VALIDATION REPORT

DATANG ANGLI (LINGWU) NEW ENERGY CO., LTD.

VALIDATION OF THE NINGXIA ANGLI LINGWU PHOTOVOLTAIC GRID CONNECTED POWER PLANT PROJECT

REPORT NO. BVC/CHINA-VAL/6240/2012

Revision No. 01

BUREAU VERITAS CERTIFICATION

62/71 Boulevard du Château
92571 Neuilly Sur Seine Cdx - France

Date of first issue:	Organizational unit:
16/09/2012	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
Datang Angli (Lingwu) New Energy Co., Ltd.	Mr. Deng Shaohui

Summary:

Bureau Veritas Certification has completed the validation of Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project owned by Datang Angli (Lingwu) New Energy Co., Ltd. located in Baitugang County, Lingwu City, Ningxia Hui Autonomous Region, P.R.China on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up on-site visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 Version 13.0.0 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.:	Subject Group:
BVC/CHINA-Val/6240/2012	CDM
Project title:	
Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project	
Work carried out by:	
Mr.Tony Li Xingtong Team Leader	
Internal technical Review carried out by:	
Ms. Jasmine Tang Xuemei	

Date of this revision:	Rev. No.:	Number of pages:
05/11/2012	01	149

Indexing terms

Work approved by:
Flavio Gomes

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution

Content

1. INTRODUCTION

Datang Angli (Lingwu) New Energy Co., Ltd. (The project participant from the Host Party, hereafter referred to as "**the PP**") has commissioned Bureau Veritas Certification to validate its CDM project Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project (hereafter referred to as "**the Project**") in Baitugang County, Lingwu City, Ningxia Hui Autonomous Region, P.R.China.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1. Objective

The validation serves as project design verification and is a requirement of all projects. It is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2. Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3. Validation team and Internal Technical Reviewer

FUNCTION	NAME	CODE HOLDER	TASK PERFORMED*
Team Leader	Mr.Tony Li Xingtong	☒**Yes** ☐ **No**	☒**DR** ☒**SV** ☒**RI**
Team Member	N.A.	☐**Yes** ☐ **No**	☐**DR** ☐**SV** ☐**RI**
Technical Specialist	N.A.	☐**Yes** ☐ **No**	☐**DR** ☐**SV** ☐**RI**

Financial Specialist	N.A.	☐**Yes** ☐ **No**	☐**DR** ☐**SV** ☐**RI**
Internal Technical Reviewer (ITR)	Ms. Jasmine Tang Xuemei	☒**Yes** ☐ **No**	☒**DR** ☐**SV** ☐**RI**
Specialist supporting ITR	N.A.	☐**Yes** ☐ **No**	☐**DR** ☐**SV** ☐**RI**

*DR = Document Review; SV = Site Visit; RI = Report issuance

2. METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual /2/, issued by CDM Executive Board at its 55th meeting on 30/07/2010. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is 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 completed validation protocol is enclosed in Appendix A to this report.

2.1. Review of Documents

The Project Design Document (PDD) submitted by DTM (Beijing) Energy Technology Development Co., Ltd. and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, DTM (Beijing) Energy Technology Development Co., Ltd. revised the PDD and resubmitted it on 19/10/2012 and the validation conclusion presented in this report relate to the project as described in the PDD version 02.

2.2. Follow-up Interviews

On 15/05/2012, Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review.

Representatives of the Datang Angli (Lingwu) New Energy Co., Ltd., the consultant and local stakeholders were interviewed (see Section 6 REFERENCES). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Datang Angli (Lingwu) New Energy Co., Ltd. (The PP)	➢ Project background information and CDM consideration. ➢ Project technology, operation, maintenance and monitoring capability. ➢ Project monitoring and management plan. ➢ Stakeholder consultation process. ➢ Project approval status (incl. EIA approval, CDM project approval status) ➢ Solar PV development in the area ➢ Government policies related to Photovoltaic power projects
Local Stakeholder	➢ Project background in details ➢ Stakeholder comments ➢ Social and environmental impact of the project
DTM (Beijing) Energy Technology Development Co., Ltd.(The consultant)	➢ Applicability of selected methodology. ➢ Baseline determination. ➢ Emission reductions calculation. ➢ Emission reduction monitoring plan.

2.3. Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Request (CAR) is issued, where:

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

Bureau Veritas Certification may also use the term Clarification Request (CL), if information is

insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

2.4. Internal Quality Control

The validation report underwent an Internal Technical Review (ITR) before requesting registration of the project activity.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Team Leader provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

The reviewer compiles clarification questions for the Team Leader and Validation Team and discusses these matters with Team Leader.

After the agreement of the responses on the 'Clarification Request' from the Team Leader as well as the PP(s) the finalized validation report is accepted for further processing such as uploading on the UNFCCC webpage

3. VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following

sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in **5** Corrective Action Requests (CARs) and **8** Clarification Requests (CLs).

The CARs and CLs were closed based on adequate responses from the Project Participant(s) which meets the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section corresponds to the VVM paragraph.

3.1. Approval (49-50)

The letter of approval have been received and the following support documentation has been verified by Bureau Veritas Certification:

- The DNA of China has issued a Letter of Approval (No.4102) in May.2012 authorizing Datang Angli (Lingwu) New Energy Co., Ltd. as the Project Participant and confirms that Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project contributes to China's Sustainable development [3].

Bureau Veritas Certification received the letter of approval from the project participant and does not doubt the letter's authenticity [15].

The letter of approval does not contain a specific version of both the PDD and the validation report.

The title and contents of the letters of approval refer to the precise proposed CDM project activity title in the PDD being submitted for registration.

- Bureau Veritas Certification considers the letters of approval are in accordance with **para. 45 - 48 /VVM**.

3.2. Participation (54)

The participation for each project participant has been approved by a Party of the Kyoto Protocol.

- Complying with **para.54/VVM**, Bureau Veritas Certification hereby confirms that by referring to the information on UNFCCC website i.e.

http://maindb.unfccc.int/public/country.pl?country=CN;

3.3. Project design document (57)

- Complying with para.**57/VVM**, Bureau Veritas Certification hereby confirms that the PDD complies with the latest Project Design Document Form (CDM-PDD) version 03 and guidance documents for completion of PDD version 07.

3.4. Changes in the Project Activity

The main differences between the GSP-PDD and the final PDD version are summarized below:

Items	The first web-hosted PDD	The final PDD	Validation opinion
1 Geo-coordinates	Central geographic coordinate 109°19′30″E and 37°49′10″N.	Inflection points Longitude / Latitude 106°21′49.52″E / 37°48′24.42″N 106°22′28.03″E / 37°48′03.59″N 106°22′17.99″E / 37°47′28.31″N 106°21′25.18″E / 37°47′50.96″N	It's a typo in the PDD version 01, and it has not impacted the real location of the approved project. Consistent with the clarification issued by the Shandong Engineering Consulting Insititute [33]. Please refer to CAR-2 for detail.
2 Emission Factor	0.8964 tCO_2e/MWh	0.89635 tCO_2e/MWh	To be conservative, the emission factor has been re-calculated as 0.89635tCO_2e/MWh. And the annual emission reductions have been revised accordingly from 48,405 tCO_2e to 48,402 tCO_2e. Please refer to CAR-3 for detail.
3. Debt value and interest rate	Debt: 65,172.37*10^4RMB Interest Rate:6.60%	Debt: 65,000*10^4RMB, Interest Rate:7.05%	The actual interest has been used to calculate the income tax as per Guidelines on the assessment of investment analysis, Version 05 (EB62, Annex5) /8/. Please refer to CAR-5 for detailed information.
4. The methodology version	ACM0002 12.3.0	ACM0002 Version 13.0.0	The methodology has been updated to the latest version. Please refer to CL-2.

3.5. Project description (64)

The Project is a newly built solar PV Power Plant located in Baitugang County, Lingwu City, Ningxia Hui Autonomous Region, P.R.China, which has the geo-coordinates of the inflection points of

Item	Longitude	Latitude
A	106°21′49.52″E	37°48′24.42″N
B	106°22′28.03″E	37°48′03.59″N
C	106°22′17.99″E	37°47′28.31″N
D	106°21′25.18″E	37°47′50.96″N

The total installed capacity of the Project is 39MWp (39.3397MWp precisely), among which there are 15,792 pieces of solar modules with 190W of unit capacity, 150,264 pieces of solar modules with 235W of unit capacity and 4,280 pieces of solar modules with 240W of unit capacity. The Project is expected to supplied 54,000MWh net electricity annually to the Northwest China Power Grid (NWPG) which is dominated by thermal power generation; The Project will result in annual emission reductions of 48,402tCO_2e during the seven years of its first renewable crediting period.

Bureau Veritas Certification can confirm that the estimated PLF of 15.67% sourced from the approved FSR of the Project finalized by a qualified third party complying with the requirement of “Guidelines for the Reporting and Validation of Plant Load Factors” version 01 (EB48, annex 11) /7/.

In the absence of the Project, the equivalent amount of annual power output of the Project would be generated by the operation of power plants connected to NWPG and by the addition of new generation sources in the NWPG. This is same as the baseline scenario. The project scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on the analysis presented in the PDD.

The processes undertaken by Bureau Veritas Certification to validate the accuracy and completeness of the Project description include the document review and crosscheck with the approved FSR and relevant approvals issued by local governments.

- 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 the host country.
- Complying with **para.64/VVM**, Bureau Veritas Certification hereby confirms that the project description in PDD is accurate and complete in all respects and that there is no

change to the project activity design or boundary as compared to the webhosted PDD.

3.6. Baseline and monitoring methodology

3.6.1. Baseline and monitoring methodology

The Project uses the approved consolidated baseline and monitoring methodology ACM0002 Version 13.0.0– "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" on 11/05/2012 /1/. The steps taken to assess the relevant information contained in the PDD against each applicability condition are described below.

By on-site visiting and interviewing with the PP, Bureau Veritas Certification confirms that the Project complies with the applicability conditions of methodology ACM0002 Version 13.0.0.

- The Project is a grid-connected renewable Photovoltaic power project that install a new power plant at a site where no renewable power plant was operated prior to the implementation of the Project (green-field plant);
- The Project does not involve switching from fossil fuels to renewable energy at the site of the Project.

Bureau Veritas Certification hereby confirms that the selected baseline and monitoring methodology, tool and other methodology component is previously approved by the CDM Executive Board, and is applicable to the Project, which, complies with all the applicability conditions therein.

Based on the on-site assessment, Bureau Veritas Certification hereby confirms that, as a result of the implementation of the Project, there are no greenhouse gas emissions occurring within the project boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.6.2. Project boundary (80)

Bureau Veritas Certification has validated the project boundary by:

a) Assessing the relevant documents including FSR.

b) Observing the physical site and equipment used in the process.

The spatial extent of the project boundary is defined in line with ACM0002 Version 13.0.0 as the physical, geographical site of Project and all other power plants connected physically to the NWPG that the Project is connected to. The greenhouse gases and emission sources included in the project boundary are CO_2 emissions from the electricity generation in fossil fuel fired power plants that are displaced due to the project activity.

✌ Complying with **para.80/VVM**, Bureau Veritas Certification hereby confirms that the identification of project boundary is in line with the delineation of grid boundaries as

provided in the version of "Notification on Determining Baseline Emission Factor of China's Grid" published by NDRC (China's DNA) on 20/10/2011 (hereafter called "Notification of China-Grid EF") [10] . During on-site visit, via observations of the physical site, Bureau Veritas Certification hereby confirms that the identified boundary and the selected sources and gases are justified for the Project.

3.6.3. Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 81 and 82 of the VVM are described below:

The Project is the installation of a newly built and grid-connected renewable power plant that delivers the generated electricity to the NWPG, hence, according to methodology ACM0002, the baseline scenario is determined properly as:

Electricity delivered to NWPG 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 within NWPG, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system" version 02.2.1 (hereafter called "Tool-Grid EF") /3/.

According to the "Notification of China-Grid EF", the delineation of grid boundary of the Project is the NWPG. Furthermore, the baseline of the Project determined in the PDD i.e. "electricity delivered to the grid by the Project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources" is transparent and deemed to be reasonable.

✌ Complying with **para. 87 and 88/VVM**, Bureau Veritas Certification hereby confirms that:

(a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;

(b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;

(c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;

(d) Relevant national and/or sector policies and circumstances are considered and listed in the PDD;

(e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6.4. Algorithms and/or formulae used to determine emission reductions (92-93)

The steps taken to assess the requirement outlined in paragraph 89 the VVM are described

below:

As per baseline methodology ACM0002 Version 13.0.0 and "*Tool-Grid EF"*, the baseline emission sources considered are the emission reduction ER_y during the crediting period is the difference between baseline emissions, project emissions and leakage. These are:

1) Baseline emissions: baseline emissions BE_y (tCO_2) are equal to baseline emission factor $EF_{grid,CM,y}$ (tCO_2/MWh) times the net electricity supplied to the grid $EG_{PJ,y}$ (MWh) (the Project is a Greenfield Photovoltaic power plant, therefore $EG_{PJ,y}$ equals to $EG_{facility,y}$ that is quantity of Annual grid-in electricity supplied by the project plant/unit)

2) Project Emissions: the project emissions are regarded as zero as per methodology ACM0002 Version 13.0.0.

3) Leakage: no leakage need to be considered as per methodology ACM0002 Version 13.0.0.

4) Emission reductions:

$ER_y = BE_y - PE_y = BE_y = EF_{grid,\,CM,\,y} \times EG_{PJ,y} = EF_{grid,\,CM,\,y} \times EG_{facility,y}$

According to the baseline methodology ACM0002 Version 13.0.0 and "Tool-Grid EF" version 02.2.1 (/3/), the baseline emission factor was calculated as following six steps. In addition, the calculation in the PDD refers to the "Notification of China-Grid EF" [10], which is the most recent information available at the time of CDM-PDD submission to Bureau Veritas Certification for validation.

Bureau Veritas has checked the "Notification of China-Grid EF" and can confirm that the emission factor calculation is in accordance with data in the China Electric Power Yearbook from 2006 to 2010 and China Energy Statistical Yearbook from 2008 to 2010, and also complies with requirement the Tool-Grid EF. According to the Notification of China-Grid EF, the Simple OM emission factor ($EF_{grid,OM,y}$) of NWPG is calculated as 1.0001tCO_2e/MWh. Similarly, the build margin emission factor ($EF_{grid,BM,y}$) of the NWPG is calculated as 0.5851tCO_2e/MWh.

According to the "*Tool-Grid EF*", the default weights ω_{OM} = 0.75 for Operating Margin and ω_{BM} = 0.25 for build Margin in the first crediting period of Photovoltaic power projects are adopted.

Therefore, the combined baseline emission factor is determined ex-ante and will remain fixed during the first crediting period, viz.

$EF_{grid,CM,y}$ =1.0001×0.75 +0.5851×0.25=0.89635tCO_2e/MWh

As a consequence, the estimated annual emission reductions of the Project are 48,402tCO_2e during the first crediting period. This is considered to be a reasonable estimation using the assumptions given by the Project.

✌ Complying with **para.92 and 93/VVM**, based on the above assessment, Bureau Veritas Certification hereby confirms that:

(a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;

(b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;

(c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;

(d) The baseline methodology ACM0002 and "*Tool-Grid EF"* has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

(e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.7. Additionality of a project activity (97)

The steps taken and sources of information used to cross-check the information contained in the PDD on this matter are described below:

"Tool for Demonstration and Assessment of Additionality" version 06.1.0 dated 13/09/2012 (hereinafter called "Tool-Additionality") (/3/) has been employed for demonstrating and assessing the additionality of the Project. The additionality of the Project has been carefully checked, in doing so Bureau Veritas Certification has put the main focus on the following issues:

3.7.1. Prior consideration of the clean development mechanism (104)

The FSR of the Project was completed in Mar.2011 by Shandong Engineering Consulting Insititute and then approved by Development and Reform Committee of Ningxia Hui Autonomous Region (Code: Ning Fa Gai Shen Fa [2011] No.154) on 21/04/2011. The FSR showed that the Project would not have been realized without CDM financial support. Based on the conclusion of the FSR, the PP decided to implement the Project with CDM support on 22/04/2011. On 19/09/2011, the EPC contract was signed. This is the earliest of the dates at which the implementation or construction or real action of the Project began and has been identified as the project start date.

