



VALIDATION REPORT

Xinjiang A'letai Hua'ning Hydropower Project

REPORT No. CDM-VAL-0034

Revision No. 2.1

No distribution without permission from the client or responsible organizational unit



Report No.	Date of first issue	Revision No.	Date of this revision
CDM-VAL-0034	19/03/2012	2.1	23/09/2012

Project name: Xinjiang A'letai Hua'ning Hydropower Project
Client: GFACC (IOM) Limited
Host country: China
Methodology: ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable resources, Version: 12.3.0
GHG reducing Measure/Technology: renewable energy: Hydropower
ER estimate: 257,532 tCO₂e /year
Size: ☒ Large Scale ☐ Small Scale
Validation Status:
☐ Corrective Actions Requested
☐ Clarifications Requested
☒ Full Approval and Submission for Registration
☐ Rejected

Summary of the Validation Opinion:

☒ The review of the project design documentation and the subsequent follow-up interviews have provided CEPREI with sufficient evidence to determine the fulfillment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence CEPREI will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.
☐ The review of the project design documentation and the subsequent follow-up interviews have not provided CEPREI with sufficient evidence to determine the fulfillment of all stated criteria. Hence CEPREI will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.

Report title: Validation Report_v2.1_ Xinjiang A'letai Hua'ning Hydropower Project
Report No.: CDM-VAL-0034 Date of this revision: 23/09/2012 Rev. No.2.1

Validated by: Guo Zhiyuan  Work period: 02/12/2011-23/09/2012

Reviewed by: Chen Chunyan  Date: 23/05/2012 – 23/09/2012

Approved by: Wang Xiuci  Date: 25/09/2012

CEPREI Certification Body

TEL: +86-20-87237425 87236606

FAX: +86-20-87236230 87237798

Physical address: No.110, Dongguanzhuang RD, Tianhe District, Guangzhou City, P.R.C.

Postal Code: 510610

www.ceprei.org

Chunyan Chen: chency@ceprei.org

The revision history of the Validation Report is shown in following table:

Version No.	Date	Description and reason of revision
1.0	19/03/2012	Findings established.
2.0	25/05/2012	Submit to UK's DNA for LoA. All of the CARs and CLs have been closed except CAR-2.
2.1	23/09/2012	Final version. This is the only change that has been made to the version referred to in the LoA from UK.

Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CL	Clarification Request
CM	Combined Margin
CNY	China Yuan
CO ₂ e	Carbon Dioxide Equivalent
DNA	Designated National Authority
CEPREI	CEPREI Certification Body
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
FSR	Feasibility Study Report
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change Global
IRR	Internal Return Rate
LoA	Letter of Approval
MP	Monitoring Plan
NDRC	National Development and Reform Commission
NGO	Non-governmental Organization
NWPG	Northwest China Power Grid
ODA	Official Development Assistance
OM	Operating Margin
PDD	Project Design Document
SD	Sustainable Development
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value-added Tax

Table of Contents

1 INTRODUCTION	5
1.1 Objective	5
1.2 Scope.....	5
2 METHODOLOGY	6
2.1 Desk Review of the Project Design Documentation.....	6
2.2 Follow-up Interviews with Project Stakeholders.....	11
2.3 Resolution of Outstanding Issues	13
2.4 Internal Quality Control	14
2.5 Validation Team	14
3 VALIDATION FINDINGS	15
3.1 Participation Requirements	15
3.2 Project Design	17
3.3 Justification of the Choice of Baseline and Monitoring Methodology	19
3.4 Project boundary	20
3.5 Baseline Determination.....	21
3.6 Additionality	21
3.7 Monitoring.....	37
3.8 Estimate of GHG Emissions	40
3.9 Environmental Impacts	40
3.10 Comments by Local Stakeholders	41
3.11 Comments by Parties, Stakeholders and NGOs	42
4 VALIDATION OPINION	43
ANNEX A: Validation Protocol.....	44
ANNEX B: Certificate of Appointment.....	85

1 INTRODUCTION

GFACC (IOM) Limited has commissioned CEPREI Certification Body Certification (hereafter called “CEPREI”) to perform a validation of “*Xinjiang A’letai Hua’ning Hydropower Project*” (hereafter called “the project activity”). This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board.

1.1 Objective

The purpose of a validation is to have an independent third party for assessing the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the 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).

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology. The validation team has, based on the recommendations in the “*Validation and Verification Manual (version 01.2)*” employed a risk-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

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

2 METHODOLOGY

The validation consisted of the following three phases:

- I A desk review of the project design documents
- II Follow-up interviews with project stakeholders
- III The resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

2.1 Desk Review of the Project Design Documentation

The following outlines the documentation reviewed during the validation:

Table 2-1: Methodologies, tools and other guidance by the CDM EB

Reference No.	Reference Document
/1/	Validation and Verification Manual, version 01.2
/2/	Methodology, ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable resources, version 12.3.0.
/3/	Tool to calculate the emission factor for an electricity system, version 02.2.1
/4/	Tool for the demonstration and assessment of additionality, version 6.0.0
/5/	Guidelines on the assessment of investment analysis, version 05.0
/6/	Glossary of CDM terms, version 06.0
/7/	Guidance on the demonstration and assessment of prior consideration of the CDM, version 04
/8/	Guidelines for the Reporting and Validation of Plant Load Factors version 01 (EB48, Annex11)

Table 2-2: Letter of Approval

Reference No.	Reference Document
/9/	Letter of Approval issued by China DNA on 28/03/2012.
/10/	Letter of Approval (Carbon & Energy Capital Co. LTD) issued by United Kingdom DNA on 17/09/2012.
/11/	Letter of Approval (GFACC (IOM) Limited) issued by United Kingdom DNA on 17/09/2012.

Table 2-3: Documentation provided by the PP

Reference No.	Reference Document
/12/	Project Design Document for Xinjiang A'letai Hua'ning Hydropower Project, version 1 of 28/11/2011 and version 4.1 of 24/05/2012.
/13/	IRR Calculation Spreadsheet.
/14/	ER Calculation Spreadsheet.
/15/	The FSR of Xinjiang A'letai Hua'ning Hydropower Project prepared by Zhejiang Design Institute Water Conservancy & Hydro-electric Power dated January 2011.
/16/	Approval of FSR issued by Development and Reform Commission of Xinjiang Uygur Autonomous Region dated 15/07/2011.
/17/	The EIA of Xinjiang A'letai Hua'ning Hydropower Project prepared by Xinjiang Academy of Environmental Protection Science dated May 2011.
/18/	Approval of EIA issued by Department of Environmental Protection of Xinjiang Uygur Autonomous Region dated 11/05/2011.
/19/	CDM development contract signed with Hangzhou Carbon Trade Environment Engineering Co., Ltd on 22/08/2011.
/20/	ERPA signed by the project owner and the buyer on 23/11/2011.
/21/	Resolution of board meeting to make decision of financial solution dated 20/07/2011.
/22/	Construction contract of power factory, diversion tunnel and dam signed with Zhejiang ZhengBang Hydroelectric Power Construction Co., Ltd on 15/09/2011.

/23/	Purchase Contract of hydro turbine, generator and accessory equipment signed with Zhejiang ShuangFu Electrical Equipment Co., Ltd on 05/01/2012.
/24/	Technical agreement of hydro turbine, generator and accessory equipment.
/25/	The Prior Consideration of the CDM Form, received by EB on 18/11/2011. http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html
/26/	The Prior Consideration of CDM Form, NDRC notification for the Project dated on 18/10/2011 and confirmed by China DNA dated 24/10/2011.
/27/	Loan commitment issued by China Development Bank on 18/03/2011.
/28/	Letter of Grid Connected opinion issued by Xinjiang Power Company dated 15/09/2010.
/29/	Approval of the planning report of soil and water conservation issued by Water Resources Department of Xinjiang on 15/04/2011.
/30/	Approval of the water resources assessment report issued by Water Resources Department of Xinjiang on 19/04/2011.
/31/	Approval of the planning report of land acquisition and immigration issued by Immigration Office of Xinjiang on 16/05/2011.
/32/	Local Stakeholders' comments Questionnaires.

Table 2-4: Documentation used to validate and cross-check the information of the project

Reference No.	Reference Document
/33/	China NDRC, the emission factor calculation for each power grid of China, published on 20/10/2011.
/34/	Economic evaluation code for small hydropower projects (SL16-95), issued by Ministry of Water Resources on 06/06/1995 and started effective since 01/07/1995.
/35/	Economic evaluation code for small hydropower projects (SL16-2010), issued by Ministry of Water Resources on 22/10/2010 and started effective since 22/01/2011.
/36/	Supervision Report on Power Tariff Application and Power Settlement of

	Northwest area in China in 2009, issued by Northwest Electricity Regulatory Bureau of SERC (State Electricity Regulatory Commission) in 2010.
/37/	China Energy Statistical Yearbook.
/38/	China Electric Power Yearbook.
/39/	China Statistics Yearbook. (Website: http://www.stats.gov.cn/tjsj/ndsj/)
/40/	Technical administrative code of electric energy metering (DL/T448-2001), issued by State Economic and Trade Commission on 03/11/2000 and started effective since 01/01/ 2001.
/41/	Notice on Issuing Electric Power Sector Reform Program (No. Guofa[2002]5), issued by the State Council dated 10/02/2002.
/42/	Interim Rules for Economic Assessment of Hydropower Construction Projects (ShuiGui[1994]0026), issued by Ministry of Water Resources and Ministry of Electric Power dated 14/06/1994.
/43/	Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects (GuoDianFa[2002]623), issued by State Power Corporation dated 10/09/2002.
/44/	Hydro energy design code for small hydropower projects (SL76-94), issued by Ministry of Water Resources on 28/03/1994 and started effective since 01/05/1994.
/45/	Classification & design safety standard of hydropower projects (DL5180-2003), issued by State Economic and Trade Commission in 2003.
/46/	Enterprises Income Tax Law of the People's Republic of China, published on 16/03/2007 and started effective since 01/01/2008.
/47/	Regulation on the Implementation of the Enterprise Income Tax Law of the People's Republic of China, published on 06/12/2007 and started effective since 01/01/2008.
/48/	Interim Regulation of the People's Republic of China on Value Added Tax (2008 Revision), published on 10/11/2008 and started effective since 01/01/2009.
/49/	Notice on the Application of Low Value Added Tax Rates and Policies on Collecting Value Added Tax by the Simple Approach to Some Goods (No. CaiShui[2009]9), issued by Ministry of Finance and State Administration of Taxation dated 19/01/2009.

/50/	Notice of Taxation on Several Issues concerning the National Implementation of Value-added Tax Reform (CaiShui[2008]170), issued by Ministry of Finance and State Administration of Taxation dated 19/12/2008.
/51/	Provisional Regulations of the People's Republic of China on City Maintenance and Construction Tax (GuoFa[1985]19), issued by State Council dated 08/02/1985.
/52/	The Provisional Regulations on educational surtax (Third Revision), issued by State Council dated 08/01/2011.
/53/	Financial system for industrial enterprises (CaiGongZhi 574), issued by Ministry of finance on 30/12/1992 and started effective since 01/07/1993.
/54/	Measure for the Collection of Water Resource fee in Xinjiang Uygur Autonomous Region (No.92), issued by People's Government of Xinjiang Uygur Autonomous Region on 11/05/2000.
/55/	Law of the People's Republic of China on Appraising of Environmental Impact, issued by Standing Committee of the National People's Congress dated 28/10/2002.

