. The justification on the choice of level has been clearly described in section D.1 of the revised PoA-DD.	Justification on why the local stakeholder consultation is done at CPA level is deemed sufficient. Hence CL 6 is closed.
7	The included sources and gases in the CPA are specified. However, the defined boundary for CPA is missing.	E.3 of PoA-DD	The boundary of the CPA is added in section E.3 of the revised PoA-DD.	The project boundary is delineated by the physical, geographic site of the renewable generation source and all the power plants physically connected to the electricity system that the CPA project power plant is connected to. Hence CL 7 is closed.
8	The calculation process and formula of Emission Factor of the Grid are needed to provide as it is part of baseline emission calculation.	E6.2 of PoA-DD	The calculation process and formula of Emission Factor of the Grid have been provided in section E.6.2 of the revised PoA-DD.	Calculation process of emission factor has been added and verified to be in line with related CDM tools. Hence CL 8 is closed.
9	Please specify the parameter $EG_{\text{facility},y}$ regarding measuring method and QA/QC procedures.	E.7.1 of PoA-DD	The parameter $EG_{\text{facility},y}$ regarding measuring method and QA/QC procedures, including calibration frequency, measurement precision and crosscheck method, has been specified in section E.7.1 of the revised PoA-DD.	The calibration frequency, accuracy of meters and data crosscheck are specified. Hence CL 9 is closed.
10	a. Please clarify the reference to “project participant” as stated in the 1 st Paragraph and the relationship between project operator and CPA operator;	E.7.2 of PoA-DD	a. “Project participant” as stated in the 1 st Paragraph of E.7.2 means “CPA operator”. As well, project operator and CPA operator are the same meaning. The description has been unified	Corresponding descriptions have been revised or added. Refer to section 3.7 of the validation report for detailed validation. Hence CL 10 is closed.

	<p>c. Data processing in case of emergency is not clear;</p> <p>d. Frequency for data reporting to CME is to be provided.</p> <p>e. Details on how CME will justify the appropriateness of data and implementation.</p>		<p>as “CPA operator” in the revised PoA-DD.</p> <p>b. Emergency procedures have been clearly described in section E.7.2. Please refer to the revised PoA-DD.</p> <p>c. Data will be reported to CME monthly, which has been provided in section E.7.2 of the revised PoA-DD. Please refer to the PoA management system for detailed description on the frequency of data reporting.</p> <p>d. The CME will verify the reported data through relevant proofs from 3th entity, such as receipts or invoices, as well as conduct field check if necessary to check the appropriateness of data. Furthermore, the CPA operator is required to provide Operation and maintenance records for CME to verify the appropriateness of implementation. Please refer to the PoA management system for more details on how CME will justify the appropriateness of data and implementation.</p>	
11	Tool for demonstration of additionality of SSC projects has been updated to version 09. Please revise the PoA-DD accordingly.	PoA-DD	As per Guidelines on the demonstration of additionality of small-scale project activities (version 09), the PoA-DD has been updated accordingly.	Tool for demonstration of additionality of SSC projects has been updated. Hence CL 11 is closed.

Table 4: List of Forward Action Requests (FARs)

Table 4: List of Forward Action Requests (FARs)				
No.	FAR	Summary of project owner response	Other information source	Validation team conclusion
1	N.A.			

ANNEX B

Certificate of Appointment