From the table analyzed in section 3.7.1.1 of this report, Bureau Veritas Certification was able to verify that the start date of the Project determined as 19/09/2011 is appropriate (the signed date of the EPC contract) and is the earliest of the dates at which the implementation or construction or real action of the Project began. This is in accordance with the latest CDM glossary. (/6/)

The Project is a new project according to the definition in the "Guidelines on the demonstration and assessment of prior consideration of the CDM" version 04 (EB62 Annex 13) (hereinafter called "Guidelines-Prior Consideration") /5/, i.e. the start date of the Project is after 02/08/2008 and the PDD has been published for global stakeholder consultation on

19/04/2012, after the starting date of the Project. As per the "Guidelines-Prior Consideration", for new projects with starting date after 02/08/2008 the project participant must inform the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and the intention of seek the CDM status within six months from the starting date.

According to the evidence gathered, the PP sent a prior consideration notice on 15/02/2012 to China DNA (Host Party) and on 28/02/2012 to UNFCCC using the standardized F-CDM-Prior Consideration form. Taking into consideration that the Project starting date has been individuated being 19/09/2011, it has been verified that both the notice of "commencement of the activity and intention of seek the CDM status" has been sent to the required Parties within the 6-month terms. Hence, Bureau Veritas Certification can confirm that CDM was seriously considered in the decision to implement the Project.

3.7.1.1. Historical information on project timeline

It has been demonstrated by the timeline of events of the Project that the CDM revenue was seriously considered in the decision to proceed with the Project prior to start of the Project and, the continuing and real action were taken to secure CDM status for the Project in parallel with its implementation:

Table 2 Timeline of the Project

Date	Events	Evidence verified
Mar.2011	FSR was finalized by Shandong Engineering Consulting Insititute	[7]
Apr.2011	The EIA Report was finished	[9]
13/04/2011	The EIA Report was approved by Environmental Protection Bureau of Ningxia Hui Autonomous Region	[9]
21/04/2011	FSR approved by Development and Reform Committee of Ningxia Hui Autonomous Region	[8]
22/04/2011	Board meeting decided to apply for CDM.	[11]
19/09/2011	EPC contract signed (starting date of the Project)	[12]
26/09/2011	Start of construction of the Project	[13]
15/02/2012	Notification to DNA of the CDM intention	[16]
28/02/2012	Notification to EB of the CDM intention	[17]

Date	Events	Evidence verified
19/04/2012	Global Stakeholder Consultation of the PDD	[1]
03/07/2012	The Project has been fully start operation	[34]

- According to the latest Glossary of CDM terms Ver. 06.0 (/6/) and "*Guidelines-Prior Consideration*" (/5/), Bureau Veritas Certification confirms that the start date of the Project in the PDD is appropriate and reasonable at that situation.

- Complying with **para.100-103/VVM**, Bureau Veritas Certification has verified this issue, which could significantly influence the additionality of the Project, and confirms that the serious consideration under the context of the Project has been addressed appropriately in accordance with the above guidance. Consequently, the chronological events described with the relevant documented evidences are the objective foundation on which Bureau Veritas Certification developed its validation opinions.

3.7.2. Identification of alternatives (107)

Because the Project is installation of a Greenfield project, according to the applied methodology, the baseline scenario is prescribed as following:

> Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".

According to the Para. 105 of VVM version 01.2, no further analysis is required to identify credible alternatives to the project activity since the methodology ACM0002 Version 13.0.0 has prescribed the baseline scenario.

- Complying with **para.105&107/VVM**, Bureau Veritas Certification was able to verify that the alternatives identified to the Project are credible and complete. Hence **Step 1** of "*Tool-Additionality*" was applied appropriately.

3.7.3. Investment analysis (114)

Considering the baseline scenario identified above, option III, the Benchmark Analysis, is applied in the investment analysis as per the *Sub-step 2b of* "*Tool-Additionality*", which is in accordance with "Guidelines on the Assessment of Investment Analysis" version 05 (/8/).

Project IRR of 8% (post-tax) sourced from the "Interim Rules on Economic Assessment of Electric Power Engineering Retrofit Projects" issued by State Power Corporation of China in 2002, was employed by the Project as benchmark [18]. Bureau Veritas Certification has verified this benchmark and confirms that it is widely applied in Chinese power generation industries.

Therefore, Bureau Veritas Certification confirms that the benchmark is suitable for the Project.

Before reviewing the IRR calculation, Bureau Veritas Certification has validated the basic parameters listed in the PDD in accordance with the guidance of **Para.113/VVM**. (/2/)

As per the relevant evidences provided, Bureau Veritas Certification confirms that the PP's final decision to proceed with the investment in the Project has been made based on the approved FSR [7], which was finalized in Mar.2011 and approved on 21/04/2011. Based on the conclusion of the FSR, the PP decided to proceed with the Project on 22/04/2011 with the support from CDM revenues. Therefore, Bureau Veritas Certification confirms that the input values from the FSR were valid and applicable to the Project at the time of investment decision. In addition, given the short period of time between the FSR and the decision to proceed with the Project, Bureau Veritas Certification was therefore confident that it is unlikely in the context of the underlying Project that the input values would have materially changed, which is in line with the guidance of **Para. 113(a)/VVM**.

At the same time, Bureau Veritas Certification compared the input values for the financial analysis in the PDD and the FSR, and confirms that all input parameters, except the debt value and interest rate sourced from the actual loan contract [14], used in the financial analysis are taken from the approved FSR, Bureau Veritas Certification was therefore of the opinion that the investment analysis is in accordance **Para. 113(b)/VVM**.

Furthermore, Bureau Veritas Certification has reviewed the IRR calculation sheet and confirms that:

- The **operation period** of 25 years was sourced from the approved FSR and selected reasonably with the lifetime of the main equipments (eg. Monocrystalline/ Polycrystalline Silicon Cell and Inverter) [12].
- The **residual value rate** of 5% was in compliance with relevant regulation in China, i.e. Notification on adjust the residue value of fixed assets issued by State Administration of Taxation (Guo Shui Han [2005] No.883) [20]
- The **total static investment** in the approved FSR is 813.2037million RMB and unit investment is 20,671 RMB/kW.
  - Bureau Veritas Certification has checked the signed EPC contract, the actual static total investment of this project is 818.200 million RMB, which is higher than that estimated in the approved FSR.
  - Bureau Veritas Certification has checked the basic input values of the registered CDM solar PV projects located in Ningxia Province public available on the UNFCCC website to assess the Project, and found that unit investments (RMB/kW) vary from 25,855 RMB/kW (UNFCCC Ref.4919) to a minimum of 16,285RMB/kW (UNFCCC Ref.5077) [31]. The investment per unit of the Project (20,671 RMB/kW) falls within this range, please refer to appendix B for details. Therefore, Bureau Veritas Certification can confirm that the total static investment estimated in FSR is appropriate, valid and

applicable at the time of the investment decision.

- The **tariff** used in the PDD is taken from FSR approved by the Development and Reform Committee of Ningxia Hui Autonomous Region. According to the FSR and PDD, the Project supplies electricity to Ningxia Provincial Grid, which is a part of NWPG. Considering that tariff, investment environment, solar energy resources are different in provinces, Bureau Veritas Certification studied relevant policies and local investment environment in Ningxia and summarized as below:

  - On 02/04/2010 the tariff of four solar projects (namely CECIC Taiyangshan Grid-connected Solar PV Power Generation Phase I project, CECIC Shizuishan Grid-connected Solar PV Power Generation Phase I project, Ningxia Taiyangshan Phase I 10MWp Solar Photovoltaic Power Project and Huadian Ningxia Ningdong 10MWp Solar PV Power Station Project) developed in Ningxia Hui Autonomous Region was approved at 1.15 RMB/kWh (incl. VAT) by NDRC throughout document Fa Gei Jia Ge [2010] No. 653 [28]

  - On 24/07/2011 the tariff of the PV solar projects in China was unified and officially determined by NDRC throughout document Fa Gei Jia Ge [2011] No. 1594 [29]. As per document the tariff of 1.15 RMB/kWh (incl. VAT) will be assigned to projects approved before 01/07/2011 and which have started commissioning before 31/12/2011. All other solar projects, excluding those in Tibet, will receive a feed-in tariff of 1.00 RMB/kWh (incl. VAT).

  Therefore, Bureau Veritas Certification is of the opinion that the tariff employed in FSR and PDD is valid and applicable to the Project at the time of investment decision. The FSR of the Project was finalized in Mar.2011, and the tariff notification (Fa Gei Jia Ge [2010] No. 653) was available at that time. Especially according to the tariff notification (Fa Gei Jia Ge [2011] No. 1594), which has unified the PV solar Project in China. And the tariff applied in the FSR and financial analysis of the Project is same as the tariff ruled by the tariff notification.

  Therefore, Bureau Veritas Certification is of the opinion that the tariff of 1.15 RMB/kWh (incl. VAT) employed in approved FSR and PDD is appropriate.

- The **annual supplied power** of the Project was determined based on the long-term statistical data provided by local meteorological station. Therefore the supplied electricity is considered to be appropriate.

  - The plant load factor of 15.67% (annual utilization hours of 1372.66hours) was determined based on the information from FSR, which was developed by an accredited third party (Shandong Engineering Consulting Insititute) contracted with the PP and approved by Development and Reform Committee of Ningxia Hui Autonomous Region. Therefore, Bureau Veritas Certification confirms that the plant load factor determined in the FSR complies with the requirement of “Guidelines for the Reporting and Validation of Plant Load Factors version 01” (EB48, annex 11) (/7/)).

- Bureau Veritas Certification has also checked plant load factor of all registered CDM solar PV projects in Ningxia Hui Autonomous Region and found that plant load factor varies from 15.1% (UNFCCC Ref.5077) to 22.84% (UNFCCC Ref.4919) [31]. The PLF of the Project is 15.67%, falls in the range and is verified to be appropriate.

- Bureau Veritas Certification confirms that the **annual O&M cost** is the sum of salary and welfare of employees, material fee, maintenance fee, insurance fee and miscellaneous account, which was studied based on the "Economic Evaluation Method and Parameters for Project Construction" (version 3) [19].

  - Each individual item of O&M cost is computed using input values from the approved FSR. Bureau Veritas Certification has checked the calculation and found it correct and reasonable.

  - The O&M cost/total investment of the registered CDM projects in Ningxia Hui Autonomous Regions varies from 0.65% (UNFCCC Ref.4981) to 1.52% (UNFCCC Ref.5077) [31], and the O&M cost/total investment of the Project is 1.14%, falls in this range and is verified to be appropriate.

- A post-tax benchmark is applied for the investment analysis of the Project. Bureau Veritas Certification has checked the IRR calculation sheet and confirms that the interest has been taken into account in the calculation of income tax. The interest rate (7.05%) used in the investment analysis sourced from the signed loan contract, and higher than the interest rate (6.60%) from the approved FSR, when the FSR finalized in Mar.2011 [7]. According to Guidelines on the assessment of investment analysis, Version 05 /8/, Bureau Veritas Certification confirms that the actual interest (Debt: 65,000*10^4RMB with Interest Rate: 7.05%) in the loan contract has been taken into account in the calculation of income tax and deemed correct.

- Bureau Veritas Certification has checked the IRR calculation sheet and confirmed that depreciation has been deducted in estimating gross profits on which tax is calculated, and be added back to net profits for the purpose of calculating the financial indicator. The depreciation period is in line with the national regulation which requires that the depreciation should be larger than 10 years. Bureau Veritas Certification confirms that the depreciation calculated complies with "Economic Evaluation Method and Parameters for Project Construction" (version 3) [19].

- Bureau Veritas Certification has also verified values of various taxes through crosschecking against the taxation rules conducted by local government and found to be fully consistent.

  - The income tax of 25% complies with Enterprise Income Tax Law of China which is effective from 01/01/2008 [21].

  - As to the VAT

    On 09/12/2008, Ministry of Finance and the State Administration of Taxation issued

the Notice of Value Added Tax Policy Regarding Products Using Certain Synthesized Resources and Other Products (Cai Shui [2008]156) which is effected on 01/07/2008 [22]. As per the notice, the 50% VAT of the wind farm project should be refunded while the notice is silent about Photovoltaic power projects.

Ministry of Finance and the State Administration of Taxation issued the Notice about Implementation of VAT Reform in the Whole Country (Cai Shui [2008]170) on 19/12/2008, which was effected on 01/01/2009 [23]. In accordance with Cai Shui [2008]170, the VAT of newly purchased equipments from the investment allows to be compensated to the Photovoltaic power projects.

- As the photovoltaic power project, for conservativeness, the Project has been referred to the policy of the wind farm projects during the FSR preparing period, and the VAT of 17% is calculated firstly, after compensation of the VAT of newly purchased equipments, 50% of the actual VAT payment is refunded to the Project annually. This calculation is fully consistent with the approved FSR [7] and the regulations above, and it's conservative for the Project.

✌ Complying with para.**113/VVM**, based on the assessment above, Bureau Veritas Certification hereby confirms that the underlying assumptions are appropriate and the financial calculations are correct.

Based on the data from the approved FSR valid and applicable to the Project at the time of investment decision and the interest from the loan contract of the Project [14], the project IRR of the Project without CDM revenues is 3.11%, lower than the benchmark, which shows that the Project is not financially attractive compared to the benchmark in the absence of CDM benefits.

Bureau Veritas Certification has reviewed the IRR calculation [24] and confirms that the IRR processing is consistent with the "Guidelines on the assessment of investment analysis" version 05 (/8/) and the data sources as well as the analysis approach are reliable and based on the FSR linking directive to the actual situation of the host country. Four financial parameters were taken as uncertain factors for sensitive analysis of financial attractiveness:

- Static Investment
- Grid-in Tariff
- Annual grid-in electricity
- Annual O&M costs

According to "Economic Evaluation Method and Parameters for Project Construction" ver. 3 published by NDRC [19], Static Investment, Annual O&M costs, Annual grid-in electricity and Grid-in Tariff should be taken as uncertain factors to do sensitivity analysis, and ±10% variation of above factors shall be considered in the sensitivity analysis. Therefore, Bureau Veritas Certification confirms that the variables and variations ±10% performed for sensitivity

analysis is deemed to be appropriate for the Project, and the IRR of the Project does not reach the benchmark under these variations.

- With a decrease in Static Investment by 35.32%, the Project IRR may reach 8%. However, it has been verified that the total value of already signed EPC contract [12] is 818.200 million RMB, higher than the static investment estimated by the approved FSR. Thus, Bureau Veritas Certification confirms that the Static Investment won't decrease by 35.32%.

- With an increase in grid-in Tariff by 52.05%, the Project IRR will reach 8%. As per tariff notifications released by NDRC (Fa Gei Jia Ge [2011] No. 1594), solar PV tariff should be 1.15RMB/kWh (Incl. VAT) for projects approved before 01/07/2011 [29], which is the same as the one used in FSR. For reaching the benchmark, the corresponding tariff should be 1.748RMB/kWh (Incl. VAT); it is much higher than the tariff ruled in tariff notification above. Therefore, Bureau Veritas Certification concludes that it is unlikely that the tariff could increase to make IRR reach benchmark of 8%.