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

- 1) Demonstration of alternative has been changed according to Para 4 of "Tool for the demonstration and assessment of additionality";
- 2) Deeper description of the monitoring plan;
- 3) The starting date of the Project changed;
- 4) The starting date of the first crediting period changed according to the validation process;
- 5) Methodology version is updated to ACM0002, version 12.3.0;
- 6) The VAT deduction considered in calculating the project IRR.
- 7) Changes related to the CARs and CLs identified in the CEPREI's draft validation protocol.

After reviewing the PDD version 4.1 of 24/05/2012, CEPREI issued this final validation report and opinion.

2.2 Follow-up Interviews with Project Stakeholders

On 27/12/2011 and 28/12/2011, validation team performed a site inspection and interviews with the representatives of the project owner, XinJiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd and the project consultant, Hangzhou Carbon Trade Environment Engineering Co., Ltd to resolve the issues identified during the desk review of the PDD.

Identified documents and information, the PDD, FSR, EIA and additional background documents related to the project design and baseline were effectively assessed as a part of the validation.

Table 2-4: Information regarding the issues discussed during the site visits

Date	Name	Organization	Topic
27/12/2011	Wu Shihui Zhao Haicheng	Xinjiang A'letai Hua'ning Hydropower Project	<ul style="list-style-type: none"> ➤ Project background information; ➤ Project technology, operation, maintenance and monitoring capability; ➤ Project additionality; ➤ Project monitoring and management plan; ➤ Project approval status (incl. EIA approval, CDM project approval); ➤ Stakeholder consultation process.
27/12/2011	Lin Yan	Hangzhou Carbon Trade Environment Engineering Co., Ltd	<ul style="list-style-type: none"> ➤ Applicability of selected methodology; ➤ Baseline determination; ➤ Emission reduction; ➤ Monitoring plan.
27/12/2011	Ma Xiangming	Development and Reform Commission of A'letai City	<ul style="list-style-type: none"> ➤ Approval Procedure; ➤ ODA; ➤ Power Load Factor of hydropower plants; ➤ Local applicable laws and regulations on hydropower projects; ➤ Other similar projects in the region; ➤ Sustainable development; ➤ Approval of Grid Access System Program; ➤ Electricity Tariff.

27/12/2011	Wang Xihe	Environmental Protection Bureau of A'letai City	<ul style="list-style-type: none"> ➤ EIA Approval; ➤ Environmental Impact; ➤ Sustainable Development; ➤ Monitoring of ecosystem during the implementation of the Project.
27/12/2011	Mu Lati	Immigration Bureau of Chonghuer town	<ul style="list-style-type: none"> ➤ Resettlement; ➤ Production Settlement; ➤ Arrangement of land using; ➤ Compensation to affected people.
27/12/2011	Ba Zaer Jia Yier	Residents in Chonghuer town of A'letai City	<ul style="list-style-type: none"> ➤ Local stakeholder consultation process; ➤ Opinion of the Project.

2.3 Resolution of Outstanding Issues

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

- It organizes, details and clarifies the requirements 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 validation protocol consists of four tables.

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

Table 2: Resolution of GSP comments;

Table 3: Resolution of Corrective Action and Clarification Requests;

Table 4: Forward Action Requests.

The completed validation protocol for the Xinjiang A'letai Hua'ning Hydropower Project is enclosed in ANNEX A to this report.

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

Corrective action requests (CAR) are issued, where:

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

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

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

2.4 Internal Quality Control

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

2.5 Validation Team

On the basis of a competence analysis and individual availabilities a validation team, consisting of 1 team leader, was appointed. Furthermore also the personnel for the technical review and the decision making were determined. The validation team composition has been communicated to the PP on 03/12/2011. No rejection from the PP was received hence no changes happened.

Table 2-5: Composition of validation team

Name	Function ¹	Role ²	Technical area competence	Type of involvement						Appointment date
				Desk review	On-site visit/interview	Reporting	Supervision of work	Technical review	Expert input	
Guo Zhiyuan	TL	V	X	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			02/12/2011
Chen Chunyan	TR	--	X					<input checked="" type="checkbox"/>		02/12/2011
Wang Xiuci	TCD/FA	-- ³	--							

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

TCD: Technical Committee Director

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

³⁾ Selection of TR and TR procedural administration

3 VALIDATION FINDINGS

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

The final validation findings relate to the project design as documented and described in the project design documentation version 4.1 of 24/05/2012.

3.1 Participation Requirements

The project participant includes *XinJiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd* of China, *GFACC (IOM) Limited* and *Carbon & Energy Capital Co. LTD* of United Kingdom.

The host Party P.R. China and the Annex I Party United Kingdom meet the requirements to participate in the CDM.

A letter of approval (LoA) was issued by DNA of China on 28/03/2012, authorizing *XinJiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd* of host Party as project participant and confirming that the project assists in achieving sustainable development.

A LoA was issued by the DNA of the United Kingdom on 17/09/2012, authorizing *Carbon & Energy Capital Co. LTD* as project participants.

A LoA was issued by the DNA of the United Kingdom on 17/09/2012, authorizing *GFACC (IOM) Limited* as project participants.

The table given as below illustrates the authenticity of three letters of approval which has been validated by validation team. These LoAs are therefore regarded as valid and as meeting the requirements.

Table 3-1: LoAs of project participants

Project participants	XinJiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd	<i>Carbon & Energy Capital Co. LTD</i>	<i>GFACC (IOM) Limited</i>
Parties involved	People's Republic of China(Host Party)	The United Kingdom of Great Britain and Northern Ireland	The United Kingdom of Great Britain and Northern Ireland
APPROVAL			

Date received of LoA	28/03/2012	17/09/2012	17/09/2012
LoA Received from	PP	PP	PP
Refer to document	No. 3863	EA/CECC/10/2012	EA/GFACCLtd/09/2012
Validation of authenticity	A list of LoA issued by Chinese DNA has been published on the DNA's website. (http://cdm.ccchina.gov.cn). The LoA of the proposed project activity can be found on the list.	The validation team wrote a clarification mail to the official mailbox of UK DNA (CDM@environment-agency.gov.uk) about the issuance of LoA and received a confirmation letter from UK DNA.	The validation team wrote a clarification mail to the official mailbox of UK DNA (CDM@environment-agency.gov.uk) about the issuance of LoA and received a confirmation letter from UK DNA.
Validity of LoA	Valid	Valid	Valid
PARTICIPATION			
Party is party to Kyoto Protocol	Yes (China ratified the Kyoto Protocol on 30/08/2002.)	Yes (United Kingdom ratified the Kyoto Protocol on 31/05/2002.)	
Voluntary participation	Yes	Yes	Yes
Project contribution to SD	Yes	NA	NA
The LoA is unconditional with above	Yes	Yes	Yes
Diversion of official development aid towards host country	NA	No	No

During the on-site assessment, the responsible person of *XinJiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd* and the officer of local DRC did confirm that the project activity is funded by the equity of the project owner and the loan from the commercial bank.

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

3.2 Project Design

The Xinjiang A'letai Hua'ning Hydropower Project is a new hydropower project with an accumulation reservoir. The project is located in A'letai City of Xinjiang Uygur Autonomous Region. The Project is developed and operated by Xinjiang A'letai Hua'ning Hydropower Investment Developing Co., Ltd.

Based on the information contained in the FSR, validation team was able to verify that the project activity is a diversion type hydropower project with a total installed capacity of 100 MW consisting of 2×50MW units. The expected annual operating hours of the project activity is 3,322 hours per annum with resulting expected annual electricity generation of 332,220 MWh per annum. Of this generation figure, 324,920 MWh is expected to be delivered net of transmission loss and auxiliary power use to the Xinjiang power grid, part of the Northwest China Power Grid (NWPG).

Validation team checked the “*Construction contract of power factory, diversion tunnel and dam*” between the project owner and the construction company Zhejiang ZhengBang Hydroelectric Power Construction Co., Ltd on 15/09/2011 and is the earliest contract related to the construction of the project activity. So the starting date of the project activity is 15/09/2011.

Based on the validation team's sectoral knowledge and the review of the FSR, the proposed technology is similar to the technology used in the existing hydropower projects in China and represents current good practice.

Table 3-2: Technical parameters

Parameter	Description in the PDD	Determination by Validation Team
Location of Project Activity	A'letai City, Xinjiang Uygur Autonomous Region, P.R.China Co-ordinates, Dam: 87°47'42"E, 48°13'23"N	By on-site assessment the validation team confirms the project location as described in the PDD is correct.

	Plant: 87°56'00"E, 48°13'08"N	
Installed Capacity	100 MW (2*50 MW)	Confirmed by reviewing the signed equipment technical agreement. – 2 sets of power units, the output capacity of each generator is 50 MW, hence total capacity is 100 MW.
Technical specification of Turbine	Type: HLFF151-LJ-216 Rated head: 138m Rated rotation speed: 375 r/min Rated flow: 40.36 m ³ /s Equipment life time: 30 years	Confirmed by reviewing the signed equipment technical agreement.
Technical specification of Generator	Type: SF50-16/4650 Installed capacity: 50 MW Rated voltage: 10.5 KV Rated power factor: 0.85 Rated rotation speed: 375 r/min Equipment life time: 30 years	Confirmed by reviewing the signed equipment technical agreement.
Starting Date of the Project activity	15/09/2011	Confirmed by checking the construction contract on site.
Expected Project Operational Lifetime	30 years	The 30 year lifetime is deemed as appropriate due to the technical lifetime for generator units of 30 years.
Stating date of credit period	01/07/2013	Considering the progress of construction, the validation team deems that it's appropriate.

Detailed technical parameters of key equipment are specified in the PDD and the corresponding FSR. Refer to section 3.6.5 "Investment analysis: Input parameters" below for more information.

The validation team considers the project description of the project contained in the PDD to be complete and accurate. The PDD complies with the relevant forms and guidance for completing

the PDD.

3.3 Justification of the Choice of Baseline and Monitoring Methodology

The project correctly applies the approved baseline methodology “ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable resources, version 12.3.0.”

The applicability criteria and fulfillment of consolidated baseline methodology for grid-connected electricity generation from renewable sources are as follows:

Table 3-3: applicability of methodology

No.	Applicability Criteria of ACM0002 Version 12.3.0	Determination by validation team	Criteria fulfilled
1	This methodology is applicable to grid-connected renewable power generation project activities.	Following desk review and conducting site visit to the project, it can be confirmed that the proposed project activity will be connected to Xinjiang Power Grid which is part of Northwest China Power Grid.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	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 run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	Following desk review and conducting site visit to the project, it can be confirmed that the proposed project activity is a newly built, hydro power plant with an accumulation reservoir.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	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 .	The project activity results in new reservoirs and the power density of the power plant is 34.01W/m ² , which is greater than 4 W/m.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	The methodology is not applicable to the following: • Project activities that involve	Following document review and the on-site assessment conducted by the validation team, it is able to	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

	<p>switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;</p> <ul style="list-style-type: none"> • Biomass fired power plants; • A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than 4 W/m²." 	<p>confirm that:</p> <ul style="list-style-type: none"> • The project activity is a greenfield hydropower project that does not involve any switching from fossil fuels to renewable energy. • No biomass fired power generation will take place at the project activity. • The power density of the proposed project activity is 34.01W/m² which is well in excess of the stipulated level of 4W/m². 	
--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Therefore, the proposed project activity meets the applicability conditions of ACM0002 (version 12.3.0) and the various methodology tools referred to within the methodology.