- With an increase by 52.05% in annual grid-in electricity, the project IRR will reach the benchmark. By checking the FSR, the electricity generation of the Project is based on local historical solar resource data. Therefore, Bureau Veritas Certification confirms that it is unlikely that the electricity generation could increase by 52.05% during the whole life of the Project.

- With a decrease in annual O&M cost by 323.19%, the Project IRR may reach 8% However, it is evidently impossible.

Bureau Veritas Certification can conclude that both of the variation range and relevant assumptions stated in the PDD are robust and the investment of the Project is deemed to be financially unattractive.

✌ Complying with **para.114/VVM**, based on the assessment result by the financial expert engaged, Bureau Veritas Certification hereby confirms that the underlying assumptions are appropriate and the financial calculations are correct.

3.7.4. Barrier Analysis (118)

The Step 3 Barrier analysis was not applied for the Project.

3.7.5. Common Practice Analysis (121)

The Common practice analysis was addressed as per Step 4 of "Tool-Additionality" and latest rules issued by EB.

Step 1. Calculate applicable output range as +/- 50% of the design output or capacity of the proposed project activity.

For the similar scale to the proposed project, the capacity range of ± 50% (19.67~59.01MW) has been taken into consideration in the common practice analysis.

Step 2: "In the applicable geographical area, identify all plants that deliver the same output or capacity, within the applicable output range calculated in Step1, as the proposed project activity and have started commercial operation before the start date of the project. Note their number N_{all} Registered CDM project activities and projects activities undergoing validation shall not be included in this step"

All plants that deliver the same output or capacity, within the applicable output range of 19.67~59.01MW, and have started commercial operation before the start date of the project have been taken into consideration in the common practice analysis.

Furthermore, China has a vast territory, the development policies and investment environment for projects in each province of China are not same. Particularly different provinces have different solar energy resource. The investment climate in the date of investment decision varies considerably from province to province depending on the local conditions. Registered CDM project activities and projects activities undergoing validation are not includ ed. Therefore, only power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project in Ningxia Hui Autonomous Region, and did not registered as CDM project activities or undergoing validation are considered in common practice analysis.

$N_{all}=N_{all,pv}+ N_{all,other}$

Where:

$N_{all,pv}$=All the photovoltaic power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region;

$N_{all,other}$=All the other renewable power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region;

Step 3: "Within plants identified in Step 2, identify thosed that apply technologies different that the technology applied in the proposed project activity. Note their number N_{diff}"

According to *Tool for the* "demonstration and assessment of additionality"(Version 06.1.0), "*Different technologies is the context of common practice are technologies that deliver the same output and differ by at least one of the following.(a)Energy source/fuel;(b)Feed stock;(c)Size of installation(power capacity);(d)Investment climate in the date of investment decision;(e)Other features.*".

The project is a photovoltaic power project, and will make use of modules to transform solar energy into electrical energy. Neither the source of energy from photovoltaic power technology is the same as the other technologies, nor the output of photovoltaic power technology is a comparable quality compared with the other technologies. Therefore, only

photovoltaic power plants are considered in common practice analysis. $N_{all,other}$= $N_{diff,other}$,

Where:

$N_{diff,other}$= The other renewable power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region;

Therefore, photovoltaic power plants with the installed capacity of 19.67~59.01MW, started commercial operation before the start date of the Project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region are considered to be similar to the proposed project.

According to the relative public available information [31], all photovoltaic power plants with the installed capacity of 19.67~59.01MW, started commercial operation and before the start date of the project, are registered or under being developed as CDM projects,

Then $N_{all,pv}$ = $N_{diff,pv}$.

Where:

$N_{diff,pv}$= Photovoltaic power plants started within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region;

Therefore, N_{diff}= $N_{diff,pv}$ + $N_{diff,other}$= N_{all}

Step 4: "Calculate the factor $F=1-N_{diff}/N_{all}$ representing the share of plants using technology similar to the technology used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity"

According to "Tool for the demonstration and assessment of additionality (Version 06.1.0)", the proposed project activity is a common practice within a sector in the applicable geographical area if the factor F is greater than 0.2 and N_{all}-N_{diff} is greater than 3."

$F=1-N_{diff}/N_{all}=0<0.2$; $N_{all}- N_{diff}=0<3$

Bureau Veritas Certification verified the description in the PDD and found that it is consistent with the sectoral statistics and therefore can conclude that the Project is not common practice in the region.

- Complying with **para.121/VVM**, Bureau Veritas Certification has verified the description in the PDD and found that it is consistent with the sectoral statistics and therefore confirms that the Project is not common practice in the region.

Based on above demonstration that in accordance with "Tool-Additionality" and supported by reliable data sources, it is the opinion of Bureau Veritas Certification that the Project is thus

additional.

3.8. Monitoring plan (124)

Bureau Veritas Certification hereby confirms that the monitoring plan complies with the requirements of the methodology.

The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below.

The Project uses the approved consolidated monitoring methodology ACM0002 Version 13.0.0 for grid connected electricity generation from renewable sources.

Applicability of this methodology is justified in PDD as it involves grid connected renewable power generation using solar energy. Refer discussions on the validity of the methodology at Section 3.6.1 above. Bureau Veritas Certification hereby confirms that the monitoring plan complies with the requirements of the methodology.

The monitoring plan includes net electricity supplied by the Project to the grid ($EG_{facility,y}$), calculated as Quantity of electricity supplied by the Project to the grid in year y ($EG_{PJ\ to\ grid,y}$) and the quantity of electricity imported from the grid by the Project in year y ($EG_{grid\ to\ PJ,y}$), measured by the main meter (M1) and backup meter (M2) installed at the output of the on-site booster station of the Project, and the meter M3 installed at 10kV backup line. The accuracy of the meters will at least be 0.5S. The meters are expected to be calibrated annually as per industry standards. The electricity will be continuously measured and monthly recorded. Readings will be checked against the sale receipts. Bureau Veritas Certification is of the opinion that the monitoring plan complies with the requirements of the methodology.

Operational management for the project activity is comprehensively detailed in PDD and this includes description of the responsibility, procedure reference, calibration frequency and maintenance needs.

By on-site interview with the PP, Bureau Veritas Certification confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions achieved by the Project can be reported ex post and verified.

- Complying with **para.124/VVM**, Bureau Veritas Certification hereby confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design and the project participants are able to implement the monitoring plan.

3.9. Sustainable development (127)

The Host Party China's DNA confirmed the contribution of the Project to the sustainable development of the host Party. Refer to item 3.1 of this report.

3.10. Local stakeholder consultation (130)

Prior to the publication of the PDD on the UNFCCC website, the PP conducted a survey on local stakeholders in Sep.2011. Totally 40 copies of questionnaires were distributed and all of them had been returned with 100% return rate [26].

The collected questionnaires with responses from stakeholders are maintained by the PP and were presented to Bureau Veritas Certification for assessment during the site visit of the validation activity [26].

The stakeholders have recognized the contribution of the Project to local environment and social economy. Their views were endorsed by the local stakeholders interviewed during the site visit of the validation activity.

During the on-site visit, Bureau Veritas Certification has conducted an interview with local stakeholders and confirms that the stakeholders affected had been invited in a transparent manner. The interview with stakeholders and review of returned questionnaires shows that the summary of the comments received has been completely provided in the PDD and due account of the comments has been described in the PDD. Bureau Veritas Certification hereby confirms that the process of local stakeholder consultation is observed to be adequate.

- Complying with **para.130VVM**, Bureau Veritas Certification hereby confirms that the local stakeholder consultation was performed and the process of local stakeholder consultation is observed to be adequate. The Project will be beneficial to the local sustainable development without negative effect on the local stakeholders.

3.11. Environmental Impacts (133)

The PP has undertaken an analysis of environmental impacts and Bureau Veritas Certification confirms that the Environmental Impact Assessment was carried out by the PP and approved by the Environmental Protection Bureau of Ningxia Hui Autonomous Region on 13/04/2011 (Code: Ning Huan Biao [2011] No.36) [9].

The environmental impact caused by the Project has been identified and analyzed in the PDD. By checking the EIA report and its approval, Bureau Veritas Certification is able to ensure that the environment impact is caused by waste water, solid wastes, noise, and ecological deterioration. All above impacts would be controlled within an acceptable limit by implementing corresponding mitigation measures as per the statement of the EIA. The impacts mentioned above were insignificant according to the conclusion of the EIA.

- Complying with **para.133/VVM**, Bureau Veritas Certification hereby confirms that the Project will not have any significant impacts on the environment by means of measures of pollution avoidance and control as well as ecological recovery.

4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

- Complying with **para.173/VVM**, the PDD using methodology ACM0002 Version 13.0.0 was webhosted on the UNFCCC for global stakeholders' comments as per CDM requirements. The Project was webhosted from 19/04/2012 to 18/05/2012 [1].

No comments were received during this period.

5. VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project in P. R. China. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up on-site visit and interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Project participants used the latest Validation and Verification Manual (version 01.2), Tool for demonstration and assessment of additionality (version 06.1.0), Paragraph 113 of VVM (version 01.2) and Guidelines on the demonstration and assessment of prior consideration of the CDM (version 04) to demonstrate the additionality of the Project. In line with this tool, the PDD provides investment analysis to determine that the project activity itself is not the baseline scenario. The latest Tool to calculate the emission factor for an electricity system (version 02.2.1) is also applied to determine the emission factor of Northwest China Power Grid.

By installing a grid-connected renewable power plant, the Project is likely to result in reductions of GHG emissions. An investment analysis demonstrates that the proposed project activity is not a plausible baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is expected to achieve the average annual emission reductions of 48,402tCO_2e over the chosen 7-year renewable crediting period.

The review of the project design documentation (version 02) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests registration of Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project as CDM project activity.

6. REFERENCES

Category 1 Documents:

Documents provided by the DTM (Beijing) Energy Technology Development Co., Ltd. and PP that relate directly to the GHG components of the project.

[1]. PDD version 01 dated 05/04/2012 and webhosted on 19/04/2012

http://cdm.unfccc.int/Projects/Validation/DB/YWZAEDPSKDUQRRVT5G0ZM4DEM2VC5A/view.html

[2]. PDD version 02 dated 19/10/2012

[3]. Letter of Approval from DNA of China (Host country) in May.2012 (Code: No.4102)

[4]. Modalities of Communication Form dated 19/06/2012 signed by Datang Angli (Lingwu) New Energy Co., Ltd.

[5]. Renewable Energy Law issued by NDRC of China effective from 01/01/2006.

http://www.mep.gov.cn/law/law/200802/t20080202_117982.htm

[6]. Tentative Measures for the Administration of Renewable Energy Power Price and Cost-sharing issued by NDRC on 04/01/2006, (Code: Fa Gai Jia Ge[2006] No. 7)

http://www.gov.cn/govtest/content_264712.htm

[7]. Feasibility Study Report (FSR) conducted by Shandong Engineering Consulting Insititute in Mar.2011

[8]. The FSR approval issued by Development and Reform Committee of Ningxia Hui Autonomous Region on 21/04/2011 (Code: Ning Fa Gai Shen Fa [2011] No.154)

[9]. EIA report in Apr.2011 and Approval issued by Environmental Protection Bureau of Ningxia Hui Autonomous Region on 13/04/2011 (Code: Ning Huan Biao [2011] No.36)

[10]. Notification on Determining Baseline Emission Factor of China's Grid dated on 20/10/2011.

http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2720.pdf

[11]. PP's Board Meeting Minutes made on 22/04/2011

[12]. EPC contract signed with Atsun Solar Electric Technology Co., Ltd. dated 19/09/2011

[13]. Permission for construction issued by the 3rd party supervisory agency dated 26/09/2011

[14]. Loan Contract of the Project

[15]. Public information of Letter of Approval issued by NDRC

http://www.sdpc.gov.cn/xmsphz/t20120521_480524.htm

[16]. The notification for the prior consideration of the CDM sent to the China DNA on 15/02/2012

[17]. The notification for the prior consideration of the CDM sent to UNFCCC secretariat on 28/02/2012
http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html

[18]. "Interim Rules on Economic Assessment of Electric Engineering Retrofit Projects" issued by the State Power Cooperation in 2002

[19]. "Economic Evaluation Method and Parameters for Project Construction" (version 3)

[20]. http://www.whgs.gov.cn/cms/whgs03/laws/05/030205/2005-09-14.html

[21]. Enterprise Income Tax Law of P.R. China

[22]. Notice of Value added Tax Policy Regarding Products Using Certain Synthesized Resources ([2008]156) released by State Administration of Taxation on 09/12/2008

[23]. Issues regarding National Value-added Tax Reform and Transition ([2008]170) released by State Administration of Taxation in Dec. 2008

http://www.chinatax.gov.cn/n8136506/n8136593/n8137537/n8138502/8745403.html

[24]. IRR calculation spreadsheet of the Project

[25]. Emission Factor calculation spreadsheet

[26]. Meeting minutes of symposium and 40 pieces of stakeholder survey questionnaires

[27]. Notice of National Council Issued about the Power System of Organization Reform Programme (National issued [2002] No.5)

http://www.sdpc.gov.cn/zcfb/zcfbtz/2009tz/t20090727_292827.htm

[28]. http://www.gov.cn/zwgk/2010-04/09/content_1577214.htm
Fa Gei Jia Ge [2010] No. 653 issued by NDRC on 02/04/2010

[29]. http://www.sdpc.gov.cn/zcfb/zcfbtz/2011tz/t20110801_426501.htm
Fa Gei Jia Ge [2011] No. 1594

[30]. Interest rate information from the People's Bank of China

http://www.pbc.gov.cn/publish/zhengcehuobisi/631/2011/20110708142554799484598/20110708142554799484598_.html

[31]. http://www.sdpc.gov.cn/zcfb/zcfbtz/2010tz/t20100409_339707.htm
http://www.nxdrc.gov.cn/zfxxgk/zfxxgkml/index.htm
http://www.bnef.com/

[32]. Statistics on the registered CDM Photovoltaic power plants in Ningxia Hui Autonomous Region, refer to Appendix B of the report

[33]. Clarification on the geo-coordinates of the Project, issued by the Shandong Engineering Consulting Insititute on 25/10/2012

[34]. Implementation log of the Project

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/. ACM0002 Version 13.0.0 “Consolidated Baseline Methodology for Grid-Connected Electricity Generation from Renewable Sources” dated 11/05/2012

/2/. Validation and Verification Manual version 01.2 dated 30/07/2010, EB55 Annex 1

/3/. Tool to calculate the emission factor for an electricity system. Version 2.2.1 dated 29/09/2011

/4/. Tool for the demonstration and assessment of additionality. Version 06.1.0 dated 13/09/2012

/5/. Guidance on the Demonstration and Assessment of Prior Consideration of the CDM version 04 (EB62 Annex 13)

/6/. Glossary of CDM terms version 06.0 (EB66 Annex 63)

/7/. Guidelines for the Reporting and Validation of Plant Load Factors version 01 (EB48, Annex11)

/8/. Guidelines on the assessment of investment analysis, Version 05 (EB62, Annex5)

Persons and Stakeholders Interviewed:

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

Datang Angli (Lingwu) New Energy Co., Ltd.

Mr. Zhang Guojun	Project Manager
Mr.Yuan Baowen	Plant Manager

Local Resident

Mr. Ma Binlin	Resident
Mr. Yue Chao	Resident

DTM (Beijing) Energy Technology Development Co., Ltd.

Ms. Tao Yun	Project Manager

7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Mr.Tony Li Xingtong	Bureau Veritas Certification, China	Team Leader, Climate Change Lead Verifier He holds a Master Degree in Landscape Ecology and Bachelor Degree in Environmental Engineering. Before joining BV in 2009, he gained 1 year of CDM technical experience in P.R China. He obtained the certificate of CDM Verifier, Lead Auditor for ISO 14001 and completed the course assessment for the ISO 14064:2006.

Ms. Jasmine Tang Xuemei	Bureau Veritas Certification, China	Internal Technical Reviewer, Climate Change Lead Verifier She holds a Master Degree in Environmental Science. Before joining BV in 2009, she gained two and a half years of CDM technical working experience in P.R China. She obtained the certificate of CDM Verifier and Lead Auditor for ISO 14001. She has passed training course of ISO 14064.

APPENDIX A: CDM PROJECT VALIDATION PROTOCOL

Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual Ver. 01.2 (EB55 Annex1)

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval	VVM	44-50	COUNTRY A (P.R. China)	COUNTRY B		
1.1. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD 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)	VVM	45	Project participant from host party is: Datang Angli (Lingwu) New Energy Co., Ltd. ~~**CAR-1.** LoA from China's DNA is required.~~ The LoA (Code: No.4102) has been issued by China's DNA in May.2012. The CAR-1 is thus closed.	N.A. It's a unilateral project.	~~CAR-1~~	OK
1.2. Does the letter of approval from DNA of each Party confirm that : - The Party is a Party of the Kyoto Protocol - The participation is voluntary - In the case of the host Party, the proposed CDM project activity contributes to the	VVM	45	~~Pending on CAR-1~~ P. R. China has ratified the Kyoto Protocol on 30/08/2002. Please refer to: http://maindb.unfccc.int/pu	N.A.	~~Pending~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
sustainable development of the country - Refers to the precise proposed CDM project activity title in the PDD being submitted for registration			blic/country.pl?country=CN			
1.3. Is (are) the letter(s) of approval unconditional with respect to (1.2) above?	VVM	46	~~Pending on CAR-1~~ No. It is unconditional with respect to (1.2) above.	N.A.	~~Pending~~	OK
1.4. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation?	VVM	47	~~Pending on CAR-1~~ Yes	N.A.	~~Pending~~	OK
1.5. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	~~Pending on CAR-1~~ No	N.A.	~~Pending~~	OK
1.6. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	~~Pending on CAR-1~~ N.A.	N.A.	~~Pending~~	OK
2. Participation	VVM	51-54	PP1 (Datang Angli (Lingwu) New Energy Co., Ltd.)	PP2 (N.A.)		

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
2.1. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes.	N.A.	OK	OK
2.2. Does the DOE have a contractual relationship with the project participants?	EB50	Ann 48	Yes	N.A.	OK	OK
2.3. Is the information in section A.3 consistent with the contact details provided in Annex 1 of the PDD?	VVM	52	Yes	N.A.	OK	OK
2.4. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	~~Pending on CAR 1~~ Yes	N.A.	~~Pending~~	OK
2.5. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No		OK	OK
2.6. Has the approval of participation issued from the relevant DNA?	VVM	53	~~Pending on CAR 1~~ Yes	N.A.	~~Pending~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
2.7. Is there doubt with respect to (2.6) above?	VVM	53	~~Pending~~ No	N.A.	~~Pending~~	OK
2.8. If yes, was verified with the DNA that the approval of participation is valid for the proposed CDM project participant?	VVM	53	~~Pending~~ N.A.	N.A.	~~Pending~~	OK
3. Project design document	**VVM**	**55-57**				
3.1. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes The PDD is in accordance with the Guidelines for completing The project design document (CDM-PDD) and The proposed new baseline and monitoring methodologies (CDM-NM) (version 07).		OK	OK
3.2. In CDM-PDD section A.1 are the following provided?	EB41	Ann 12				
3.2.1. Title of project	EB41	Ann 12	Ningxia Angli Lingwu Photovoltaic Grid Connected Power Plant Project		OK	OK
3.2.2. Current version number and date of document	EB41	Ann 12	The PDD version 01 dated 05/04/2012 was published for global stakeholder consultation.		OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The final PDD version 02 dated 19/10/2012.		
3.3. In CDM-PDD section A.2, are following provided?	EB41	Ann 12			
3.3.1. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, project scenario and baseline scenario.	EB41	Ann 12	Yes. The Project will generate electricity by using renewable solar photovoltaic (PV) power to the Northwest China Power Grid (NWPG) and replacing equivalent electricity generated by fossil fuel fired power plants connected to the NWPG. The total installed capacity is 39MW (39.3397 precisely), and expected to supply 54,000MWh electricity to the NWPG annually. The Project will achieve greenhouse gas (GHG) emission reductions by displacing equivalent electricity supplied by NWPG, which is predominated by fossil fuel-fired power plants. The estimated annual emission reductions are 48,402tCO_2e. The scenario existing prior to the implementation of the Project is that the electricity requirement is satisfied by Ningxia Power Grid which is an integral part of the NWPG. The baseline scenario of the Project is the same as the scenario existing prior to the start of implementation of the project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The description of the Project includes the scenario existing prior to the start of project, project scenario and baseline scenario, which is in line with the requirement of EB41 Annex 12.		
3.3.2. Explanation on how the GHG emission reductions are affected.	EB 41	Ann 12	Yes. To utilize the solar resource for power generation which will be delivered to the NWPG to displace the power from fossil fired power plants, therefore avoids CO_2 emissions.	OK	OK
3.3.3. The PP's views on the contribution of project activity to sustainable development	EB 41	Ann 12	Yes. The contribution to sustainable development is included in Section A.2 of the PDD has been checked against the approved FSR of the Project. – The Project will displace the power generation of fossil fuel power plants, reducing CO_2, SO_x and NO_x emissions significantly, thus mitigating the air pollution and its adverse impacts on human health. – Improvement of the fossil fuel dominated fuel mix of the electricity generation in the power grid by providing clean and renewable energy source, and help to energy supply security. – Promote application and diffusion of the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			innovative/creative solar PV technology in China through the demonstrative practice of the project activity. – Create employment opportunities for the local community during the construction and operation period.		
3.3.4. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No.	OK	OK
3.4. In CDM-PDD section A.3, are following provided in the tabular format?	EB41	Ann 12			
3.4.1. List of project participants and parties	EB41	Ann 12	Yes. The entities involved in the Project are listed at section A.3 of the PDD. Host Party (P.R. China): Datang Angli (Lingwu) New Energy Co., Ltd.	OK	OK
3.4.2. Identification of Host Party	EB41	Ann 12	The Host Party is P.R. China.	OK	OK
3.4.3. Indication whether the Party wishes to be considered as project participant	EB41	Ann 12	No Party is considered as a project participant.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.5. In CDM-PDD section A.4.1, are following provided?	EB41	Ann 12			
3.5.1. Technical description, location, host party(ies) and address as required.	EB41	Ann 12	Yes. The Project is located in Baitugang County, Lingwu City, Ningxia Hui Autonomous Region, P.R.China.	OK	OK
3.5.2. Detailed physical location with unique identification of the project activity (e.g. Longitude/latitude)	EB41	Ann 12	~~**CAR-2.** The validation team has found the geo-coordinates in the PDD version 01 are inconsistent with those measured onsite.~~ According to the clarification from Shandong Engineering Consulting Institute, which is the FSR compiled institute of the Project, the site inflection point coordinates are as below: (see table below) The geo-coordinates measured by the validation team are	~~CAR 2~~	OK

	Longitude	Latitude
A	106°21′49.52″E	37°48′24.42″N
B	106°22′28.03″E	37°48′03.59″N
C	106°22′17.99″E	37°47′28.31″N
D	106°21′25.18″E	37°47′50.96″N