3.4 Project boundary

The proposed project activity will be connected to the NWPG via the Xinjiang Power Grid. The project boundary includes the physical and geographical site of the project, as well as all power plants physically connected to the NWPG.

(The NWPG is a regional power grid in China. Provincial Grids included in the NWPG are: Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang Power Grid. The designation of the NWPG has been made by the National Development and Reform Commission of China. The Letter of Grid Connected Opinion for the Project issued by Xinjiang Power Company has been checked by the validation team.)

Emission sources and gases included in the project boundary are:

Table 3-4: Project boundary

	GHGs involved	Description
Baseline emissions	CO ₂	As per the calculation of expected emission reductions as a result of displacing electricity which would otherwise been supplied by power plants connected to the NWPG.
Project emissions	No project emissions	The project is a hydropower activity resulting in new reservoirs with power density greater then greater than 10 W/m ² .

		PD=34.01 W/m ²
Leakage	No leakage	No leakages that need to be considered when applying this methodology ACM0002, version 12.3.0.

The selected sources and gases are justified for the project activity. The project boundary is transparent and reasonable.

3.5 Baseline Determination

According to Methodology of ACM0002 (Version 12.3.0), if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the 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”.

The validation team confirms that the proposed project activity is a new grid connected hydropower plant. Therefore, the baseline scenario as prescribed in the ACM0002 (version 12.3.0) is applicable to the proposed project activity and the validation team considers the baseline scenario realistic and credible.

3.6 Additionality

The additionality of the proposed project activity, as required by ACM0002, is demonstrated by applying the “Tool for the demonstration and assessment of additionality (Version 06.0.0).”

3.6.1 CDM consideration and continued action to secure CDM status:

According to the “Glossary of CDM terms, version 6.0”, “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.”

The validation team checked the “Construction contract of power factory, diversion tunnel and dam” between the project owner and the construction company on 15/09/2011 and has been confirmed to be the earliest contract signed related to the construction of the project activity. Thus the starting date of the project activity is deemed to be 15/09/2011 which was after 02 August 2008 and validation team is able to conclude that the project is a new project activity.

According to Guidelines on the demonstration and assessment of prior consideration of the CDM version 04 (EB 62 annex 13), the following evidences are checked on site:

- *“Prior consideration of the CDM Form”* of the project has been sent to EB and received on 18/11/2011.
- *“CDM notification form of the project activity”* of the project was issued by NDRC of China, confirmed by NDRC on 24/10/2011.

The Validator also checked the official websites of UNFCCC and found out that the date received by EB for the project is: 18/11/2011.

The notification has been provided by the project participants within six months of the project activity start date. Besides the board minutes issued on 20/07/2011 can indicate that the CDM was seriously considered in the decision to implement the project activity.

Therefore, the validation team confirms that the implementation of the Project as a CDM project is fully in line with “Guidelines on the demonstration and assessment of prior consideration of the CDM” (version04, EB62 Annex13).

3.6.2 Identification of alternatives to the project activity

In accordance with the methodology, the project activity and the current practice of generation by other power plants in the NWPG have been selected as the alternatives. Therefore, no further analysis is needed according to Para105 of VVM (version 01.2).

3.6.3 Investment analysis: Choice of approach

As the project generates financial and economic benefits through the sales of electricity other than CDM related income and the alternative for the baseline scenario of the project is not a similar investment project, a benchmark analysis (option III) is justified for conducting the investment analysis.

3.6.4 Investment analysis: Benchmark selection

In accordance with the *“Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects”* issued by the state grid company, the benchmark (after tax) can be considered as the Internal Rate of Return (IRR) at 8%.

At the present, this benchmark of total investment, financial internal rate of return (IRR), is widely accepted and applied normally for hydropower projects in China as indicator for investors, commercial banks and other stakeholders and it is seen from other similar hydropower projects in China which are recently registered under CDM. Thus the validation team is able to confirm the suitability and applicability of this benchmark.

3.6.5 Investment analysis: Input parameters

Before reviewing the IRR calculation, the validation team has validated the basic parameters listed in the PDD in accordance with the Guidance of Para.113 of the VVM.

3.6.5.1 The validity of FSR:

In China, a FSR is required to be developed by a third party qualified directly by the government. An approval letter of the FSR is issued by the government only after it passes the public assessment of the sectoral experts designated by the government. A FSR can thus be regarded as an accurate and trustworthy source of information coming from a recognized entity once it has the approval letter from the government.

The input parameters used in the financial analysis of Xinjiang A'letai Hua'ning Hydropower Project are taken from the FSR developed by Zhejiang Design Institute Water Conservancy & Hydro-electric Power which is an independent officially accredited entity with hydropower design qualification. The FSR was approved by Development and Reform Commission of Xinjiang Uygur Autonomous Region. The FSR can thus be considered as the information provided by an independent and recognized source.

The validation team has compared the input parameters for the financial analysis included in the PDD with the parameters stated in the FSR and was able to confirm that the values applied are consistent with the values stated in the FSR and IRR calculation sheets and were found to be correct.

The finalization date of FSR is January 2011, the approval date of FSR is 15/07/2011. And the Director Board decided to apply the project as a CDM project on 20/07/2011. Given the relatively short period of time between finalization of the FSR and the decision to proceed with the project activity it is unlikely in the context of the project that the input values would have materially changed and that it is thus reasonable to assume that the cited documents have been the basis of the decision to proceed with the investment in the project.

3.6.5.2 PLF & net electricity delivered to the grid

The plant load factor calculated under EB 48 Annex 11 "*GUIDELINES FOR THE REPORTING AND VALIDATION OF PLANT LOAD FACTORS*", was based on the FSR of the project and was determined by a third party contracted by the project participants.

Table 3-5: PLF & net electricity delivered to the grid

Parameter	PDD	FSR	Determination by Validation Team
Installed capacity	100 MW	100 MW	In the FSR, the determination of Installed Capacity and Annual electricity generation discussed sufficiently in relation to the water resources based on the long term meteorological data of the water resources in the local area, for 54 years (1957-2010) water resource measurement.
Annual designed electricity generation	332,220 MWh	332,220 MWh	
Annual average operational hours	3,322 hrs.	3,322 hrs.	According to official statistics from the <i>"China Electric Power Yearbook"</i> , in 2006, 2007, 2008, 2009 and 2010, the average PLFs of hydropower plants located in Xinjiang is 35.5%, 35.6%, 42.1%, 39.9% and 40.6% respectively. Considering the project located in the Northern part of Xinjiang, the freezing season is relatively longer; and cross-checked the annual operating hours (PLF) with registered similar hydropower CDM projects in the same region (Refer to section 3.6.5.8 below) and finds that the annual operating hours of the registered hydropower projects in Xinjiang listed in Table 7 is between 3096h (35.34%) ~ 5784h (66.02%). The annual operating hour (PLF) of the proposed project is within the typical range of similar projects. Therefore, the PLF of the project is applicable and reasonable.
PLF	37.92%	37.92%	
Coefficient of Effective Electricity	98%	98%	Referring to <i>"Economic evaluation code for small hydropower projects (SL16-95 & SL16-2010)"</i> , the Coefficient of Effective Electricity for a grid-connected power plant of yearly regulation reservoir is ranged from 0.95 to 1.00, hence 0.98 used for this project is applicable and reasonable. Even 1.00 of coefficient applied in the project, the PIRR changed from 4.27% to 4.45%; it is significantly lower than the benchmark (8%).
Onsite electricity consumption rate	0.2%	0.2%	Referring to <i>"Hydro energy design code for small hydro power project (SL76-94)"</i> , the onsite electricity consumption rate can be 0.5%~1.0%. Furthermore, even onsite electricity consumption rate go down to zero, the IRR of the project will not exceed the

			benchmark. Hence, the value is applicable and conservative for the project.
Net electricity delivered to the grid	324,920 MWh	324,920 MWh	Calculated in accordance with the parameters above.

As elaborated in the table above, the expected net electricity delivered to the grid used for investment analysis in the PDD is reasonable and conservative with respect to the calculation of the IRR of the propose project.

Furthermore, the net electricity delivered to the grid of 324,920 MWh used for calculation the estimated GHG emissions is applicable and reasonable. Refer to section 3.8 below.

3.6.5.3 Fixed Asset Investment

The contracted investment costs from individual contracts the values valid were compared to the total budgeted investments as per the FSR:

Table 3-6: Fixed Asset Investment

Budgeted fixed asset investment in FSR		Actually occurs in the contract		
Item	Value (CNY)	Contract	Contractor	Value (CNY)
Construction cost	374,360,000	Construction contract (Power factory)	Zhejiang ZhengBang Hydroelectric Power Construction Co., Ltd	108,572,824
		Construction contract (Diversion tunnel)	Zhejiang ZhengBang Hydroelectric Power Construction Co., Ltd	126,190,675
		Construction contract (Dam)	Zhejiang Provincial No.1 Water Conservancy & Electric Power Construction Group Holdings Co., Ltd.	162,492,971
		Amount		397,256,470

Hydro turbines and Generators	23,400,000	Contract of hydro turbines and generators	Zhejiang ShuangFu Electrical Equipment Co., Ltd.	24,155,500
Electromechanical equipment (except Hydro turbines and Generators) and installation costs	54,720,000	The costs have not yet occurred during the validation.		
Metal structure equipment and installation costs	39,610,000			
Auxiliary project costs	119,340,000			
Environmental protection and soil conservation projects costs	15,790,000			
Land collection and auxiliary project costs	33,690,000			
Others (administrative fee, Reserve fund and taxes etc.)	183,530,000			

The validation team has checked the available cost according to the current corresponding purchase contracts for construction, which is the main part of total investment, and found the contracted value of the current contracts is higher than the budgeted construction cost in FSR.

Furthermore, by compare with other similar registered CDM projects in Xinjiang, the Unit investment cost of the project activity is 8444 CNY/KW, falling within the range of similar projects and slightly higher than the average unit investment cost. However, even if the average unit investment cost of 7163 CNY/KW applied in the project activity, the PIRR works out to be 5.66% which is still lower than the benchmark. (Refer to section 3.6.5.8 below).

Thus the validation team is able to conclude that the construction investment designed in FSR and applied in the calculation of IRR is reasonable and appropriate.