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			included in the revised boundary. The CAR-2 is thus closed.		
3.5.3. Are there any changes/modifications compared to the webhosted PDD?	EB41	Ann 12	No.	OK	OK
3.6. In CDM-PDD section A.4.2, is the list of categories of project activities provided?	EB 41	Ann 12	Yes. Scope 1: Energy Industries (renewable sources)	OK	OK
3.7. In CDM-PDD section A.4.3, are following provided?	EB 41	Ann 12			
3.7.1. A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies).	EB 41	Ann 12	Domestic technology is employed by the Project and no technology transfer involved.	OK	OK
3.7.2. Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario.	EB 41	Ann 12	The Project is a newly built grid-connected photovoltaic power plant with total installed capacity of 39MWp(39.3397 precisely). The annual grid-in electricity is estimated to be 54,000MWh which contributes to the reduction of GHG emission by replacing parts of the electricity supply by NWPG.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.7.3. List and arrangement of the main manufacturing/production technologies, systems and equipments involved.	EB 41	Ann 12	~~**CL-1** The technical specifications of all the main equipments should be provided.~~ The technical specifications of all the main equipments have been submitted. The relative section of PDD has been revised accordingly. The CL-1 is thus closed.	~~CL-1~~	OK
3.7.4. The emissions sources and GHGs involved.	EB 41	Ann 12	The implementation of the Project will reduce greenhouse gas emissions of CO_2 produced in NWPG, and since the Project generates electricity from solar energy, it involves no greenhouse gas emissions and no emission resources.	OK	OK
3.7.5. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No.	OK	OK
3.8. In CDM-PDD section A.4.4, is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	The 7-year renewable crediting period was chosen; the annual emission reductions of 48,402tCO_2e are estimated for the first crediting period was provided in the tabular format.	OK	
3.9. In CDM-PDD section A.4.5, is information	EB 41	Ann	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
regarding public funding provided?		12	No public fund involved confirmed with the approved FSR		
3.10. In CDM-PDD section B.1 are following provided?	EB 41	Ann 12			OK
3.10.1. The approved methodology and version number	EB 41	Ann 12	~~**CL-2** The latest version of the methodology ACM0002 has been issued in EB67.~~ The latest approved methodology ACM0002 Version 13.0.0 "Consolidated Baseline Methodology for Grid-Connected Electricity Generation from Renewable Sources" was applied in the revised PDD. The CL-2 is thus closed.	~~CL-2~~	OK
3.10.2. Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	Yes. "Tool for the Demonstration and Assessment of Additionality" version 06.1.0 and "Tool to calculate the emission factor for an electricity system" version 02.2.1 were applied in the webhosted PDD.	OK	OK
3.11. In CDM-PDD section B.2 are following provided?	EB 41	Ann 12			
3.11.1. Justification to the choice of methodology that the project activity	EB 41	Ann 12	Yes. The Project is a new grid-connected photovoltaic power	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
meets each of the applicability conditions			plant at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plants). The Project does not involve switching from fossil fuels to renewable energy at the site of the project activity.		
3.11.2. Documentations with references that had been used. This can be provided in Annex 3 instead	EB 41	Ann 12	The delineation of grid has been provided.	OK	OK
3.12. In CDM-PDD section B.3, are following provided?	EB 41	Ann 12			
3.12.1. Description of all sources and gases included in the project boundary in the table	EB 41	Ann 12	Yes. The spatial extent of the project boundary includes the project site and all power plants connected physically to the NWPG that the CDM project power plant is connected to. The baseline emission gas includes CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity; no project emission gas involved in the Project.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.12.2. A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Yes. A flow diagram of the project boundary has been presented in the PDD.	OK	OK
3.12.3. The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	~~**CL-3** As per the requirement of EB41, Annex12, the monitoring variables should be represented in the flow diagram.~~ The monitoring variables have been added in the flow diagram in PDD. The CL-3 is thus closed.	~~CL-3~~	OK
3.13. In CDM-PDD section B.4 are following provided?	EB 41	Ann 12			
3.13.1. Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology?	EB 41	Ann 12	N.A. No further analysis is required to identify credible alternatives to the project activity since the methodology ACM0002 Version 13.0.0 has prescribed the baseline scenario.	OK	OK
3.13.2. Justification of key assumptions and rationales	EB 41	Ann 12	N.A.	OK	OK
3.13.3. Transparent illustration of all data used	EB 41	Ann	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
to determine the baseline scenario (variables, parameters, data sources, etc.)		12			
3.13.4. A transparent and detailed 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 project activity	EB 41	Ann 12	Yes. Methodology ACM0002 Version 13.0.0 prescribes the baseline scenario and no further analysis required, thus there is no need to take steps to identify the baseline scenarios.	OK	OK
3.13.5. Are there any changes/modifications compared to the webhosted PDD?	EB 41	Ann 12	No.	OK	OK
3.14. In CDM-PDD section B.5, are following provided?	EB 41	Ann 12			
3.14.1. Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	Yes. The Tool for the Demonstration and Assessment of Additionality version 06.1.0 was followed to demonstrate its additionality.	OK	OK
3.14.2. Justification of key assumptions and rationales	EB 41	Ann 12	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.14.3. Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources etc)	EB 41	Ann 12	Yes.	OK	OK
3.14.4. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	Yes The FSR was completed in March 2011 by Shandong Engineering Consulting Institute and approved on 21/04/2011 by Development and Reform Committee of Ningxia Hui Autonomous Region. In the FSR, the IRR is lower than the benchmark of 8%, which means the project is not financial attractive. Therefore, it is advised to apply the CDM for overcoming the financial barrier in the FSR. Considering the key role of CDM for this project, the directorate of the PP decided to apply the project as a CDM project on 22/04/2011. On 15/02/2012, The CDM prior consideration letter was submitted to NDRC, and on 28/02/2012, the CDM prior consideration letter was submitted to EB and the confirmation letter was received.	OK	OK
3.15. In CDM-PDD section B.6.1, are following provided?	EB 41	Ann 12			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.15.1. Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	Yes Complying with ACM0002, the "Tool to calculate the emission factor for an electricity system" ver. 02.2.1 was used in the webhosted PDD (referred to as "Tool-Grid EF" in the report).	OK	OK
3.15.2. Equations used in calculating emission reductions	EB 41	Ann 12	The steps taken and the equations given by the ACM0002 are correctly applied. Six steps given by the "Tool-Grid EF" version 02.2.1 has been correctly applied to determine the emission factor of the electricity system.	OK	OK
3.15.3. Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	Yes. The explanation and justification were in accordance with the "Tool-Grid EF" version 02.2.1.	OK	OK
3.16. In CDM-PDD section B.6.2 are following provided?	EB 41	Ann 12			
3.16.1. A compilation of information on the data and parameters that are not monitored	EB 41	Ann 12	The necessary official data of power grid made publically by NDRC (China DNA) are available and determined	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period and that are available when validation is undertaken			during validation. The determination of the emission factor of the baseline electricity system has been correctly determined followed the "Tool-Grid EF" version 02.2.1, and the data issued by China DNA on 20/10/2011 has been applied.		
3.16.2. The actual value applied	EB 41	Ann 12	The data issued by China DNA on 20/10/2011 has been applied, which was the most recent data available at the time of submission of the CDM-PDD to the DOE for validation.	OK	OK
3.16.3. Explanation and justification for the choice of the source of data	EB 41	Ann 12	The official data i.e. Notification on Determining Baseline Emission Factor of China's Grid issued by NDRC dated 20/10/2011 (hereinafter referred to as "Notification on EF of China's Grid"), was based on the data of China Energy Statistical Yearbook and China Power Yearbook, and authorities' expertise.	OK	OK
3.16.4. Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	Yes The Annex 3 has been attached to the PDD with clear and transparent references.	OK	OK
3.16.5. Where values have been measured, a	EB 41	Ann	~~**CAR-3.** The calculated emission factor (EF) of the~~	~~CAR-3~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results		12	~~Project of 0.8964 tCO_2e/MWh is not conservative.~~ It is not applicable in this case as the emission factor is determined ex-ante as per the options in "Tool-Grid EF", the data is source from the "Notification on EF of China's Grid" issued by the China DNA. The emission factor of the electricity system was determined ex-ante and fixed for the first crediting period, which is in compliance with the "Tool-Grid EF". According to *2011 Baseline emission factors for regional power grids in China* issued by the National Development and Reform Commission of the Government of China (China DNA), the OM emission factor ($EF_{grid,OM,y}$) of NWPG is calculated as 1.0001 tCO_2/MWh, and the build margin emission factor ($EF_{grid,BM,y}$) of NWPG is calculated as 0.5851 tCO_2/MWh. $EF_{grid,CM,y}$ = 0.5851 *0.25+1.0001*0.75=0.89635≈0.8964 tCO_2/MWh For conservative consideration, 0.89635 tCO_2/MWh has been used. Please see the revised PDD. The CAR-3 is thus closed.		
3.17. In CDM-PDD section B.6.3, are following provided?	EB 41	Ann 12			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.17.1. A transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	The calculation of baseline emissions and emission reductions are in line with the methodology. The determination of the emission factor of the baseline electricity system has been correctly determined followed the “Tool-Grid EF” version 02.2.1.	OK	OK
3.17.2. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	The emission reduction calculation spreadsheet has been provided and checked. The determination of the emission factor of the baseline electricity system has been correctly determined followed the “Tool-Grid EF” version 02.2.1, the emission reductions spreadsheet has been re-produced and got the same result.	OK	OK
3.17.3. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	The calculation spreadsheet has been presented for re-produce. The background information and data has been specified in the Annex 3 of the PDD.	OK	OK
3.18. In CDM-PDD section B.6.4 are the results of the ex ante estimation of emission	EB 41	Ann 12	Yes. From 2012 to 2019 with year-wise data of emission	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
reductions for all years of the crediting period provided in a tabular format?			reductions have been provided in the tabular format.		
3.19. In CDM-PDD section B.7.1, are following provided?	EB 41	Ann 12			
3.19.1. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	~~**CL-4** Please clarify in the current monitoring plan, how to monitor the quantity of Annual grid in electricity supplied by the project to the grid ($EG_{facility,y}$) required by the methodology.~~ $EG_{facility,y} = EG_{PJ\ to\ grid,y} - EG_{grid\ to\ PJ,y}$ $EG_{facility,y}$ is the quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh); $EG_{export,,y}$ is the quantity of electricity exported to the grid by the proposed project (MWh); $EG_{import,y}$ is the quantity of electricity imported from the grid by the proposed project (MWh). The parameters will be monitored by main meter and back-up meter onsite and the M3 installed at 10kV backup line. The accuracy of the meter will not lower than 0.5S. The meters are expected to be calibrated and checked annually for accuracy by a qualified entity in	~~CL-4~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			accordance with industry standards. The CL-4 is thus closed.		
3.19.2. For each parameter the following below information, using the table provided:	EB 41	Ann 12			
3.19.2.1. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.	EB 41	Ann 12	N/A No other outside source(s) of data should be used.	OK	OK
3.19.2.2. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied,	EB 41	Ann 12	The monitoring methods and procedures to monitor the electricity exported to the grid and the electricity imported from the grid has been specified, the net electricity supplied to the grid by the Project will be monitored continuously and recorded monthly by electricity meters. The QA/QC procedures have been specified. The error of the meters will be at lease 0.5S, and the calibration intervals will be annually conducted accordance with relevant national standard. The data will be crosschecked with records for sold/bought electricity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.					
3.20. In CDM-PDD section B.7.2 are following provided?	EB 41	Ann 12			
3.20.1. A detailed description of the monitoring plan	EB 41	Ann 12	Yes. The detailed description of the monitoring plan has been specified in the PDD.	OK	OK
3.20.2. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects	EB 41	Ann 12	Yes. The description of the management structure, training, calibration and arrangement of meters, monitoring parameters, data recording, quality assurance and quality	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
generated by the project activity			control, data management system and verification has been specified in the PDD.		
3.20.3. The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Yes.	OK	OK
3.20.4. Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	~~Pending on CL 4~~ The monitoring plan can reflect good monitoring practice appropriate to the type of the Project.	~~Pending~~	OK
3.20.5. Relevant further background information in Annex 4	EB 41	Ann 12	No further background information in Annex 4.	OK	OK
3.21. In CDM-PDD section B.8, are following provided?	EB 41	Ann 12			
3.21.1. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	Yes. The application of methodology to the Project in the webhosted PDD was completed on 05/04/2012 in version 01 and 19/10/2012 in version 02.	OK	OK
3.21.2. Contact information of the person(s)/entity(ies) responsible for the	EB 41	Ann 12	Yes. Contact information of the personnel has been presented	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
application of the baseline and monitoring methodology to the project activity			in the section B.8.		
3.21.3. Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	~~**CL-5** Please indicate whether the entity/personnel is one of the project participant.~~ The entity/personnel is not the project participant. The CL-5 is thus closed.	~~CL-5~~	OK
3.22. In CDM-PDD section C.1.1, is the project's starting date clearly defined and evidenced?	EB 41	Ann 12	~~**CL-6** No construction contract signed on 19/09/2011 has been provided.~~ The contract signed on 19/09/2011 is EPC contract, not construction contract. The PDD has been revised. The CL-6 is thus closed.	~~CL-6~~	OK
3.23. In CDM-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 41	Ann 12	25 years and 0 month.	OK	OK
3.24. In CDM-PDD section C.2, is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. three x 7 years or fixed crediting	EB 41	Ann 12	Yes. The 7-year renewable crediting period has been defined. The expected starting date of the crediting period is 01/12/2012.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
period of max. 10 years)?					
3.25. In CDM-PDD section D., are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	The conclusion stated. The support document has been provided and checked. The environment impact assessment (EIA) of the Project was approved by Environmental Protection Bureau of Ningxia Hui Autonomous Region on 13/04/2011. According to the EIA and the Approval issued by the government, the environmental impacts are not considered significant.	OK	OK
3.26. In CDM-PDD section E.1, are the following provided?	EB 41	Ann 12			
3.26.1. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	Yes. Representatives of local villagers were consulted in Sep. 2011 and 40 questionnaires were distributed.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
3.26.2. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	Yes. By distributing questionnaires to household.	OK	OK
3.26.3. The local stakeholder process has been, completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	Yes The local stakeholder consulting process has been completed in Sep. 2011 before the PDD was published in EB website for global stakeholder consultation on 19/04/2012.	OK	OK
3.27. In CDM-PDD section E.2, are following provided?	EB 41	Ann 12			
3.27.1. Identification of local stakeholders that have made comments	EB 41	Ann 12	Yes. Local residents were identified as stakeholders.	OK	OK
3.27.2. A summary of these comments.	EB 41	Ann 12	Yes. All the respondents support the construction of the Project.	OK	OK
3.28. In CDM-PDD section E.3 is the explanation	EB 41	Ann	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
of how due account have been taken of comments received from local stakeholders provided?		12	The stakeholders are supportive of the Project, and no negative comment received.		
3.29. In CDM-PDD Annex 1, are the following provided?	EB 41	Ann 12			
3.29.1. Contact information of project participants	EB 41	Ann 12	Yes Contact information has been presented.	OK	OK
3.29.2. For each organization listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes.	OK	OK
3.30. In CDM-PDD Annex 2, is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards	EB 41	Ann 12	No public funding was involved in the Project.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the financial obligations of those Parties provided?					
3.31. In CDM-PDD Annex 3, is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	The background information used in the application of the baseline methodology has been provided.	OK	OK
3.32. In CDM-PDD Annex 4, is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No.	OK	OK
4. ***Project description***	VVM	58-64			
4.1. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59			
4.1.1. Sufficiently covering all relevant elements?	VVM	59	Yes.	OK	OK
4.1.2. Accurate?	VVM	59	Yes. The Project is a newly built Photovoltaic power project providing total capacity of 39MW (39.3397MWp precisely), and expected to supply 54,000MWh electricity	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			to the NWPG annually.		
4.1.3. Providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes.	OK	OK
4.1.4. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	No.	OK	OK
4.2. Is the proposed CDM project activity in existing facilities or utilizing existing equipments?	VVM	60	No.	OK	OK
4.3. Is the CDM project activity one of the following types:	VVM	60			
4.3.1. Large scale?	VVM	60	Yes.	OK	OK
4.3.2. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	No.	OK	OK
4.3.3. Bundled small scale projects, each with emission reductions not exceeding	VVM	60	No.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
15,000 tonnes?					
4.4. If yes to (4.2) or (4.3) above, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity, unless other means are specified in the methodology?	VVM	60	Yes. Bureau Veritas Certification has performed an onsite visit on 15/05/2012 to assess the Project. by the following personnel: Bureau Veritas China: Mr.Tony Li Xingtong Climate Change Lead Verifier The personnel interviewed as listed below: **Datang Angli (Lingwu) New Energy Co., Ltd.** Mr. Zhang Guojun Project Manager Mr.Yuan Baowen Plant Manager **Local Resident** Mr. Ma Binlin Mr. Yue Chao **DTM (Beijing) Energy Technology Development Co., Ltd.** Ms. Tao Yun Project Manager	OK	OK
4.5. If yes to (4.3.3) above, was the number of physical site visits base on sampling?	VVM	60	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
4.6. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	N.A.	OK	OK
4.7. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a physical site inspection conducted?	VVM	61	N.A.	OK	OK
4.8. For all other proposed CDM project activities not referred to in VVM paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	N.A.	OK	OK
4.9. If no, was it appropriately justified?	VVM	62	N.A.	OK	OK
4.10. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	N.A.	OK	OK
4.11. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project	VVM	63	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
situation?					
5. ***Baseline and monitoring methodology***					
5.1. General requirement	VVM	65-67			
5.1.1. Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM	65	Yes. ACM0002 Version 13.0.0 was applied.	OK	OK
5.1.2. Is the selected methodology applicable to the project activity?	VVM	66	Refer to section 5.2.1 below.	OK	OK
5.1.3. Had the PP correctly applied the selected methodology?	VVM	66	Refer to section 5.2.4 below.	OK	OK
5.1.4. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to section 5.3 below.	OK	OK
5.1.5. Had the selected methodology been	VVM	67	Refer to section 5.4 below.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
correctly applied with respect to baseline identification?					
5.1.6. Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	Refer to section 5.5 below.	OK	OK
5.1.7. Had the selected methodology been correctly applied with respect to additionality?	VVM	67	Yes. "Tool for demonstration and assessment of additionality" version 06.1.0 was used in the PDD.	OK	OK
5.1.8. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Yes. The monitoring methodology ACM 0002 'Consolidated baseline methodology for grid-connected electricity generation from renewable sources' was applied.	OK	OK
5.2. ***Applicability of the selected methodology to the project activity***	VVM	68-77			
5.2.1. Is the methodology correctly quoted?	VVM	70	Yes. ACM0002 Version 13.0.0 "Consolidated baseline methodology for grid-connected electricity generation	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			from renewable sources" is correctly quoted.		
5.2.2. Are the applicability conditions of the methodology ACM0002 Version 13.0.0 met?	VVM	71			
5.2.2.1. 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 plants); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	ACM	0002	The Project is a new Photovoltaic power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plants).	OK	OK
5.2.2.2. The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a	ACM	0002	The Project is the installation of a Photovoltaic power plant.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	run-of-river reservoir or an accumulation reservoir), Photovoltaic power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit					
5.2.2.3.	In the case of capacity additions, retrofits or replacements: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	ACM	0002	N.A.	OK	OK
5.2.2.4.	In case of hydro power plants, one of the following conditions must apply:	ACM	0002	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or - The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m^2; or - The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2.					
5.2.2.5. The methodology is not applicable to the following conditions. Please confirm - Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity	ACM	0002	The Project is a Photovoltaic power plant and does not involve switching from fossil fuels to renewable energy at the site of the project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- Biomass fired power plants; - Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m^2.					
5.2.3. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	No.	OK	OK
5.2.4. Is the choice of the methodology justified?	VVM	71	Yes.	OK	OK
5.2.5. Have the project participants shown that the project activity meets each of the applicability conditions of the approved methodology?	VVM	71	Yes. Please refer to the section 5.2.2 above.	OK	OK
5.2.6. Have the project participants shown that the project activity meets each of the applicability conditions of any tool or other methodology component referred to the methodology?	VVM	71	Yes. The Project meets the applicability conditions of tool to calculate the emission factor for an electricity system and tool for demonstration and assessment of additionality.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
5.2.7.	Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	71	Yes. Public information in the website of local government has been checked and found consistent.	OK	OK
5.2.8.	If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	Yes. Bureau Veritas Certification has checked the public information, FSR approval, EIA approval, equipment purchase contracts and conducted on-site observation and confirmed the Project meets the applicability of the applied methodology.	OK	OK
5.2.9.	Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	72	Yes.	OK	OK
5.2.10.	If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	N.A.	OK	OK
5.2.11.	If answer to (5.2.2) above is “no”,	VVM	73	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?					
5.2.12. If yes to (5.2.10) and (5.2.11) above, a request for registration was submitted before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	N.A.	OK	OK
5.3. ***Project boundary***	VVM	78-80			
5.3.1. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including secondary equipment and associated processes such as logistics etc.?	VVM	79	Yes. The spatial extent of the project boundary includes the project power plant and all power plants connected physically to NWPG, the grid delineation NWPG has been correctly described in the PDD; this is in line with the delineation of grid boundaries as provided by the DNA of China.	OK	OK
5.3.2. Does the delineation in the PDD of the project boundary meet the requirements	VVM	79	Yes. The defined project boundary is in line with ACM0002	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	of the selected baseline?			Version 13.0.0 and all emission sources and GHGs have been included in the project boundary.		
5.3.3.	Have changes been made to the project boundary in comparison to the webhosted PDD? If yes please comment on the reason for the changes.	VVM	79	No.	OK	OK
5.3.4.	Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	Yes.	OK	OK
5.3.5.	Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary	VVM	79	No.	OK	OK
5.3.6.	If yes, have the project participants justified that choice?	VVM	79	N.A.	OK	OK
5.3.7.	If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
5.4. ***Baseline identification***	VVM	81-88			
5.4.1. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	No. The ACM0002 Version 13.0.0 prescribes the baseline scenario.	OK	OK
5.4.2. 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 CDM project activity?	VVM	83	N.A.	OK	OK
5.4.3. Has any reasonable alternative scenario been excluded?	VVM	83	N.A.	OK	OK
5.4.4. Is the baseline scenario identified reasonably supported by:	VVM	84			
5.4.4.1. Assumptions?	VVM	84	N.A.	OK	OK
5.4.4.2. Calculations?	VVM	84	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
5.4.4.3. Rationales?	VVM	84	N.A.	OK	OK
5.4.5. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	Yes, the Notification on Determining Baseline Emission Factor of China's Grid issued by NDRC has been checked and found consistent.	OK	OK
5.4.6. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM	84	Yes, the Notification on Determining Baseline Emission Factor of China's Grid issued by NDRC has been checked and found consistent.	OK	OK
5.4.7. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	85	Yes. The ACM0002 Version 13.0.0 prescribes the baseline scenario.	OK	OK
5.4.8. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	Yes. The ACM0002 Version 13.0.0 prescribes the baseline scenario.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
5.4.9. Does the PDD 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 project activity?	VVM	86	Yes. The baseline is Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".	OK	OK
5.5. ***Algorithms and/or formulae used to determine emission reductions***	VVM	89-93			
5.5.1. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90	Yes. The equations are in accordance with Tool to calculate the emission factor for an electricity system.	OK	OK
5.5.2. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	Yes.	OK	OK
5.5.3. If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the	VVM	90	Yes. Adequate justification has been provided and correct equations and parameters been used in accordance with	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	proposed CDM project activity and other evidence provided)?			the methodology selected.		
5.5.4.	If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	Yes.	OK	OK
5.5.5.	Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	No.	OK	OK
5.5.6.	If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91			
5.5.6.1.	Appropriate and correct?	VVM	91	Yes. All data source used are appropriate and calculations are correct as they are consistent with official EF calculation.	OK	OK
5.5.6.2.	Applicable to the proposed CDM project activity?	VVM	91	Yes, all equations and parameters used are applicable to the Project.	OK	OK
5.5.6.3.	Resulting in a conservative estimate	VVM	91	Yes, all equations and parameters will result in a	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
of the emission reductions?			conservative estimate of the emission reductions.		
5.5.6.4. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	91	No.	OK	OK
5.5.6.5. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	N.A.	OK	OK
6. Additionality of a project activity	VVM	94-97			
6.1. General checklist for additionality					
6.1.1. Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	95	Yes. The approved “Tool for the Demonstration and Assessment of Additionality” version 06.1.0 was used.	OK	OK
6.1.2. Is the entire host country selected as the applicable geographical area as a default?	EB 65	Ann 21	No. The similar project activities should take place in a comparable environment with respect to regulatory framework and investment climate. The Project is located	OK	