3.6.5.4 Annual O&M costs

The annual operation costs mainly include maintenance fee, insurance, salaries, employee welfare, materials cost, reservoir maintenance fee, other costs, water resource fee. Annual O&M costs are reasonable for a hydropower project, and the input values for annual operation cost were justified as following:

Table 3-7: Every item of Annual O&M

Every item of Annual O&M	PDD&IRR Calculation	FSR	Determination by Validation Team
Repair Fee	0.8%	0.8%	According to <i>"Interim Rules for Economic Assessment of Hydropower Construction Projects"</i> , the rate of Annual Repair Fee is 1%. Hence, the value adopted in FSR and investment analysis is applicable and conservative for the project activity.
Insurance fee	0.25%	0.25%	According to the opinions of hydropower industry experts and a common practice for hydropower industry, the rate of 0.25% adopted in FSR and investment analysis is applicable and reasonable for the project.
Reservoir maintenance fee	1 CNY/MWh	1 CNY/MWh	According to <i>"Interim Rules for Economic Assessment of Hydropower Construction Projects"</i> , the Reservoir maintenance fee is 1 CNY/MWh. Hence, the value adopted in FSR and investment analysis is applicable and reasonable for the project activity.
Water Resources Fee	3 CNY/MWh	3 CNY/MWh	According to <i>"Measure for the Collection of Water Resource fee in Xinjiang Uygur Autonomous Region (No. 92)"</i> , the Water Resources Fee in Xinjiang is 3 CNY/MWh. Hence, the value adopted in FSR and investment analysis is applicable and reasonable for the project activity.
Number of Staffs	50	50	According to <i>"Interim Rules for Economic Assessment of Hydropower Construction Projects"</i> , the Number of Employees is 3.2/MW for a hydropower station with installed capacity of less

			<p>than or equal to 250MW.</p> <p>Hence, the value adopted in FSR and investment analysis is applicable and conservative for the project activity.</p>
Salary and welfare	20,000 CNY/year	20,000 CNY/year	<p>According to “China Statistics Yearbook 2009, 2010 and 2011”, the annual average salary of electricity industry employee (exclusive of benefits) in Xinjiang was 33,551CNY (2008), 38,079CNY (2009) and 43,855CNY (2010).</p> <p>Hence the 20,000 CNY adopted in FSR and investment analysis is applicable and conservative.</p>
Material Costs	5 CNY/KW	5 CNY/KW	<p>According to “Interim Rules for Economic Assessment of Hydropower Construction Projects”, the annual material costs is 5 CNY/KW.</p> <p>Hence, the value adopted in FSR and investment analysis is applicable and reasonable for the project activity.</p>
Other Costs	24 CNY /KW	24 CNY /KW	<p>According to “Interim Rules for Economic Assessment of Hydropower Construction Projects”, the Other Costs is 24 CNY/KW for a hydropower station with installed capacity of less than or equal to 250MW.</p> <p>Hence, the value adopted in FSR and investment analysis is conservative and applicable for the project activity.</p>

As elaborated in above table, validation team checked the O&M cost totally, and was able to conclude that the O&M costs value used in the investment analysis is reasonable.

Furthermore, even if the annual O&M is excluded, the PIRR works out to be 6% which is still lower than the benchmark.

3.6.5.5 Feed-in Tariff

The tariff of 0.21 CNY/kWh (without VAT) of the project used in the PDD is taken from the approved FSR.

In China, most policies are promulgated in provincial level by combining the national policy with the region’s condition, but there is no regulated grid tariff for hydropower plants in Xinjiang Uyghur Autonomous Region. Hence, the electricity tariff used by the project will be stipulated by considering the conditions in Xinjiang Uyghur Autonomous Region.

According to the “*Supervision Report on Power Tariff Application and Power Settlement of Northwest area in China in 2009*”, the average power tariff of hydro power projects in Xinjiang Uyghur Autonomous Region in 2009 is 0.23 CNY/kWh (with VAT).

Furthermore, according to similar registered CDM projects in Xinjiang (refer to section 3.6.5.8 below), the highest tariff for the hydropower projects in Xinjiang with an installed capacity between 50MW~150MW is 0.21 CNY/ kWh (without VAT).

Therefore, the validation team is able to confirm that the tariff of 0.21 CNY/kWh (without VAT) applied in the PDD is reasonable and deemed applicable.

3.6.5.6 Taxes

The tax rates in the financial assessment are listed below:

Table 3-8: Taxes for financial assessment

Parameters	PDD&IRR Calculation	FSR	Determination by Validation Team
Income Tax Rate	25%	25%	According to “ <i>Enterprises Income Tax Law of the People's Republic of China</i> ”, the Income Tax Rate of 25% is applicable and accurate.
Value Added Tax Rate	17%	17%	According to “ <i>Provisional Regulations on Value Added Tax of the People's Republic of China</i> ”, the Value Added Tax Rate of 17% is applicable and accurate.
City Construction & Maintenance Tax Rate	5%	5%	According to “ <i>Provisional Regulations of the People's Republic of China on City Maintenance and Construction Tax</i> ”, City Construction & Maintenance Tax Rate of 5% is applicable and accurate.
National Surtax for education	3%	3%	According to “ <i>The Provisional Regulations on educational surtax (Third Revision)</i> ”, National Surtax for education rate of 3% is applicable and accurate.

As elaborated in the table above, validation team was able to conclude that the taxes value used in the investment analysis is reasonable.

3.6.5.7 Other parameters used in the calculation of the financial indicators

The parameters in the financial assessment are listed below:

Table 3-9: Other parameters for financial assessment

Parameters	PDD&IRR Calculation	FSR	Determination by Validation Team
Residual Value Rate	5%	5%	<p>Under the new Law on Enterprise Income Tax (Regulation on the Implementation of the Enterprise Income Tax Law of the People's Republic of China), Article 59, the enterprise could, on its own, decide its residual value.</p> <p>According to <i>"Financial system for industrial enterprises"</i>, the Residual Value Rate is values of 3% to 5%.</p> <p>Hence, 5% used for this project is applicable and reasonable.</p>
Depreciation period	30 years	30 years	<p>According to <i>"Regulation on the Implementation of the Enterprise Income Tax Law of the People's Republic of China"</i>, the minimum term of depreciation period is 20 years. Also the lifetime of the Project is confirmed as 30 years as per the equipment technical agreement.</p> <p>Hence, the value used for this project is applicable and reasonable.</p>
Depreciation Rate	3.17%	3.17%	Calculated according to residual value and depreciation period.
Interest Rate	6.40%	6.40%	<p>According to the long-term loan interest rate published by the People's BANK of China, it is 6.40% at the finalization of the FSR (Jan 2011).</p> <p>http://www.pbc.gov.cn/publish/zhengcehuobisi/631/2012/20120706181352694274852/20120706181352694274852_.html</p>
Working capital	10 CNY/kW	10 CNY/kW	Referring to <i>"Economic evaluation code for small hydropower projects (SL16-95 & SL16-2010)"</i> , the working capital rate is 10 CNY/KW.
Construction Period	3 years	3 years	Referring to <i>"Economic evaluation code for small hydropower projects (SL16-95 & SL16-2010)"</i> , the Construction Period falls within 1-3 years, the proposed

			project is located in North Part of Xinjiang, suffering from long-term freezing season every year. Hydropower plant is expected to stop operating during the whole winter, hence 3 years used for this project is applicable and reasonable.
Operation Period	30 years	30 years	According to “Interim Rules for Economic Assessment of Hydropower Construction Projects”, the Operation Period is 20 years to 30 years, hence 30 years used for this project is applicable and reasonable.

As elaborated in above table, validation team was able to conclude that the value used in the investment analysis is reasonable.

3.6.5.8 Similar registered CDM projects

The input parameters used in the financial analysis were compared with the data from other similar registered CDM hydropower projects in Xinjiang with an installed capacity between 50MW~150MW.

Table 3-10: Similar registered CDM projects

Ref. No.	Project name	Installed capacity (MW)	Unit investment cost (CNY/KW)	Unit O&M cost (CNY/KW)	Operating hours	Electricity price (without VAT) (CNY/KWh)
3768	Jilintai Stage II Hydropower Project, Nileke County, Xinjiang Uyghur Autonomous Region	50	9,063	507	5,784	0.21
4632	Burqin River Chonghuer Hydropower Project in Xinjiang Uygur Autonomous Region	110	7,673	152	3,555	0.21
4446	Xinjiang Kashi River Wenquan Hydropower Project	135	9,050	207	5,000	0.21
5131	Xinjiang Kalasuke 140MW Hydroelectric Project	140	4,860	138	3,707	0.17
1956	Xinjiang Uygur Autonomous Region Tekesi River Shankou Hydropower Station	141	7,759	160	4,049	0.17
3767	Xinjiang Uygur Autonomous Region Kashgar Tarim River Xiabandi Hydropower Station	150	5,400	102	3,059	0.21
4000	Xinjiang Hetian Bobona Hydropower Project	150	6,338	192	4,440	0.19
	Min	50	4,860	102	3,059	0.17
	Max	150	9,063	507	5,784	0.21
	Average	125	7,163	209	4,228	0.20
	Proposed project activity	100	8,444	141	3,322	0.21

The operation hours of the proposed project is 3,322 h, less than other similar projects. The main reason for this is that the project is located in northern part of Xinjiang, suffering from long-term freezing season every year. Hydropower plant is expected to stop operating during the whole winter. The expected electricity generation from the project is 332,220 MWh per year, of which 324,920 MWh is supplied to the grid, is calculated based on 54 years' (from 1957 to 2010) meteorological data of the water resource in the local area. Thus the average operating hours is 3,322 hours is reasonable and conservative.

By comparing in the table above, the validation team was able to confirm that the input parameters used in the financial analysis are reasonable and adequately represent the economic situation of the project activity.

3.6.6 Investment analysis: Calculation and conclusion

The project-IRR calculations for the construction period of 3 years and the operation period of 30 years provided in the spreadsheets were verified. The assumptions used in the calculations are also deemed to be correct by validation team. The project-IRR after tax for the propose project activity is:

Table 3-11: Project-IRR

	GSP-PDD	Final PDD	Benchmark	With CER revenues
Project-IRR	4.17%	4.27%	8%	8.12%

The PIRR changed from 4.17% to 4.27% after considering the VAT deduction regulations. It is concluded that in the absence of CDM benefits and when compared to the benchmark, the project was not financially attractive.

3.6.7 Investment analysis: Sensitivity analysis

Sensitivity analysis was carried out for parameters contributing more than 20% to revenues or costs in order to check the robustness of the financial analysis. Total static investment, annual O&M cost, annual electricity output and tariff were taken as uncertain factors to do sensitivity analysis, and $\pm 10\%$ variation of above factors was considered in the sensitivity analysis. Therefore, Validation team confirms that the variables with $\pm 10\%$ variations performed for sensitivity analysis is deemed to be appropriate for the Project.

Table 3-12: Variation in the values of Parameters and its effects on the IRR of the Project

Variation	-10.0%	-5.0%	0.0%	5.0%	10.0%
Total investment	5.16%	4.70%	4.27%	3.87%	3.50%
Annual O&M costs	4.46%	4.37%	4.27%	4.18%	4.08%

Annual power generation	3.35%	3.82%	4.27%	4.71%	5.13%
Electricity tariff	3.35%	3.82%	4.27%	4.71%	5.13%
Benchmark	8%	8%	8%	8%	8%

The PP also made a critical point value analysis. Reasonable variations of the parameters:

- Total Investment
- Annual O&M costs
- Annual power generation
- Electricity tariff

were checked by calculating the variations necessary to reach the benchmark and then discussing the likelihood for that to happen. None of the parameters in the sensitivity analysis are considered to have possibility to make the PIRR cross the benchmark.