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			in Ningxia Hui Autonomous Region, thus Ningxia Hui Autonomous Region has been chosen as the similar region.		
6.1.3. If the technology applied in the project is not country specific, is the applicable geographical area extened to other countries?	EB 65	Ann 21	No.	OK	
6.1.4. If the applicable geographical area is smaller than the host country, has the project participants provided justification that technologies that vary considerably from location to location depending on local conditions?	EB 65	Ann 21	The similar project activities should take place in a comparable environment with respect to regulatory framework and investment climate. The Project is located in Ningxia Hui Autonomous Region, thus Ningxia Hui Autonomous Region has been chosen as the similar region.	OK	
6.1.5. Has the measure of proposed project activity falls in: (a) Fuel and feedstock switch; (b) Switch of technology with or without change of energy source (including energy efficiency improvement as well as use of renewable energies);	EB 65	Ann 21	As a newly-built Photovoltaic power plant, the proposed project is a type (b) of measure.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(c) Methane destruction; (d) Methane formation avoidance.					
6.1.6. Were the following steps of the tool to assess additionality used:	EB 65	Ann 21			
6.1.6.1. Identification of alternatives to the project activity?	EB 65	Ann 21	Yes.	OK	OK
6.1.6.2. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 65	Ann 21	Yes.	OK	OK
6.1.6.3. Barriers analysis?	EB 65	Ann 21	No.	OK	OK
6.1.6.4. Common practice analysis?	EB 65	Ann 21	Yes.	OK	OK
6.1.7. In step 1 have all the sub-steps as below been followed?	EB 65	Ann 21			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.8. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 65	Ann 21			
6.1.8.1. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK
6.1.8.2. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK
6.1.8.3. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.9. Has the project participant included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the relevant country/region?	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK
6.1.10. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives. The baseline scenario is 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,	OK	OK
6.1.11. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	other than GHG reductions, e.g. to mitigate local air pollution?					
6.1.12.	If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 65	Ann 21	No. Since the ACM0002 Version 13.0.0 has prescribed the baseline scenario, according to the paragraph 105 of VVM version 01.2, no further analysis is required for identification of alternatives.	OK	OK
6.1.13.	Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly?	EB 65	Ann 21	Yes. The identified scenario is realistic and feasible and complies with applicable laws and regulations.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
Please state the outcome.					
6.1.14. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 65	Ann 21	The PP selected only Step 2 (Investment analysis) for demonstrating the additionality.	OK	OK
6.1.15. Step 2, Investment analysis	EB 65	Ann 21			
6.1.16. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 65	Ann 21			
6.1.16.1. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 65	Ann 21	The Project generates financial and economic benefits through the sales of electricity other than CDM related income therefore the simple cost analysis (Option I) cannot be taken.	OK	OK
6.1.16.2. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 65	Ann 21	Yes. Benchmark analysis (Option III) is applied.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.17. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 65	Ann 21	Not applicable.	OK	OK
6.1.18. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 65	Ann 21	Not applicable.	OK	OK
6.1.19. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 65	Ann 21	Yes. Project IRR of 8% (post tax) is determined as the benchmark.	OK	OK
6.1.19.1. Identify the financial/economic indicator, such as IRR, most suitable	EB 65	Ann 21	Yes. A government/official approved benchmark where such benchmarks are used for investment decisions was	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	for the project type and decision context.			employed. With reference to Interim Rules on Economic Assessment of Electric Engineering Retrofit Projects, the financial benchmark project IRR is 8% for Photovoltaic power projects, which has been used widely in feasibility studies Photovoltaic power projects in China.		
6.1.19.2.	When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 65	Ann 21	Yes. Project IRR of 8% (post tax) is widely used in the Chinese power sector. The financial analysis was based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of the PP.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.19.3. Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has	EB 65	Ann 21	Yes. The benchmark selection complies with option d: Government/official approved benchmark where such benchmarks are used for investment decisions. The benchmark was derived from Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects issued by former State Power Corporation of China in 2002, which has been used widely in feasibility studies of new power plants, including Photovoltaic power projects in China.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
6.1.20. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 65	Ann 21			
6.1.20.1. Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs	EB 65	Ann 21	Yes, the project IRR was calculated for the Project included all relevant costs and revenue.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	(including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.					
6.1.20.2.	Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 65	Ann 21	IRR calculation spread sheet has been provided. Bureau Veritas Certification re-produced the analysis and obtain the same results as that indicated in the PDD.	OK	OK
6.1.20.3.	Justify and/or cite assumptions.	EB 65	Ann 21	Yes. All input values are sourced from the FSR except the interest rate and actual loan, which has been approved by Ningxia Hui Autonomous Region Development & Reform	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Commission.		
6.1.20.4. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 65	Ann 21	Yes. Relevant costs are included.	OK	OK
6.1.20.5. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 65	Ann 21	Not applicable as Option III is used.	OK	OK
6.1.20.6. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 65	Ann 21	3.11% VS benchmark of 8% in PDD version 01. The IRR has not been changed in the final PDD.	OK	OK
6.1.21. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether	EB 65	Ann 21	Four main variable factors are identified for sensitivity analysis of the project, including Static total investment, Annual grid-in electricity, Grid-in Tariff, Annual O&M cost with a variation range from -10% to 10% and the IRR	~~CL-7~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.			remains lower than the benchmark of 10%. ~~**CL-7** Please assess the sensitivity analysis to determine under what conditions variations in the result would occur, and the likelihood of these conditions.~~ A further elaboration was carried out in the PDD to show whether the variables will exceed -10% or +10% so as to the IRR of the project could reach the benchmark, the result shown that if the static Investment decreased by 35.32%, or the grid-in tariff increased by 52.05%, or the annual grid-in electricity increased by 52.05% or the annual O&M cost decreased by 323.19%, the IRR of the Project will reach the benchmark. The PDD demonstrated that all these four parameters will not vary in so large range, the supporting documents have been checked and found consistent. The CL-7 is thus closed.		
6.1.22. Has the outcome of Step 2 clearly mentioned with justification?	EB 65	Ann 21	The outcome of Step 2 is that the Project is not financially feasible without the revenue of CERs.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.23. Step 3: Barrier analysis	EB 65	Ann 21			
6.1.24. Have the latest approved version of the "Guidelines for objective demonstration and assessment of barriers" been taken into account when applying this step?	EB 65	Ann 21	N.A. The barrier analysis has not been applied in the PDD.	OK	OK
6.1.25. For barriers other than barriers due to project being "first of its kind", has the project participant demonstrated that the CDM would alleviate the identified barriers that prevent the proposed project activity from occurring?	EB 65	Ann 21	N.A. The barrier analysis has not been applied in the PDD.	OK	OK
6.1.26. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project?	EB 65	Ann 21	N.A.	OK	OK
6.1.26.1. Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as demonstrated by the credit rating of the country or other country investments reports of reputed origin.					
6.1.26.2.	Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.					
6.1.26.3. Barriers due to prevailing practice: The project activity is the "first of its kind". (a) For the measures identified under 6.1.5, a proposed project activity is the First-of-its-kind in the applicable geographical area if : (i) The project is the first in the applicable geographical area that applies a technology that is different from any other technologies able to deliver the same output and	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
that have started commercial operation in the applicable geographical area before the start date of the project; and (ii) Project participants selected a crediting period for the project activity that is .a maximum of 10 years with no option of renewal; (b) For the measures identified under 6.1.5, a proposed project activity that was identified as the First-of-its-kind project activity is additional and Sub-step 3b does not apply. (c) For other measures, the project proponents shall propose approach for demonstrating that a project is a first-of-its-kind and Sub-step 3b applies.					
6.1.26.4. Other barriers, preferably specified in the underlying methodology as examples.	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.27. Has the outcome from Step 3a clearly mentioned in PDD?	EB 65	Ann 21	N.A.	OK	OK
6.1.28. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)?	EB 65	Ann 21	N.A.	OK	OK
6.1.28.1. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.28.2.	Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers.	EB 65	Ann 21	N.A.	OK	OK
6.1.28.3.	The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of relevant market data (e.g. market prices, tariffs, rules);	EB 65	Ann 21	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.					
6.1.29. Has the outcome from Step 3 clearly mentioned in PDD?	EB 65	Ann 21	N.A.	OK	OK
6.1.30. Step 4: Common practice	EB 65	Ann 21			
6.1.31. Has the proposed project been demonstrated to be first of its kind (according to sub-step 3a)?	EB 65	Ann 21	No.	OK	OK
6.1.32. If not, for measures different from those listed in 6.1.5, have all the sub-steps as below followed?	EB 65	Ann 21			
6.1.32.1. Sub-step 4a: Analyze other activities similar to the proposed project	EB 65	Ann 21	Refer to section 6.1.34-6.1.37 below	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.					
6.1.32.2.	Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar	EB 65	Ann 21	Refer to section 6.1.34-6.1.37 below	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.					
6.1.33. For measures that are listed in 6.1.5, have all the sub-steps as below followed?	EB 65	Ann 21			
6.1.34. Step 1: Calculate applicable output range as +/-50% of the design output or capacity of the proposed project activity.	EB 65	Ann 21	The design capacity of the Project is 39MW (39.3397MWh precisely).Therefore the applicable output range for the common practice analysis is from 19.67~59.01MW.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.1.35. Step 2: In the applicable geographical area, identify all plants that deliver the same output or capacity, within the applicable output range calculated in Step 1, as the proposed project activity and have started commercial operation before the start date of the project. Note their number Nall. Registered CDM project activities and projects activities undergoing validation shall not be included in this step;	EB 65	Ann 21	~~**CAR-4.** Please re-conduct the common practice analysis as per the steps in the Additionality-Tool.~~ All plants that deliver the same output or capacity, within the applicable output range of 19.67~59.01MW, and have started commercial operation before the start date of the project have been taken into consideration in the common practice analysis. Furthermore, China has a vast territory, the development policies and investment environment for projects in each province of China are not same. Particularly different provinces have different solar energy resource. The investment climate in the date of investment decision varies considerably from province to province depending on the local conditions. Registered CDM project activities and projects activities undergoing validation are not included. Therefore, only power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project in Ningxia Hui Autonomous Region, and did not registered as CDM project activities or undergoing validation are considered	~~CAR-4~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			in common practice analysis. $N_{all}=N_{all,pv}+ N_{all,other}$ Where: $N_{all,pv}$=All the photovoltaic power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region; $N_{all,other}$=All the other renewable power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region. The CAR-4 is thus closed.		
6.1.36. Step 3: Within plants identified in Step 2, identify those that apply technologies different that the technology applied in the proposed project activity. Note their number Ndiff.	EB 65	Ann 21	~~Pending on CAR-4~~ According to *Tool for the* "demonstration and assessment of additionality"(Version 06.1.0), " *Different technologies is the context of common practice are technologies that deliver the same output and differ by at least one of the*	~~Pending~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			following.(a)Energy source/fuel;(b)Feed stock;(c)Size of installation(power capacity);(d)Investment climate in the date of investment decision;(e)Other features...". The project is a photovoltaic power project, and will make use of modules to transform solar energy into electrical energy. Neither the source of energy from photovoltaic power technology is the same as the other technologies, nor the output of photovoltaic power technology is a comparable quality compared with the other technologies. Therefore, only photovoltaic power plants are considered in common practice analysis. $N_{all,other}= N_{diff,other}$, Where: $N_{diff,other}$= The other renewable power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region; Therefore, photovoltaic power plants with the installed capacity of 19.67~59.01MW, started commercial		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			operation before the start date of the Project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region are considered to be similar to the proposed project. According to the relative public available information [31], all photovoltaic power plants with the installed capacity of 19.67~59.01MW, started commercial operation and before the start date of the project, are registered or under being developed as CDM projects, Then $N_{all,pv} = N_{diff,pv}$. Where: $N_{diff,pv}$= Photovoltaic power plants within the applicable output range of 19.67~59.01MW, have started commercial operation before the start date of the project, and did not registered as CDM project activities or undergoing validation in Ningxia Hui Autonomous Region; Therefore, $N_{diff}= N_{diff,pv} + N_{diff,other}= N_{all}$		
6.1.37. Step 4: Calculate factor $F=1-N_{diff}/N_{all}$ representing the share of plants using technology similar to the technology	EB 65	Ann 21	~~Pending on CAR 4~~ According to “Tool for the demonstration and assessment	~~Pending~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity.			of additionality (Version 06.1.0)", the proposed project activity is a common practice within a sector in the applicable geographical area if the factor F is greater than 0.2 and N_{all}-N_{diff} is greater than 3." $F=1-N_{diff}/N_{all}=0<0.2;N_{all}- N_{diff}=0<3$		
6.1.38. Are the following conditions are fulfilled: (a) the factor F is greater than 0.2, and (b) Nall-Ndiff is greater than 3.	EB 65	Ann 21	~~Pending on CAR-4~~ The Project is not common practice in the region.	~~Pending~~	OK
6.1.39. Has the outcome from Step 4 clearly mentioned in PDD?	EB 65	Ann 21	Yes. The outcome from step 4 has been clearly stated in the PDD, that the Project is not common practice in the region.	OK	OK
6.1.40. Has it been proved that the project is additional?	EB 65	Ann 21	Yes.	OK	OK
6.2. Prior consideration of the clean development mechanism	VVM	98-104			
6.2.1. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	Yes The start date identified in PDD is 19/09/2011. The PDD was published for global stakeholder's comments on	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
				19/04/2012.		
6.2.2.	If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	N.A.	OK	OK
6.2.3.	Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins"?	VVM	99	~~Pending on CL 6~~ The starting date is the earliest date at which either the implementation or construction or real action of a project activity begins, relevant evidences have been checked and found consistent.	~~Pending~~	OK
6.2.4.	Does the project activity require construction, retrofit or other modifications?	VVM	99	Yes, the project activity requires construction.	OK	OK
6.2.5.	If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	~~Pending on CL 6~~ As the date of EPC Contract was identified as the starting date of the Project on 19/09/2011, when the Project has	~~Pending~~	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
				not commission yet, the date of commissioning will not be considered as the starting date of the Project.		
6.2.6.	Is it a new project activity (a project activity with a starting date on or after 02 August 2008) or an existing project activity (a project activity with a start date before 02 August 2008)?	VVM EB 62	100 Ann 13	It is a new project activity with starting date after 02/08/2008.	OK	OK
6.2.7.	For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, had PPs informed the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from host Party DNA and UNFCCC secretariat).	VVM EB 62	100 Ann 13	Yes The PP has informed the China's DNA on 15/02/2012 and informed UNFCCC on 28/02/2012 in writing of the commencement of the project activity and of their intention to seek CDM status.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.2.8. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM EB62	102 Ann 13			
6.2.8.1. Evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project,	VVM EB62	102 Ann 13	N.A. The Project is a new project activity.	OK	OK
6.2.8.1.1. minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2. Reliable evidence from project participants that must indicate that continuing and real actions were	VVM EB62	102 Ann 13	The Project is a new project activity.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
taken to secure CDM status for the project in parallel with its implementation					
6.2.8.2.1. contract with consultants for CDM/PDD/methodology services?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.2. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.3. evidence of agreements or negotiations with a DOE for validation services?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.4. submission of a new methodology to the CDM Executive Board?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.5. publication in newspaper?	VVM	102	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	EB62	Ann 13			
6.2.8.2.6. interviews with DNA?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.7. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM EB62	102 Ann 13	N.A.	OK	OK
6.2.8.2.8. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	N.A.	OK	OK
6.3. Identification of alternatives	VVM	105-107			
6.3.1. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	105	Yes. The ACM0002 Version 13.0.0 prescribed the baseline scenario and no further analysis is required.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.3.2. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	105	Not applicable	OK	OK
6.3.3. Does the list of alternatives given in the PDD ensure that:	VVM	106	No. Not applicable, as methodology ACM0002 Version 13.0.0 prescribes the baseline scenario and no further analysis required, therefore, there is no need to take steps to identify the baseline scenarios.	OK	OK
6.3.3.1. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	N.A. As the approved methodology ACM0002 Version 13.0.0 selected by the proposed CDM project activity prescribes the baseline scenario and no further analysis is required.	OK	OK
6.3.3.2. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	106	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.3.3.3. the alternatives comply with all applicable and enforced legislation?	VVM	106	N.A.	OK	OK
6.4. Investment analysis	VVM	108-114			
6.4.1. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity:	VVM	108	Yes.	OK	OK
6.4.2. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108			
6.4.2.1. The most economically or financially attractive alternative?	VVM	108	Not applied, the PDD employed the option III (Benchmark analysis).	OK	OK
6.4.2.2. Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Yes. The Project was financially unfeasible without the revenue from the sales of CER. (The IRR was 3.11%, lower than the benchmark of 8%), the IRR shows that the Project is financially unfeasible without the CERs revenue. The IRR spreadsheet has been checked and found consistent.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.4.3. Was this shown by one of the following approaches?	VVM	109			
6.4.3.1. The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	109	Not applicable.	OK	OK
6.4.3.2. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	Not applicable.	OK	OK
6.4.3.3. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Yes.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
6.4.3.4.	Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB62	Ann 5	One year for construction and 25 years for operation period as per the approved FSR, not limited to the crediting period of the Project.	OK	OK
6.4.3.5.	Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or – if a shorter period is chosen – include the fair value of the project activity assets at the end of the assessment period?	EB62	Ann 5	One year for construction and 25 years for operation period as per the approved FSR. The residual value of the project activity assets has been recovered; the residue value rate is 5%.	OK	OK
6.4.3.6.	Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB62	Ann 5	Yes. The annual maintenance costs were included.	OK	OK
6.4.3.7.	Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without	EB62	Ann 5	Yes. One year for construction and 25 years was sourced from the approved FSR and selected reasonably with the lifetime of the main equipments (eg. Monocrystalline/	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	reference to the proposed CDM crediting period?			Polycrystalline Silicon Cell and Inverter)		
6.4.3.8.	Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB62	Ann 5	Yes. 5% of the fixed assets have been recovered at the end of the assessment period; this is in line with relevant rules, the free cash has been recovered at the end of assessment period.	OK	OK
6.4.3.9.	Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB62	Ann 5	Yes. 5% of the fixed assets have been recovered at the end of the assessment period; this is in line with relevant rules.	OK	OK
6.4.3.10.	Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB62	Ann 5	Yes. The residue value is 5% of the book value of assets and the calculation can reasonably expect the potential profit recoverable.	OK	OK
6.4.3.11.	Was the depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax	EB62	Ann 5	Yes. The depreciation and the interest payable have been deducted in calculating tax and have been added back to net profits for calculating the IRR.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
is calculated, added back to net profits for the purpose of calculating the financial indicator? (e.g. IRR, NPV)					
6.4.3.12. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB62	Ann 5	Yes. The income tax of 25% has been included in the IRR calculation.	OK	OK
6.4.4. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project participant?	EB62	Ann 5	The input values from the FSR are valid and applicable at the time of investment decision.	OK	OK
6.4.5. Is the timing of the investment decision consistent and appropriate with the input values?	EB62	Ann 5	Yes. The FSR was finalized in Mar.2011 and approved on 21/04/2011, consequently, the investment decision was made on 22/04/2011 based on the conclusion in the FSR.	OK	OK
6.4.6. Are all the listed input values been consistently applied in all calculations?	EB62	Ann 5	~~**CL-8** Some key financial indicators.eg. the interest rate and debt-equity ratio should be listed in the PDD.~~ Some key financial indicators have been supplemented in	~~CL-8~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			the Table 5 of the PDD. Bureau Veritas Certification has checked the captial and the interest ratio in the PDD and found consistent with the signed loan contract. The city build tax and education tax are consistent with the local regulations. CL-8 was hence closed.		
6.4.7. Does the investment analysis reflect the economic decision making context at point of the decision to recommence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB62	Ann 5	N.A.	OK	OK
6.4.8. Have project participants supplied the spreadsheet versions of all investment analysis?	EB62	Ann 5	Yes.	OK	OK
6.4.9. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB62	Ann 5	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.4.10. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB62	Ann 5	N.A.	OK	OK
6.4.11. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB62	Ann 5	N.A.	OK	OK
6.4.12. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB62	Ann 5	Yes.	OK	OK
6.4.13. In the calculation of equity IRR, has only the portion of Static Investment which is financed by equity been considered as the net cash outflow?	EB62	Ann 5	N.A.	OK	OK
6.4.14. Has the portion of the Static Investment which is financed by debt been considered a cash outflow in the	EB62	Ann 5	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
calculation of equity IRR? (this is not allowed)					
6.4.15. Was a pre-tax benchmark applied?	EB62	Ann 5	No.	OK	OK
6.4.16. In cases where a post-tax benchmark is applied, is actual interest payable taken into account in the calculation of income tax?	EB62	Ann 5	A post tax benchmark was applied in the investment analysis. ~~**CAR-5.** The Loan Contract of the Project should be provided and the actual interest payable should be taken into account in the calculation of income tax.~~ The Loan Contract signed between the PP and the bank has been provided, the interest rate and debt value of the loan contract have been taken into the IRR calculation. The interest rate (7.05%) used in the investment analysis sourced from the signed loan contract, and higher than the interest rate (6.60%) from the approved FSR, when the FSR finalized in Mar.2011. Taken the actual interest payable in the IRR calculation (Debt: 65,000*10^4RMB with interest rate:7.05%), the IRR of this project is still 3.11%, which has not been changed. Due to the change of the loan and interest in the IRR	~~CAR-5~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			calculation, O&M cost of has been changed comparing with the PDD version 01 because that the fix assets maintenance was based on the Static total investment and Interest incurred during construction period. The CAR-5 is thus closed.		
6.4.17. In such situations, was interest calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in the previous three years?	EB62	Ann 5	~~Pending on CAR-5~~ Yes. The actual interest payable was calculated with taking the interest rate and debt value of the loan contract	~~Pending~~	OK
6.4.18. In cases where a benchmark approach is used, is the applied benchmark appropriate to the type of IRR calculated?	EB62	Ann 5	Yes.	OK	OK
6.4.19. Has local commercial lending rates or weighted average costs of capital	EB62	Ann 5	No.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
(WACC) selected as appropriate benchmarks for a project IRR?					
6.4.20. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB62	Ann 5	No.	OK	OK
6.4.21. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB62	Ann 5	Yes. The benchmark was sourced from Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects issued by former State Power Corporation of China in 2002, which has been used widely in feasibility studies of new power plants, including Photovoltaic power projects in China.	OK	OK
6.4.22. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on publicly available data sources which can be clearly validated?	EB62	Ann 5	Yes.	OK	OK
6.4.23. Have internal company benchmarks/expected returns (including	EB62	Ann 5	No.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
those used as the expected return on equity in the calculation of a weighted average cost of capital – WACC) been applied in cases where there is only one possible project developer?					
6.4.24. In such cases, have these values been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region?	EB62	Ann 5	N.A.	OK	OK
6.4.25. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB62	Ann 5	N.A.	OK	OK
6.4.26. Has a thorough assessment of the financial statements of the project developer – including the proposed WACC – to assess the past financial behaviour of the entity during at least the	EB62	Ann 5	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
last 3 years in relation to similar projects been conducted?					
6.4.27. Does the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB62	Ann 5	N.A.	OK	OK
6.4.28. Has an investment comparison analysis and not a benchmark analysis used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	EB62	Ann 5	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
6.4.29. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB62	Ann 5	Four main variable factors are identified for Static total investment, Annual grid-in electricity, Grid-in Tariff, Annual O&M cost with a variation range from -10% to10% and the IRR remains lower than the benchmark of 8%.	OK	OK
6.4.30. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis?	EB62	Ann 5	No.	OK	OK
6.4.31. Is the range of variations selected is reasonable in the project context?	EB62	Ann 5	Yes. The range of -10%-+10% has been analyzed.	OK	OK
6.4.32. Does the variations in the sensitivity analysis at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific	EB62	Ann 5	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
project circumstances?					
6.4.33. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative, is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity?	EB62	Ann 5	~~Pending on CL 7~~ A further elaboration was carried out in the PDD to show whether the variables will exceed -10% or +10% so as to the IRR of the project could reach the benchmark. The result shown that if the static Investment decreased by 35.32%, or the grid-in tariff increased by 52.05%, or the annual grid-in electricity increased by 52.05% or the annual O&M cost decreased by 323.19%, the IRR of the Project will reach the benchmark. The PDD demonstrated that all these four parameters will not vary in so large range, the supporting documents have been checked and found consistent.	~~Pending~~	OK
6.4.34. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 48	Ann 11			
6.4.34.1. The plant load factor provided to banks and/or equity financiers while applying the project activity for project	EB 48	Ann 11	Yes. The PLF sourced from the FSR is the one that was applied for local government approval.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
financing, or to the government while applying the project activity for implementation approval?					
6.4.34.2. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 48	Ann 11	Yes. The PLF is determined by an authorized third party contracted by the PP.	OK	OK
6.4.35. Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?	VVM	111	Yes.	OK	OK
6.4.36. Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	111	During on site visit, Bureau Veritas Certification checked the documented evidences include the FSR, the approval of FSR issued by government, investment decision, the contracts and other available information, and therefore can confirm that:		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The FSR has been the basis of the decision to proceed with the investment in the project. The FSR was finished in Mar.2011 and approved on 21/04/2011, and the investment decision was made on 22/04/2011 shortly after the FSR was approved, the period of time between the finalization of the FSR and the investment decision is short, it is unlikely in the context of the underlying project activity that the input values would have materially changed; • The values used in the PDD and associated annexes are fully consistent with the FSR. Bureau Veritas Certification checked the FSR, the PDD and the IRR spreadsheet and found that all input values, except the debt and interest rate, are consistent with the FSR. • The input values from the FSR are valid and applicable at the time of the investment decision ➢ Total investment: The final account report of the Project is unavailable during the validation period. Bureau Veritas Certification has checked the signed EPC contract, the actual static total investment of this		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			project is 818.200 million RMB, which is higher than that estimated in the approved FSR. Bureau Veritas Certification has checked the basic input values of the registered CDM solar PV projects located in Ningxia Province public available on the UNFCCC website to assess the Project, and found that unit investments (RMB/kW) vary from 25,855 RMB/kW (UNFCCC Ref.4919) to a minimum of 16,285RMB/kW (UNFCCC Ref.5077) [31]. The investment per unit of the Project (20,671 RMB/kW) falls within this range. Therefore, Bureau Veritas Certification can confirm that the total static investment estimated in FSR is appropriate, valid and applicable at the time of the investment decision. ➢ Tariff: On 02/04/2010 the tariff of four solar projects (namely CECIC Taiyangshan Grid-connected Solar PV Power Generation Phase I project, CECIC Shizuishan Grid-connected Solar PV Power Generation Phase I project, Ningxia Taiyangshan Phase I 10MWp Solar Photovoltaic		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Power Project and Huadian Ningxia Ningdong 10MWp Solar PV Power Station Project) developed in Ningxia Hui Autonomous Region was approved at 1.15 RMB/kWh (incl. VAT) by NDRC throughout document Fa Gei Jia Ge [2010] No. 653 [28] On 24/07/2011 the tariff of the PV solar projects in China was unified and officially determined by NDRC throughout document Fa Gei Jia Ge [2011] No. 1594 [29]. As per document the tariff of 1.15 RMB/kWh (incl. VAT) will be assigned to projects approved before 01/07/2011 and which have started commissioning before 31/12/2011. All other solar projects, excluding those in Tibet, will receive a feed-in tariff of 1.00 RMB/kWh (incl. VAT). Therefore, Bureau Veritas Certification is of the opinion that the tariff employed in FSR and PDD is valid and applicable to the Project at the time of investment decision. The FSR of the Project was finalized in Mar.2011, and the tariff notification (Fa	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Gei Jia Ge [2010] No. 653) was available at that time. Especially according to the tariff notification (Fa Gei Jia Ge [2011] No. 1594), which has unified the PV solar Project in China. And the tariff applied in the FSR and financial analysis of the Project is same as the tariff ruled by the tariff notification. Therefore, Bureau Veritas Certification is of the opinion that the tariff of 1.15 RMB/kWh (incl. VAT) employed in approved FSR and PDD is appropriate. ➢ O&M cost The unit O&M cost of the Project falls in the range of the registered CDM projects in Ningxia Hui Autonomous Regions and is verified to be appropriate. ➢ Tax Bureau Veritas Certification has verified values of various taxes including VAT, VAT offset, income tax, etc. by cross checking with the taxation rules conducted by government and found to be fully consistent.		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			The depreciation has been deducted in estimating gross profits on which tax is calculated, and be added back to net profits for the purpose of calculating the financial indicator. ➢ PLF The PLF of the Project was determined by a qualified third party based on the historical local weather data, the PLF was approved by local government and reasonable. ➢ Assessment period: The assessment period is in line with national regulation. ➢ Residue value The residue value rate of 5% is compliance with prevailing policy.		
6.4.37. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	Yes.	OK	OK
6.4.38. Was the correctness of computations	VVM	111	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
carried out and documented by the project participants assessed?					
6.4.39. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions assessed?	VVM	111	Yes. The sensitivity analysis for four indicators with range from -10% to +10%, and a further analysis on what condition the IRR will reach the benchmark has been conducted, the sensitivity analysis shows that the IRR could not reach the benchmark due to the impossibility of fluctuation of those indicators.	OK	OK
6.4.40. Is the type of benchmark applied suitable for the type of financial indicator presented?	VVM	112	Yes. The benchmark of 8% is widely used for Photovoltaic power projects similar to the Project in China.	OK	OK
6.4.41. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	N.A. The benchmark of 8% is widely used for Photovoltaic power projects similar to the Project in China.	OK	OK
6.4.42. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate	VVM	112			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
of return lower than the benchmark by:					
6.4.42.1. assessing previous investment decisions by the project participants involved?	VVM	112	N.A.	OK	OK
6.4.42.2. determining whether the same benchmark has been applied?	VVM	112	N.A.	OK	OK
6.4.42.3. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	N.A.	OK	OK
6.4.43. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?	VVM	113	Yes.	OK	OK
6.4.44. If yes:	VVM	113			
6.4.44.1. has the FSR been the basis of the decision to proceed with the	VVM	113	Yes, as interviewed, the PP's final decision to proceed with the investment in the Project has been made based	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
	investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?			on the FSR finalized in Mar.2011 and approved by the Development and Reform Committee of Ningxia Hui Autonomous Region on 21/04/2011, and then the PP made the investment decision on 22/04/2011. Bureau Veritas Certification was therefore confident that it is unlikely in the context of the underlying project activity that the input values would have materially changed.		
6.4.44.2.	Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	~~Pending on CAR-5~~ All parameters, except the loan value and interest rate, used in the PDD are consistent with the FSR.	~~Pending~~	OK
6.4.44.3.	If not, was the appropriateness of the values validated?	VVM	113	~~Pending on CAR-5~~ The loan value and interest rate are sourced from the actual loan signed with the bank.	~~Pending~~	OK
6.4.44.4.	On the basis of its specific local and sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the	VVM	113	Refer to section 6.4.36 above. The input values from the FSR are valid and applicable at the time of investment decision.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
investment decision?					
6.5. Barrier analysis	VVM	115-118			
6.5.1. Has barrier analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	115	Not applied in the PDD.	OK	OK
6.5.2. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115			
6.5.2.1. prevent the implementation of this type of proposed CMD project activity?	VVM	115	N.A.	OK	OK
6.5.2.2. do not prevent the implementation of at least one of the alternatives?	VVM	115	N.A.	OK	OK
6.5.3. Are there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, for example risk of	VVM	116	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
technical failure, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity? (If yes, these issues cannot be considered barriers and shall be assessed by investment analysis. Refer to (6.4) above)					
6.5.4. Were the barriers determined as real by:	VVM	117			
6.5.4.1. Assessing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist?	VVM	117	N.A.	OK	OK
6.5.4.2. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions	VVM	117	N.A.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
and national or international statistics?					
6.5.4.3. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	117	N.A.	OK	OK
6.5.5. Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives by applying local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally prevent implementation of *at least one of* the possible alternatives, in particular the identified baseline scenario?	VVM	117	N.A.	OK	OK
6.6. Common practice analysis	VVM	119-			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
		121			
6.6.1. Is this a proposed large-scale or first-of-its kind small-scale project activity?	VVM	119	It is a large-scale project activity.	OK	OK
6.6.2. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	119	Yes.	OK	OK
6.6.3. Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologies the relevant region for assessment will be local and for others it may be trans-national /global.)	VVM	120	The geographical region for the common practice analysis of Photovoltaic power projects is Ningxia Hui Autonomous Region. In China, the regulatory framework and investment environment for Photovoltaic power plants are only similar and comparable for projects connected to the same grid and located in the same Province; therefore, the Ningxia Hui Autonomous Region selected for geographical scope is appropriate.	OK	OK

CHECKLIST QUESTION		Ref.	§	COMMENTS	Draft Concl	Final Concl
6.6.4.	Was a region other than the entire host country chosen?	VVM	120	Yes. The geographical region for the common practice analysis is Ningxia Hui Autonomous Region.	OK	OK
6.6.5.	If yes, was the explanation why this region is more appropriate assessed?	VVM	120	Yes.	OK	OK
6.6.6.	Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?	VVM	120	Yes	OK	OK
6.6.7.	Are similar and operational projects, other than CDM project activities, already “widely observed and commonly carried out” in the defined region?	VVM	120	No.	OK	OK
6.6.8.	If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the	VVM	120	No.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
other similar activities?					
7. Monitoring plan	VVM	122-124			
7.1. Does the PDD include a monitoring plan?	VVM	122	Yes.	OK	OK
7.2. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	Yes.	OK	OK
7.3. Were the list of parameters required by the selected methodology identified?	VVM	123	~~Pending on CL 4~~ Yes. The monitoring plan includes net electricity supplied by the Project to the grid ($EG_{facility,y}$), , calculated as the quantity of total net electricity delivered to the grid by the Project in year y ($EG_{PJ\ to\ grid,y}$) and the quantity of net electricity purchased from the grid by the Project in year y ($EG_{grid\ to\ PJ,y}$).	P~~ending~~	OK
7.4. Does the monitoring plan contain all necessary parameters?	VVM	123	~~Pending on CL 4~~ All necessary parameters required by the methodology have been included in the monitoring plan.	~~Pending~~	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
7.5. Are the parameters clearly described?	VVM	123	Yes.	OK	OK
7.6. Do the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	Yes.	OK	OK
7.7. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Yes. In line with local practices in power sector.	OK	OK
7.8. Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified?	VVM	123			
7.8.1. Data management procedures?	VVM	123	The electricity exported to and imported from the grid will be monitored continuously by the main meter installed at Substation and recorded at least monthly. The accuracy of the main meter and backup meter will at least be 0.5S.In the monitoring plan, data collection procedures have been planned.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
7.8.2. Quality assurance procedures?	VVM	123	Yes.	OK	OK
7.8.3. Quality control procedures?	VVM	123	Yes.	OK	OK
8. Sustainable development	VVM	125-127			
8.1. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Yes, according to the approved FSR, the Project assists China in achieving sustainable development.	OK	OK
8.2. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	Yes.	OK	OK
9. Local stakeholder consultation	VVM	128-130			
9.1. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to	VVM	128	The PP carried out the stakeholders' survey in Sep.2011 by distributing questionnaires, 40 pieces of questionnaires were distributed to the local stakeholders and all of them were responded. The stakeholder	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?			consulting was prior to the publication of the PDD on the UNFCCC website on 19/04/2012.		
9.2. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	Yes. The stakeholders are all supportive of the Project.	OK	OK
9.3. Is the summary of the comments received as provided in the PDD complete?	VVM	129	Sampled questionnaires have been cross checked with the summary of comments in the PDD section E. 2 and found consistent.	OK	OK
9.4. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	See PDD section E.3. The stakeholders are all supportive of the Project, no negative comment received.	OK	OK
10. Environmental impacts	VVM	131-133			
10.1. Have the project participants submitted documentation on the analysis of the	VVM	131	Yes. EIA and its approval issued by Environmental Protection Bureau of Ningxia Hui Autonomous Region are	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
environmental impacts of the project activity?			presented.		
10.2. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Yes. The EIA was finished in Apr.2011.	OK	OK
10.3. Does the host Party require an environmental impact assessment?	VVM	132	Yes.	OK	OK
10.4. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	Yes. The EIA was approved by Environmental Protection Bureau of Ningxia Hui Autonomous Region on 13/04/2011.	OK	OK