Table 3-14: Variation of the parameter needed to reach benchmark

Variable parameters	Total static investment	Annual O&M cost	Feed-in-tariff	Power supply
Project IRR=benchmark	-34.53%	-258.60% Unreachable	+49.54%	+49.54%

Total Investment: According to National Bureau of Statistics of China, compared with previous year, Purchasing Price Indices for Raw Materials, Fuels and Power has increased by 4.4%, 10.5%, -7.9% and 9.6% in year 2007, 2008, 2009 and 2010 respectively, Price Indices for Investment in Fixed Assets has increased by 3.9%, 8.9%, -2.4% and 3.6% respectively. This demonstrates that there is upward price pressure due to inflation within China, making the possibility of the total investment being reduced by 34.53% versus the planned cost in the FSR completed one year ago in January 2011 very unlikely.

Annual O&M cost: Even if the annual O&M cost of the proposed project decrease to 0, the IRR cannot access the benchmark of 8%. At present, it is impossible for a plant to keep operation without any cost. Furthermore, according to National Bureau of Statistics of China, compared with previous year, Purchasing Price Indices for Raw Materials, Fuels and Power has increased by 4.4%, 10.5%, -7.9% and 9.6% in year 2007, 2008, 2009 and 2010 respectively, the Annual Average Salary of electricity industry employee in Xinjiang has increased 16.1%, 13.5% and 15.2% in 2008, 2009 and 2010. As the two indicator increase recent years, the annual O&M cost will also increase.

Annual power generation: It depends on water resources of the project site. In the FSR the determination of installed capacity and operation hours was discussed sufficiently in relation to the water resources. Moreover, the annual electric output is based on 54 years' (from 1957 to 2010) meteorological data of the water resource in the local area. Additionally, as a newly-built power plant with reservoir, the project's power generation will not fluctuate much through the whole operational period. Hence, it is highly unlikely to increase by 49.54%.

Feed-in-tariff: If the tariff of the proposed project activity increased by 49.54%, which should be 0.31CNY/kWh the IRR would reach the benchmark. As assessed in section 3.6.5.5 above, the tariff used by the project activity in the PDD is the highest tariff of the similar projects in Xinjiang. Furthermore, the power tariff in China is strictly regulated by Chinese government and electricity tariff is an important energy price directly controlled by government. The electricity tariff shall be stable in line with government's policy. Therefore, the validation team confirms that the tariff would not increase by 49.54%.

Therefore, analysis above shows that very unrealistic favorable circumstances would be needed for the project IRR to reach the benchmark.

3.6.8 Common practice analysis

The common practice analysis was addressed as per Step 4 of *"Tool for the demonstration and assessment of additionality (version 6.0.0)"*.

3.6.8.1 Determination of applicable output range – Step 1

The project activity has an installed capacity of 100MW, hence $\pm 50\%$ range of the capacity of the proposed project is from 50MW to 150MW.

3.6.8.2 Identification of N_{all} – Step 2

Determination of applicable geographical area

Geographical region for the common practice analysis of hydropower projects is Xinjiang Uygur Autonomous Region, the activities in different Province/Region have different grid structure, geological and transportation conditions, economic development stages. To verify the appropriateness of this choice, it has been requested to project participants to demonstrate why, as written in the PDD, the projects located in different provinces cannot be included in the analysis; With this perspective, the differences of Xinjiang Uygur Autonomous Region in terms of investment conditions and natural conditions like water resources availability have been demonstrated considering the amounts of the total investment in water resources projects among the different provinces in Northwest China Grid. Hence the validation team considers that delineating Xinjiang Uygur Autonomous Region as the border is reasonable.

Starting date

The starting date of the project activity is 15/09/2011 which is the signed date of the construction contract and confirmed by the validation team. Hence all plants that deliver the same capacity (50MW ~ 150MW), within Xinjiang Uygur Autonomous Region, and its commercial operation is before 15/09/2011, other than registered CDM projects, are identified as N_{all} .

Analyze other activities similar to the proposed project activity

According to “Tool for the demonstration and assessment of additionality (version 6.0.0)”, PDD provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Projects are considered similar if they are in the same country/region and/or rely on a broadly similar technology, are of a similar scale, and take place in a comparable environment with respect to regulatory framework, investment climate, access to technology, access to financing, etc.

According to “Tool for the demonstration and assessment of additionality (version.06.0.0)”, it’s identified that all plants deliver the same output (electricity generation) in Xinjiang Uygur Autonomous Region and started commercial operation before the start date of the Project (15/09/2011) without registering as CDM projects. So, two categories of projects are identified as follow.

-Category 1: Hydropower projects between 50MW to 150 MW in Xinjiang Uygur Autonomous Region. Note their number $N_{all,hydropower}$

-Category 2: Power generation projects other than hydropower with the applicable output range in Xinjiang Uygur Autonomous Region. Note their number $N_{all,other}$

Therefore, the $N_{all} = N_{all,hydropower} + N_{all,other}$

Identification of N_{all}

Referring to the Yearbook of China water resources 2002~2011 and the website of State Power Information Network, all the hydropower plants were identified in Xinjiang Autonomous Region. Among the projects identified according to situation described above and criteria, there are four similar non-CDM hydro power project with installed capacity between 50MW and 150MW operated before 15/09/2011 (the start date of the proposed project) within Xinjiang Autonomous Region.

Table 3-15: Identified hydropower projects

No	Project name	Installed Capacity (MW)	Year of construction
1	Yili Tuohai Hydropower Project	50	1984
2	Dashankou Hydropower Project	80	1987

3	Wuluwati Hydropower Project	60	1995
4	Tianchi Hydropower Project	100	1998

Therefore, the $N_{all} = N_{all,hydropower} + N_{all,other} = 4 + N_{all,other}$

3.6.8.2 Identification of N_{diff} – Step 3

Category 1 projects: Investment climate & Other features

There is essential distinction between projects which commissioned in and after 2002 and projects before 2002 due to the reform of electric system in China. The validation team reviewed the “*Notice on Issuing Electric Power Sector Reform Program (No.Guofa[2002]5)*”, issued by the State Council dated 10/02/2002 and confirms that only hydropower projects started commercial operation after 2002 and before the starting date of the project activity were included as the similar activities and is deemed appropriate. Due to all the similar projects identified of $N_{all,hydropower}$ has been operated before 2002,

Thus $N_{diff,hydropower} = 4$ is included in N_{diff} .

Category 2 projects:

The energy sources of projects in category 2 are different from the proposed project which uses water sources for power generation. So the projects in Category 2 apply technologies different that the technology applied in the proposed project activity. So $N_{diff,other}$ is included in N_{diff} .

As analysed above,

Thus, $N_{diff,other} = N_{all,other}$

$N_{diff} = N_{diff,hydropower} + N_{diff,other} = 4 + N_{diff,other}$

3.6.8.3 Calculation of Factor F – Step 4

As per “*Tool for the demonstration and assessment of additionality (version 6.0.0)*”, the factor F can be calculated as:

$$F = 1 - N_{diff} / N_{all} = 1 - (4 + N_{diff,other}) / (4 + N_{all,other}) = 1 - 1 = 0 < 0.2$$

$$N_{all} - N_{diff} = (4 + N_{all,other}) - (4 + N_{diff,other}) = 0 < 3$$

3.6.8.4 Conclusion

As per “*Tool for the demonstration and assessment of additionality (version 6.0.0)*” if “ $N_{all} - N_{diff} > 3$ ”

and " $F > 0.2$ ", it is concluded that the proposed project is a "common practice".

Since $F = 0 < 0.2$ and $N_{all} - N_{diff} = 0 < 3$, the validation team can conclude that the Project is not a common practice and is adequately additional.

3.6.9 Conclusion of assessment of additionality

On the basis of all the analysis in the paragraph 3.6 above, the validation team confirms that:

1. The CDM was seriously considered by the PP prior to the starting date of the project activity.
2. Investment analysis and sensitivity analysis clearly demonstrate that the proposed project activity is financially unattractive.
3. Common practice analysis was carried out showing that the proposed project activity is not common practice.
4. All of the evidences were transparently reviewed by the validation team and considered to be effective.

In summary, the proposed project activity is thus additional and it is not financially attractive without CDM support.

3.7 Monitoring

The project applies the approved monitoring methodology ACM0002, version 12.3.0. The selected monitoring methodology is applicable for the project activity. The project monitoring plan is in accordance with the monitoring methodology ACM0002, version 12.3.0. The monitoring plan has been drafted to focus on monitoring the electricity delivered to and bought from the Northwest China Power Grid by the project activity. The monitoring plan will give opportunity for real measurements of achieved emission reductions and contains principles and concepts on which it is based, operational and monitoring obligations of the project owner like resources involved in the monitoring process, training, support activities, calibration and collection data, quality assurance procedures, data management, electronic support tools, etc.

The application of the monitoring methodology is transparent. It is the opinion of the validation team, that the project participants are able to implement the monitoring plan as described in the PDD.

3.7.1 Parameters determined ex-ante

The PDD was published on 02/12/2011, and the calculation of the grid emission factor has been updated to the latest data available at the commencement of validation. The data used in the emission factor calculation is in accordance with data in the China Electric Power Yearbook from

2008 to 2010 (published annually) and the China Energy Statistical Yearbook from 2008 to 2010.

Ex-ante emission factor in year y $EF_{grid,CM}$ (tCO_2 / MWh) is determined as combined margin (CM), which is combined from operating margin (OM) and build margin (BM) according to the “Tool to calculate the emission factor for an electricity system version 2.2.1” and it will be fixed in the first crediting period. NWPG was determined as the relevant grid system.

Table 3-16: Parameters determined ex-ante

Data and Parameters	Unit	Value applied	Source of data used
Operating Margin EF ($EF_{grid,OM,y}$)	tCO_2 / MWh	1.0001	China Energy Statistic Yearbook(2008-2010)
Build Margin EF ($EF_{grid,BM,y}$)	tCO_2 / MWh	0.5851	China Electric Power Yearbook(2008-2010)
Combined Margin EF ($EF_{grid,CM,y}$)	tCO_2 / MWh	0.7926	Baseline Emission Factors for Regional Power Grids in China published by China DNA on 20/10/2011.

The validation team was confirmed that the data sources are reliable and that the calculation and results are correct.

3.7.2 Parameters monitored ex-post

The following parameters were identified to be monitored ex-post:

- $EG_{facility,y}$
- Cap_{PJ}
- A_{PJ}

Because the baseline emission factor is ex-ante calculated, the data to be monitored continuously by the electricity meter only refers to electricity delivered to the grid by the project activity and electricity consumed by the project activity. The main meter (M, bi-direction) will be installed at the grid side of NWPG which agreed by both the project owner and power grid company. The data will be cross-checked by the power invoice and power statement. If the error of the meter is out of the permissible limits, then the electricity generated during this period will be neglected for conservative approach.

Electric energy metering equipment of the project activity should be collocated and installed according to “Technical Administrative Code of Electric Energy Metering (DL/T448-2000)”, issued by State Economic and Trade Commission of the People’s Republic of China on Nov.3rd, 2000

and implemented on Jan.1st, 2001).