Table 2 Resolution of Corrective Action and Clarification Requests

<table>
<tr><th>Draft report clarifications and corrective action requests by validation team</th><th>Ref. To checklist question in table 1</th><th>Summary of project owner response</th><th>Validation team conclusion</th></tr>
<tr><td>CAR-1
LoA from China's DNA is required.</td><td>1.1</td><td>The LoA from China DNA has been submitted.</td><td>Bureau Veritas Certification has checked the LoA and found authentic.
Hence, CAR-1 is closed.</td></tr>
<tr><td>CAR-2
The validation team has found the geo-coordinates in the PDD version 01 are inconsistent with those measured onsite.</td><td>3.5.2</td><td>According to the clarification from Shandong Engineering Consulting Institute, which is the FSR compiled institute of the Project, the site inflection point coordinates are as below:
<table><tr><th></th><th>Longitude</th><th>Latitude</th></tr><tr><td>A</td><td>106°21′49.52″E</td><td>37°48′24.42″N</td></tr><tr><td>B</td><td>106°22′28.03″E</td><td>37°48′03.59″N</td></tr><tr><td>C</td><td>106°22′17.99″E</td><td>37°47′28.31″N</td></tr><tr><td>D</td><td>106°21′25.18″E</td><td>37°47′50.96″N</td></tr></table>The geo-coordinates measured by the validation team are included in the revised boundary.</td><td>Bureau Veritas Certification has checked the revised PDD against the clarification and the onsite measured data, and found the revised coordinates are correct.
Hence, CAR-2 is closed.</td></tr>
<tr><td>CAR-3
The calculated emission factor (EF) of the Project of 0.8964 tCO_2e/MWh is not</td><td>3.16.5</td><td>According to 2011 Baseline emission factors for regional power grids in China issued by the National Development and Reform Commission of the Government of China (China DNA), the OM emission factor ($EF_{grid,OM,y}$) of NWPG is calculated as 1.0001</td><td>Bureau Veritas Certification has checked the revised PDD with the 2011 Baseline emission factors for regional power grids in China issued</td></tr>
</table>

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in table 1	Summary of project owner response	Validation team conclusion
conservative.		tCO_2/MWh, and the build margin emission factor ($EF_{grid,BM,y}$) of NWPG is calculated as 0.5851 tCO_2/MWh. $EF_{grid,CM,y}$ = 0.5851 *0.25+1.0001*0.75=0.89635≈0.8964 tCO_2/MWh For conservative consideration, 0.89635 tCO_2/MWh has been used. Please see the revised PDD. And therefore, the annual emission reductions have been re-calculated as 48,402 tCO_2e.	by the NDRC, and found the data are consistent and correct. Hence, CAR-3 is closed.
CAR-4 Please re-conduct the common practice analysis as per the steps in the Additionality-Tool.	6.1.35	The relative section of PDD has been revised, please see the revised PDD.	Bureau Veritas Certification has checked the revised PDD and found the steps and requirement in the Additionality-Tool has been followed correctly. Hence, CAR-4 is closed.
CAR-5 The Loan Contract of the Project should be provided and the actual interest payable should be taken into account in the calculation of income tax.	6.4.16	The loan contract has been submitted. The Loan Contract signed between the PP and the bank has been provided, the interest rate and debt value of the loan contract have been taken into the IRR calculation. The interest rate (7.05%) used in the investment analysis sourced from the signed loan contract, and higher than the interest rate (6.60%) from the approved FSR, when the FSR	Bureau Veritas Certification has checked the debt value and interest rate in the income tax calculations, and found consistent with the signed loan contract. Hence, CAR-5 is closed.

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in table 1	Summary of project owner response	Validation team conclusion
		finalized in Mar.2011. Taken the actual interest payable in the IRR calculation (Debt: 65,000*10^4RMB with interest Rate:7.05%), the IRR of this project is still 3.11%, which has not been changed. Due to the change of the loan and interest in the IRR calculation, O&M cost of has been changed comparing with the PDD version 01 because that the fix assets maintenance was based on the Static total investment and Interest incurred during construction period, please refer to the IRR calculation sheet for the detail.	
CL-1 The technical specifications of all the main equipments should be provided.	3.7.3	The technical specifications of all the main equipments have been submitted. The relative section of PDD has been revised accordingly.	Bureau Veritas Certification has checked the revised PDD and found appropriate. Hence, CL-1 is closed.
CL-2 The latest version of the methodology ACM0002 has been issued in EB67.	3.10.1	The latest approved methodology ACM0002 Version 13.0.0 "Consolidated Baseline Methodology for Grid-Connected Electricity Generation from Renewable Sources" was applied in the revised PDD.	Bureau Veritas Certification has checked the revised PDD and found the latest methodology has been correctly applied in the revised PDD. Hence, CL-2 is closed.
CL-3	3.12.3	The monitoring variables has been added in the flow diagram in	Bureau Veritas Certification has

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in table 1	Summary of project owner response	Validation team conclusion
As per the requirement of EB41, Annex12, the monitoring variables should be represented in the flow diagram.		PDD, please see the revised PDD.	checked the revised PDD and found appropriate. Hence, CL-3 is closed.
CL-4 Please clarify in the current monitoring plan, how to monitor the quantity of Annual grid-in electricity supplied by the project to the grid ($EG_{facility,y}$) required by the methodology**.**	3.19.1	According to methodology, $EG_{facility,y}$ will be calculated from the continuously measured parameters $EG_{PJ\ to\ grid,y}$ *and* $EG_{grid\ to\ PJ,y}$.($EG_{facility,y}$ =$EG_{PJ\ to\ grid,y}$- $EG_{grid\ to\ PJ,y}$). Recorded on a monthly basis. Please see details in the revised PDD.	Bureau Veritas Certification has checked the revised PDD and found the parameter can be calculated from the continuously measurement of the other parameters. Hence, CL-4 is closed.
CL-5 Please indicate whether the entity/personnel is one of the project participant.	3.21.3	The entity/personnel is not the project participant.	Bureau Veritas Certification has checked the revised PDD and found appropriate. Hence, CL-5 is closed.
CL-6 No construction contract signed on 19/09/2011 has been provided.	3.22	The contract signed on 19/09/2011 is EPC contract, not construction contract. The PDD has been revised.	Bureau Veritas Certification has checked signed EPC contract and found the construction has been included in the contract, and it

Draft report clarifications and corrective action requests by validation team	Ref. To checklist question in table 1	Summary of project owner response	Validation team conclusion
			signing date is 19/09/2011. Hence, CL-6 is closed.
CL-7 Please assess the sensitivity analysis to determine under what conditions variations in the result would occur, and the likelihood of these conditions.	6.1.21	The PDD has been revised, please see the revised PDD.	Bureau Veritas Certification has checked the revised PDD and found appropriate. Hence, CL-7 is closed.
CL-8 Some key financial indicators.eg. the interest rate and debt-equity ratio should be listed in the PDD.	6.4.6	The key financial indicators have been added in Table 4 of PDD, please see the revised PDD.	Bureau Veritas Certification has checked the captial and the interest ratio in the PDD and found consistent with the signed loan contract. The city build tax and education tax are consistent with the local regulations. Hence, CL-8 is closed.

APPENDIX B. Comparison on Input Values of registered CDM PV solar projects located in Ningxia Hui Autonomous Region

Project Name	CDM Ref. No.	Capacity (MW)	Total static investment (million RMB)	Unit investment (RMB/kW)	Annual O&M cost (million RMB)	O&M cost/Static Investment	PLF
CECIC Taiyangshan Grid-connected Solar PV Power Generation Phase I project	4775	10.028	185.0010	18,448	1.237	0.67%	0.1766
Ningxia Hongsipu No.1 PV(photovoltaic) Power Plant 50MWp Project	4919	50	1,292.7300	25,855	11.560	0.89%	0.2284
CECIC Shizuishan Grid-connected Solar PV Power Generation Phase I project	4981	10.006	188.6853	18,857	1.232	0.65%	0.1766
Guodian Ningxia Pingluo 10MWp Solar Photovoltaic Power Project	4982	10	216.1800	21,618	2.54	1.17%	0.1712
Ningxia Taiyangshan Phase I 10MWp Solar Photovoltaic Power Project	4994	10	236.7400	23,674	2.54	1.07%	0.1998
Huadian Ningxia Ningdong 10MWp Solar PV Power Station Project	5077	10.00832	162.9810	16,285	2.479	1.52%	0.1510

Project Name	CDM Ref. No.	Capacity (MW)	Total static investment (million RMB)	Unit investment (RMB/kW)	Annual O&M cost (million RMB)	O&M cost/Static Investment	PLF
Guodian Ningxia Zhongwei 10MWp Solar Photovoltaic Power Project	5374	10	202.8600	20,285	2.59	1.28%	0.1713
CGN Ningxia Qingtongxia Phase I 10MWp Grid-connected Solar PV Power Generation Project	5712	10	N.A.	N.A.	N.A.	NA	0.1657
Ningxia Shizuishan 10MWP Photovoltaic Power Generation Project	5792	10	17.00461	17,005	1.35	0.79%	0.1513
Ningxia Shizuishan 10MWp Photovoltaic Power Generation Project	5854	10.2555	N.A.	N.A.	N.A.	NA	0.1719
MIN		**/**	**/**	**16,285**	**/**	**0.65%**	**0.1510**
MAX		**/**	**/**	**25,855**	**/**	**1.52%**	**0.2284**
The Project		**/**	**/**	**20,671**	**/**	**1.4%**	**0.1570**