The installed capacity of the hydropower plant after the implementation of the project activity will be checked by the equipment specification like the nameplate and area of the reservoir will be measured and monitored yearly in the surface of the water after the implementation of the project activity.

3.7.3 Management system and QA/QC

The monitoring arrangement for the CDM project has been described in the B.7 of the PDD:

- The power exported to and imported from the grid (NWPG) will be measured continuously by the main electricity meter (M) and cross-checked by the power invoice and power statement. The actions for the failure of meters have been identified correctly by the PP. If the error of the meter is out of the permissible limits, then the electricity generated during this period will be neglected for conservative approach.
- The accuracy of meter (no less than 0.5s) and record frequency (monthly) have been identified in the PDD appropriately;
- The electricity meter will be calibrated annually according to the relevant national regulations and standards.
- The installed capacity of the Project activity (Cap_{PJ}) will be crosschecked with specification manual and nameplates.
- The measurement of surface area of the reservoir (A_{PJ}) will be carried out by a qualified third party following latest national standard yearly.
- The operation and management structure of the monitoring have been described appropriately;
- The emergency procedure and the correctness action have been identified appropriately.
- The training on operation of project activity will be given by manufacturer as agreed in the contract. The training process of CDM specific monitoring will be developed by the PP.

In summary, a formal set of monitoring procedures are expected to be in place prior to the start of the crediting period, with details on the organization, data control, QA/QC procedures, procedures for calibration of metering equipment and training. Hence, the validation team is convinced that the application of monitoring methodology is transparent and the participant is able to implement the monitoring plan.

3.8 Estimate of GHG Emissions

For Greenfield hydropower plant:

$$ER_y = BE_y - PE_y - LE_y$$

$$BE_y = EG_{PJ, y} * EF_{grid, CM, y}$$

$PE_y = 0$, as following:

Power Density of the Project (PD)

$$PD = \text{Installed Capacity of Project (W)} / \text{Surface Area of backwater (m}^2\text{)}$$

$$= 100,000,000 \text{ W} / 2,940,000 \text{ m}^2$$

$$= 34.01 \text{ W/m}^2$$

As we can see the results above, the PD of the project is greater than 10 W / m^2 , Hence, the emissions of the project are equal to zero.

$LE_y = 0$, as per ACM0002 version 12.3.0, no leakage emissions are considered.

$$\text{Thus, } ER_y = EG_{PJ, y} * EF_{grid, CM, y}$$

$$= 324,920 \text{ MWh/year} * 0.7926 \text{ tCO}_2\text{e/MWh}$$

$$= 257,532 \text{ tCO}_2\text{e /year}$$

($EG_{facility, y}$ = quantity of net electricity, refer to section 3.6.5.2 above,

$EF_{grid, CM, y}$ = combined margin CO_2 emission factor of NWPG, refer to section 3.7.1 above)

7×3 renewable crediting periods have been chosen for the project.

Thus, the total estimated reduction in first credit period is **1,802,724** tCO₂e.

In summary, the GHG calculations are complete and transparent, and the data accuracy has been verified.

3.9 Environmental Impacts

According to “Law of the People’s Republic of China on Appraising of Environmental Impact” the EIA is required for a new hydropower project in China. The project developer commissioned a third party, Xinjiang Academy of Environmental Protection Science to conduct the required

Environmental Impact Assessment (EIA) in May 2011 and the EIA report was approved by the Department of Environmental Protection of Xinjiang Uygur Autonomous Region on 11/05/2011.

Analysis of potential environmental impacts

- Waste water
- Air
- Noise
- Ecological environment

have been sufficiently identified based on the EIA report of the environmental impact resulted from the project and corresponding measures taken by the project owner indicate that the project will not have significant negative impacts to the local environment on the whole.

In conclusion, construction and operation of the project will not significantly impact the environment.

3.10 Comments by Local Stakeholders

Before the construction of the project activity, the project owner carried out a survey of local stakeholders with the purpose of collecting opinions about the impact of the proposed project activity.

The validation team assessed the adequacy of the local stakeholder consultation as below:

I. Identification of local stakeholders

The local stakeholders involved in the project activity were identified as local authorities and affected local residents. The validation team deems that identification of local stakeholders is appropriate.

II. Invitation of comments of relevant local stakeholders

Comments of relevant local stakeholders were invited by means of distribution of questionnaires. 60 questionnaires were distributed, and 55 pieces came back. The validation team deems that invitation of comments of relevant local stakeholders is appropriate.

III. Timing of stakeholder consultation process

The local stakeholder consultation process was carried before 15/09/2011 of the starting date and 02/12/2011 of publication on the UNFCCC website. The validation team deems the timing is appropriate.

IV. Summary of comments provided

Comments received from the local stakeholders have been addressed in section E.2 of PDD. By means of reviewing questionnaires returned by local stakeholders and interviewing 5 local stakeholders during on-site visit (include 2 residents impacted by this project and 3 officials of

A'letai City, refer to section 2.2 above), the validation team confirms that the PDD reflects comments received appropriately.

V. How due account was taken on the comments received?

As for the concerns of ecology and dust, irrigation water and household water, compensation, the Project owner has adopt patient explanation to the questions or issues concerned by local stakeholders and promise that they will strictly follow the regulations about land requisition compensation, environment protection during construction according to EIA and welcome supervision from local government and villagers. They promise to take prudential care about the natural reservation. They will do all to decrease the destroy of water loss and soil erosion.

By review of "Approval of the planning report of land acquisition and immigration", no people have to be resettled in the domain of project construction and the planning for land requisition compensations is applicable and sufficient, and it will be supervised by the local government with relevant regulations.

By review of "Approval of EIA", the Project will not cause significant environment impacts. Furthermore, the corresponding measures taken by the Project owner to protect the local environment is applicable and sufficient and it will be supervised by the local environment government with relevant regulations. No farmland is occupied due to the construction of the project activity.

Base on the analysis above, no negative comments from the local residents or officials have been received by the validation team during the on-site assessment, thus the validation team is able to confirm that the solutions for the comments received is applicable and sufficient.

In summary, the validation team is able to confirm the adequacy of the local stakeholder consultation process.

3.11 Comments by Parties, Stakeholders and NGOs

The PDD (version 01) dated 28/11/2011 was made publicly available on UNFCCC's website and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 02/12/2011 to 31/12/2011.

No comments were received.

4 VALIDATION OPINION

CEPREI Certification Body (CEPREI) has performed a validation of the **“Xinjiang A’letai Hua’ning Hydropower Project”** in China on the basis of UNFCCC criteria for the Clean Development Mechanism and host Party criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of Kyoto Protocol, the CDM modalities and procedures and the subsequent decision by the CDM Executive Board.

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

The host Party is China and the Annex I Party is United Kingdom. Both Parties fulfill the participation criteria. The DNA from China issued the Letter of Approval of the project activity confirming that the project assists in achieving sustainable development, approved the project and authorized the project participant. The validation does not reveal any information that indicates that the project can be seen as a diversion of official development assistance (ODA) funding towards China.

The project correctly applies the methodology ACM0002 *“Consolidated baseline methodology for grid-connected electricity generation from renewable sources”*, version 12.3.0

The project generates renewable energy from hydropower plant. As a result, the project results in reductions of CO₂ emissions that is real, measurable and gives long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The annual emission reductions from the **“Xinjiang A’letai Hua’ning Hydropower Project”** are estimated to be on the average 257,532 tCO₂e per year over the selected 7 years crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

The monitoring plan provides for the monitoring of the project’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is CEPREI’s opinion that the project participants are able to implement the monitoring plan.

In summary, it is CEPREI’s opinion that the **“Xinjiang A’letai Hua’ning Hydropower Project”** in China as described in the PDD, version 4.1 of 24/05/2012, meets all relevant UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology ACM0002 version 12.3.0. CEPREI thus requests the registration of the project as a CDM project activity.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: 

Name: Wang Xiuci

Date: 25/09/2012

ANNEX A

Validation Protocol



ANNEX 1: CDM PROJECT VALIDATION PROTOCOL

VALIDATION PROTOCOL

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

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Draft Concl.	Final Concl.
1.Approval						
Have All Parties involved approved the project activity?	VVM44	DR	Country A	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)	VVM45		<p><i>CAR 1: Any LoAs from the DNA involved in the proposed CDM project activity are still not available during the process of desk review.</i></p> <p>Conclusion: The China LoA (No. 3863) issued by China DNA on 28/03/2012 has been verified.</p>	<p>CAR 1: Any LoAs from the DNA involved in the proposed CDM project activity are still not available during the process of desk review.</p> <p>Conclusion: The LoAs (EA/CECC/10/2012 and EA/GFACCLtd/09/2012) issued by DNA of United Kingdom on 17/09/2012 has been verified.</p>	CAR-1	OK
1.2. Does the letter of approval from DNA of each Party involved:	VVM45		<p><i>Pending on closure of CAR-1.</i></p> <p>Conclusion: OK</p>	<p><i>Pending on closure of CAR-1.</i></p> <p>Conclusion: OK</p>	Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Draft Concl.	Final Concl.
i. Confirm that the Party is the Party of the Kyoto Protocol?			P.R.China has ratified the Kyoto Protocol.	United Kingdom has ratified the Kyoto Protocol.	OK	OK
ii. Confirm that participation is voluntary?			<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA stated the participation is voluntary.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA stated the participation is voluntary.	Pending	OK
iii. Confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?			<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA confirmed the project contributes to the sustainable development of the country.	N.A.	Pending	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?			<i>Pending on closure of CAR-1.</i> Conclusion: Yes.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes.	Pending	OK
1.3 Is (are) the letter(s) of approval unconditional with respect to (a) to (d) above?	VVM46		<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA is unconditional with respect to	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA is unconditional with respect	Pending	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Draft Concl.	Final Concl.
			1.2 above.	to 1.2 above.		
1.4 Has (have) the letter(s) of approval has been issued by the respective Party's designated national authority (DNA)? The letter of approval is valid for the proposed CDM project activity under validation?	VVM47		<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA is issued by the DNA of China and it is valid.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the LoA is issued by the DNA of United Kingdom and it is valid.	Pending	OK
2.Participation			PP1 (XinJiang A' letai Hua' ning Hydropower Investment Developing Co., Ltd)	PP2 (GFACC (IOM) Limited) (Carbon & Energy Capital Co. LTD)		
2.1 Have all project participants been listed in a consistent manner in the project documentation?	VVM51		Yes. The project participant has been consistently listed	Yes. The project participant has been consistently listed	OK	OK
2.2 Has the participation of the PPs in the project activity been approved by a Party to the Kyoto Protocol?	VVM51		<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the participation of the PP has been approved in this LoA.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the participation of the PP has been approved in this LoA.	Pending	OK
2.3 Are the project participants listed in tabular form in section A.3 of the PDD?	VVM52		Yes. The project owner, one of the Project Participants, has been listed in section A.3.	Yes. The project buyer, the other Project Participant, has been listed in section A.3.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS		Draft Concl.	Final Concl.
2.4 Is this information consistent with the contact details provided in annex 1 of the PDD	VVM52		Yes. This information is consistent with the contact details provided in annex 1 of the PDD.	Yes. This information is consistent with the contact details provided in annex 1 of the PDD.	OK	OK
2.5 Has the participation of each project participant been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation?	VVM52		<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the PP has been approved by China DNA in the LoA provided.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, the PP has been approved by United Kingdom DNA in the LoA provided.	Pending	OK
2.6 Are any entities other than those approved as project participants are included in these sections of the PDD?	VVM52		No. There are no any other entities included in the PDD.	No. There are no any other entities included in the PDD.	OK	OK
2.7 Has the approval of participation been issued from the relevant DNA?	VVM53		<i>Pending on closure of CAR-1.</i> Conclusion: Yes, LoA is issued by NDRC, the DNA of China.	<i>Pending on closure of CAR-1.</i> Conclusion: Yes, LoA is issued by Environment Agency, the DNA of United Kingdom.	Pending	OK
3.Project design document						
3.1 Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from	VVM55		Yes. The PDD is prepared with the latest template from the		OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
the CDM Executive Board available on the UNFCCC CDM website?			CDM Executive.		
3.2 Is the PDD in accordance with the applicable CDM requirements for completing PDDs?	VVM56		Yes.	OK	OK
3.3 Are the following provided in CDM-PDD section A.1? i. Title of project ii. Current version number and date of document	EB41 Ann12		Yes. The Title of project and the relevant information to the version has been provided in section A.1 of PDD.	OK	OK
3.4 Is the explanation on how the GHG emission reductions are effected provided in CDM-PDD section A.2?	EB41 Ann12		Yes. The explanation on how GHG emission reductions exist in section A.2.	OK	OK
3.5 Are the following provided in CDM-PDD section A.3? i. List of project participants and parties. ii. Identification of Host Party iii. Indication whether the Party wishes to be considered as project participant	EB41 Ann12		Yes. The information of left column has been provided in the table of PDD section A.3.	OK	OK
3.6 Are the following provided in CDM-PDD section A.4.1? i. Location, host party(ies) and address as required? ii. Detailed physical location with unique identification of the project activity (eg.	EB41 Ann12		<i>CL-1 : Please further describe the geographical coordinates of the dam and the plant respectively.</i> Conclusion: The updated PDD has been checked OK. The geographical coordinates of the dam of the Project is	CL-1	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
Longitude/Latitude)- not to exceed one page			87°47'42"E, 48°13'23"N. The geographical coordinates of the plant of the Project is 87°56'00"E, 48°13'08"N. Yes. The information of left column has been provided in PDD section A.4.		
3.7 In CDM-PDD section A.4.2, is the list of Category(ies) of project activity provided?	EB41 Ann12		Yes. The project activity falls within Sectoral Scope 1: energy industries (renewable).	OK	OK
3.8 In CDM-PDD section A4.3 are the following provided? i. a description of how environmentally safe and sound technology, and know-how to be used, is transferred to the Host Party(ies) ii. explanation of purpose of the project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario iii. A list and the arrangement of the main manufacturing/production technologies, systems and equipments involved iv. The emissions sources and the GHGs involved	EB41 Ann12		<i>CL-2: The description of baseline scenario in A.4.3 of the PDD is promiscuous. Clarification is required to justify it.</i> Conclusion: The updated PDD has been checked OK. <i>CL-3: It is description in the PDD that the project activity is a run of river hydropower station, but according to the FSR, The type of project activity is a hydropower plant with an accumulation reservoir. Clarification is required to justify it.</i> Conclusion: The updated PDD has been checked OK. <i>CL-4: The type of turbine and generator is inconsistent with the technical agreement.</i> Conclusion: The updated PDD has been checked OK.	CL-2 CL-3 CL-4	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			<p>i. Yes. The project activity will utilizes domestic made equipment and no technology transfer is involved.</p> <p>ii. Yes. The scenario existing prior to the implementation of the project activity is NWPG provide the same electricity as the project activity, which is same as the baseline scenario.</p> <p>iii. Yes. The information of the turbines and generators has been listed in the PDD.</p> <p>iv. Yes. Section A.4.3 of PDD cited the emission sources and how the project activity reduces.</p>		
3.9 In CDM-PDD section A4.4 is the estimation of emission reductions provided as requested in a tabular format?	EB41 Ann12		<p>Yes. Section A.4.3 includes this information. 7×3 renewable crediting periods have been chosen and the estimation of emission reductions was provided in a tabular format.</p> <p><i>CL-5: The expected starting date of the crediting period is 01/07/2012 as describe in the PDD; however, during the on-site validation, PP estimated that the project will be completed in 2013.</i></p> <p>Conclusion: The expected starting date of the crediting period is 01/07/2013 which has revised in the PDD.</p>	CL-5	OK
3.10 In CDM-PDD section A4.5 is information regarding public funding provided?	EB41 Ann12		<p>Yes. There is no public funding from Annex I Parties for the Project.</p>	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
4. Project description					
4.1 A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline scenario.	VVM58-60 EB41 Ann12		As demonstrated in the PDD, the present scenario and baseline scenario is the same: electricity delivered to the grid is generated by the operation of grid-connected power plants and by the addition of new generation sources. Coal-fired power generation is currently the dominant power supply option within the Northwest China Power Grid.	OK	OK
4.2 Does the proposed CDM project activity involve the alteration of an existing installation or process? Or does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM63		The proposed project activity is a new hydropower project with an accumulation reservoir.	OK	OK
5. Baseline and monitoring methodology					
5.1 General requirement					
Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM65		Yes. The project is in line with the baseline methodologies specified in <i>ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable resources</i> (Version 12.3.0).	OK	OK
5.2 Applicability of the selected methodology to the project activity					



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
5.2.1 In CDM-PDD section B.1, were any methodologies or tools which the above approved methodology draws upon and their version number indicated?	EB41 Ann12 PDDb.1		ACM0002 "Consolidated methodology for grid-connected electricity generation from renewable sources" "Tool for demonstration and assessment of additionality", version 06.0.0; "Tool to calculate the emission factor for an electricity system", version 02.2.1 <i>CL-6: The version of ACM0002 is not the latest one.</i> Conclusion: The version of ACM0002 has updated to 12.3.0 that is latest one issued by EB 66.	CL-6	OK
5.2.2 Is the methodology correctly quoted and applied by comparing it with the actual text of the applicable version of the methodology available on the UNFCCC CDM website	VVM70		Yes. The project activity is a newly built hydro power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plants). The project activity does not involve switching from fossil fuels to renewable energy at the site of the project activity. The project activity results in new reservoir and the power density of the project is 34.01 W/m ² , which is greater than 4W/m ² .	OK	OK
5.2.3 Are the applicability conditions of the methodology are met? Is the project activity not expected to result in emissions other than those allowed by the methodology?	VVM71 PDDb.2		Yes. All the applicability conditions of the methodology ACM0002 (Version 12.3.0) was analyzed in PDD and confirmed to be met. The project activity will not result in emissions other than those allowed by the methodology.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
5.2.4 Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD? If yes, do the DOE cross check the PDD against the other sources to confirm that the project activity meets the applicability conditions of the methodology?	VVM71		Yes. The validation team has checked FSR, EIA and their approvals. Base on the document review and on-site observation, the validation team could confirm that the project meets the applied methodology.	OK	OK
5.2.5 Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made? If no, clarification of the methodology was request in accordance with the guidance provided by the CDM Executive Board.	VVM72		Validation team can determine that the selected methodology is applicable to the project activity.	OK	OK
5.2.6 If the applicability conditions of the methodology are not met, revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board	VVM73		N.A.	N.A.	N.A.
5.3 Project boundary					
5.3.1 Do the description of the sources and gases included in the project boundary comply with the latest version of the guidance for completing the CDM-PDD?	EB41 Ann12 PDDb.3		Yes. The project boundary includes CO ₂ emission from the grid and own electricity consumption.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
5.3.2 Is the delineation in the PDD of the project boundary correct?	VVM78		Yes, the project boundary of the project activity has been clearly described in the PDD: The electricity generated by the project will be transferred to NWPG, and therefore NWPG is defined as the project boundary of the project.	OK	OK
5.3.3 Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline methodology?	VVM78		Yes. According to the methodology ACM0002, the project boundary physically covers the geographic site of the project activity, as well as NWPG the project connected.	OK	OK
5.3.4 Have all sources and GHGs required by the methodology been included within the project boundary?	VVM79 PDDB.3		<i>CAR-2: The area of reservoir is 2,970,000 m² and the calculated power density of the project is 33.67 W/m² as described in the PDD; however, by reviewing of the FSR, the area of reservoir is 2,940,000 m².</i> Conclusion: The area of reservoir is 2,940,000 and the power density of the project is 34.01 W/m ² . Yes. The proposed project activity involves the construction of a new hydropower plant. According to ACM0002, CO ₂ is included as a main emission source under the baseline scenario. And CH ₄ is excluded from the project boundary because the power density of this project is 34.01 W/m ² which is much greater than 10 W/m ² .	CAR-2	OK
5.4 Baseline identification					



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
5.4.1 Do the description of how the baseline scenario is identified and description of the identified baseline scenario comply with the latest version of the guidance for completing the CDM-PDD?	EB41 Ann12 PDDb.4		Yes. According to the ACM0002, the baseline has been determined.	OK	OK
5.4.2 Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM81		Yes. In accordance with ACM0002, the baseline scenario was clearly identified in PDD B.4.	OK	OK
5.4.3 Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM82		ACM0002 has determined the baseline scenario as the project is a new grid-connected renewable power plant/unit, there is no need to take steps to identify the baseline scenarios.	OK	OK
5.4.4 Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario? If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM82		No. there is no need to use tools to determine baseline scenario of a new grid-connected renewable power plant/unit as per ACM0002.	OK	OK
5.4.5 Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM83		No. there is no need to use tools to determine baseline scenario of a new grid-connected renewable power plant/unit as per ACM0002.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
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? If yes, has any unreasonable alternative scenario been excluded?					
5.4.6 Are documents and sources referred to in the PDD correctly quoted and interpreted?	VVM84		N.A. The ACM0002 prescribes the baseline scenario.	N.A.	N.A.
5.4.7 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)	VVM84		N.A. The ACM0002 prescribes the baseline scenario.	N.A.	N.A.
5.4.8 Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity, including “relevant national and/or sectoral policies and circumstances?”	VVM85		N.A. The ACM0002 prescribes the baseline scenario.	N.A.	N.A.
5.4.9 Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM85		N.A. The ACM0002 prescribes the baseline scenario.	N.A.	N.A.
5.4.10 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	VVM86		Yes. The project involves the construction of a new grid-connected hydropower plant, and the continuation of current situation is considered as the identified baseline scenario. The description is provided in PDD and verifiable.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
proposed CDM project activity?					
5.5 Algorithms and/or formulae used to determine emission reductions					
5.5.1 Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring methodology?	VVM89		<p>Yes.</p> <p>Complying with ACM0002, the “Tool to calculate the emission factor for an electricity system” is used in the GSP PDD.</p> <p>For Greenfield hydropower plant:</p> $ER_y = BE_y - PE_y - LE_y$ $BE_y = EG_{PJ, y} * EF_{grid, CM, y}$	OK	OK
5.5.2 Have the equations and parameters in the PDD been correctly applied by comparing them to those in the selected approved methodology?	VVM90		Yes. The equations and parameters in the PDD have been correctly applied by comparing them to those in the selected approved methodology.	OK	OK
<p>5.5.3 Does the methodology provide for selection between different options for equations or parameters?</p> <p>If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?</p> <p>If yes, have the correct equations and parameters been</p>	VVM90		Yes. Simple OM method and method in a deviation for BM is applied, with reasonable justifications and in accordance with the methodology. The parameters have been selected correctly.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
used, in accordance with the methodology selected?					
<p>5.5.4 Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?</p> <p>If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:</p> <p>i. Appropriate and correct?</p> <p>ii. Applicable to the proposed CDM project activity?</p> <p>iii. Resulting in a conservative estimate of the emission reductions?</p>	VVM91		<p>No. $EF_{grid,CM}$ will remain fixed in the first crediting period:</p> <p>0.7926 tCO₂e/ MWh, it is the same as the value of 2011 emission factor of NWPG issued by NRDC and its calculation process is consistent with the applied tool.</p>	OK	OK
<p>5.5.5 Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?</p> <p>If yes, are the estimates provided in the PDD for these data and parameters reasonable?</p>	VVM91		<p>The data and parameters in B.7.1 will be monitored throughout the crediting period. The validation team has checked FSR, EIA and their approvals. Base on the document review and on-site observation, the estimates provided in the PDD for these data and parameters are reasonable.</p> <p>Annual Electricity Supply will be monitored and its estimated value is reasonable. Please refer to section 6.3.14 above.</p>	OK	OK
6. Additionality of a project activity					
6.0.1 Are all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality, reliable and	VVM95		Yes, refer to section 6.1 ~ 6.5 below.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
credible?					
6.0.2 Does the CDM-PDD state the latest version of the additionality tool being used?	VVM96		Yes, "Tool for the demonstration and assessment of additionality", version 06.0.0	OK	OK
6.1 Prior consideration of the clean development mechanism					
6.1.1 Is the project activity start date prior to the date of publication of the PDD for stakeholder comments If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM98		<p>Yes. The start date of the project activity is 15/09/2011, which is prior to the date of publication of the PDD for stakeholder comments on 28/11/2011.</p> <p>Yes. As shown in Feasibility Study Report (FSR) of the project activity, the additional financial support of the CDM makes a significant difference to the project finance.</p> <p>Therefore, the CDM benefit has been considered seriously in the decision to proceed with the project activity and was the most important decision-making factors for the investment of the project activity.</p>	OK	OK
6.1.2 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."?	VVM99		<p><i>CAR-3: The starting date of the project activity is 03/09/2011 which is the date of signing construction contract as described in the PDD; however, by reviewing of the construction contract, the signing date of is 15/09/2011.</i></p> <p>Conclusion: Yes. The starting date of the project is 15/09/2011, which is the date of construction contract was signed of the project activity. It is in accordance with the "Glossary of CDM</p>	CAR-3	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			terms".		
6.1.3 Does the project activity require construction, retrofit or other modifications? If yes, is it ensured that the date of commissioning can't be considered as the project activity start date?	VVM99		The project activity requires construction. The date of signing construction contract has been taken as the project activity start date. It is ensured that the date of commissioning is not considered as the project activity start date.	OK	OK
6.1.4 Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM100		Yes. This is new project activity and the starting date of the project is 15/09/2011.	OK	OK
6.1.5 For a new project activity, and for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the 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? And when did they provide the notification? (Provide Refer to such confirmation from Host Party DNA and UNFCCC secretariat)	VVM101		The validator checked the 'prior consideration of the CDM Form', and the written confirmation for commencement of the project activity issued by NDRC on site. The Validator also checked the official websites of UNFCCC and found out that the information is consistent with the description of PDD. The date of CDM Notification confirmed by DNA: 24/10/2011 The date of CDM Notification received by EB: 18/11/2011	OK	OK
6.1.6 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: i. evidence that must indicate that awareness of the CDM	VVM102		N.A.	N.A.	N.A.



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<p>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. Evidence to support this would include, inter alia, 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.</p> <p>ii. Reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation. Evidence to support this should include, inter alia:</p> <p>a. Contracts with consultants for CDM/PDD/methodology services?</p> <p>b. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?</p> <p>c. Evidence of agreements or negotiations with a DOE for validation services?</p> <p>d. Submission of a new methodology to the CDM Executive Board?</p> <p>e. Publication in newspaper?</p> <p>f. Interviews with DNA?</p> <p>g. Earlier correspondence on the project with the DNA</p>					



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
or the UNFCCC secretariat?					
6.2 Identification of alternatives					
6.2.1 Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM105		Yes. ACM0002 has prescribed the baseline scenario.	OK	OK
6.2.2 If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM105		N.A	OK	OK
6.2.3 Does the list of alternatives given in the PDD ensure that: i. 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? ii. 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? iii. The alternatives comply with all applicable and enforced legislation?	VVM106		N.A.	OK	OK
6.3 Investment analysis					



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
6.3.1 Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM108		Yes. Investment analysis is applied.	OK	OK
6.3.2 If yes, does the PDD provide evidence that the proposed CDM project activity would not be: i. the most economically or financially attractive alternative? ii. economically or financially feasible, without the revenue from the sale of CERs?	VVM108		By calculated in PDD and IRR calculation sheet, the project IRR without revenue from the sale of CERs is 4.27%, which is lower than the benchmark 8%.	OK	OK
6.3.3 Was this show through one of the following approaches? i. Demonstrate that 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. ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative. iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM109		iii is selected to demonstrate the additionality.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
6.3.4 Is the period of assessment be limited to the proposed crediting period of the CDM project activity?	EB62 Ann5		No. The assessment period cover the whole technical lifetime of the proposed CDM project activity, 33 years.	OK	OK
6.3.5 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 Ann5		The assessment period cover the whole technical lifetime of the proposed CDM project activity.	OK	OK
6.3.6 Was the fair value of any project activity assets at the end of the assessment period included as a cash inflow in the final year?	EB62 Ann5		A residual value of the project activity was included in the cash flow at the end of the assessment period.	OK	OK
6.3.7 Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB62 Ann5		The residual value rate of the assets is 5% in PDD, which is quoted from the approved FSR. According to the <i>Industrial Enterprise Financial System</i> issued by Ministry of Finance People's Republic of China, the residual value rate for calculating the depreciation fluctuates from 3% to 5%. 5% is selected for this project in FSR. The period of depreciation is 30 year, and the depreciation rate is 3.17%, the residual value is considered in the final year.	OK	OK
6.3.8 Does project participants supply spreadsheet versions of all investment analysis in which all formulas used in this analysis be readable and all relevant cells be viewable and unprotected?	EB62 Ann5		Yes. A spreadsheet to calculate the project IRR has been provided by the PPs.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
6.3.9 Whether the cost of financing expenditures (i.e. loan repayments and interest) is included in the calculation of project IRR.	EB62 Ann5		Yes.	OK	OK
6.3.10 In the calculation of equity IRR only the portion of investment costs which is financed by equity should be considered as the net cash outflow, the portion of the investment costs which is financed by debt should not be considered a cash outflow.	EB62 Ann5		N.A. The proposed project applies the project IRR.	OK	OK
6.3.11 when a project IRR is calculated to demonstrate additionality if a pre-tax benchmark is applied. In cases where a post-tax benchmark is applied the DOE shall ensure that actual interest payable is taken into account in the calculation of income tax.	EB62 Ann5		According to "Interim rules on Economic Assessment of Electrical Engineering Retrofit Project ", the benchmark, 8%, is a post-tax benchmark for project, so validation team checked the calculation of income tax and concluded that interest payable was considered in the spreadsheet correctly.	OK	OK
6.3.12 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 Ann5		Yes. The major maintenance cost is included in IRR calculation.	OK	OK
6.3.13 Do project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without Refer to the proposed CDM crediting period?	EB62 Ann5		Yes. The technical lifetime is selected to assess in the PDD which is consistent with FSR.	OK	OK
6.3.14 Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator conducted?	VVM111		The parameters and assumptions are accuracy and suitability in relevant accounting practices. <i>CAR-4: The IRR with CERs is 9.11% as described in the PDD</i>	CAR-4 CAR-5	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
And were the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices determined?			<i>which is inconsistency with IRR spreadsheet.</i> Conclusion: The updated PDD has been checked OK. <i>CAR-5: Clarification is required on the impact of the VAT refund policy issued the Notice of Taxation on Several Issues concerning the National Implementation of Value-added Tax Reform (CaiShui[2008]170) at the time of investment decision.</i> Closed: The VAT refund for the main equipment has been taken into account in the final PDD and IRR calculation spreadsheet.		
6.3.15 Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM111		Yes. The parameters have been checked with the actual regulations, rules or industry practice etc. Refer to section 3.6 in the report for detailed analysis.	OK	OK
6.3.16 Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM111		Yes. The FSR has been reviewed.	OK	OK
6.3.17 Was the correctness of computations carried out and documented by the project participants?	VVM111		Yes. The validation team checked the input data of IRR calculation sheet for their consistence and rationality with FSR. The formula used for IRR calculation was reviewed. Checking-calculations were carried out to verify the correctness of the computations (with and without CDM). The output data to demonstrate the additionality were consistently referenced in PDD.	OK	Ok



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
6.3.18 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?	VVM111		<p>Yes. Four key parameters are selected to make sensitivity analysis:</p> <ul style="list-style-type: none">● Total Investment● Annual O&M costs● Annual power generation● Electricity tariff <p>The PDD has analyzed these four parameters changes when the project IRR equals to the benchmark.</p>	OK	Ok
6.3.19 Whether variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues are subjected to reasonable variation (all parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude), and whether the results of this variation are presented in the PDD and be reproducible in the associated spreadsheets.	EB 62 Ann5		<p>Yes.</p> <p>The sensitivity analysis for four indicators, with range from -10% to +10% has been provided, and it states that the IRR could not reach the benchmark due to the impossibility of fluctuation of those indicators.</p>	OK	Ok
6.3.20 Whether there is variable which constitute less than 20%, Validator considers has a material impact on the analysis. Whether Validator raises a corrective action request to include this variable in the sensitivity analysis.	EB 62 Ann5		<p>There is no need to analyze the other variable than the four key parameters mentioned above.</p>	OK	Ok



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<p>6.3.21 To confirm the suitability of any benchmark applied in the investment analysis by that:</p> <p>i. is the type of benchmark applied suitable for the type of financial indicator presented?</p> <p>ii. do any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity?</p> <p>iii. is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants involved and determining whether the same benchmark has been applied or if there are verifiable circumstances that have led to a change in the benchmark</p>	VVM112		The PDD select 8% as a benchmark of project IRR after tax. The benchmark is consistent with the <i>"Interim rules on Economic Assessment of Electrical Engineering Retrofit Project"</i> issued by the State Electric Power Corporation. This national regulation is extensive taken as the benchmark IRR of financial evaluation for the newly built hydropower projects similar to this project activity in China.	OK	Ok
<p>6.3.22 Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?</p>	VVM113		<p>Yes.</p> <p>The approval of FSR has been issued by local DRC:</p> <p>Issued authority: Development and Reform Commission of Xinjiang Uygur Autonomous Region</p> <p>Issued Date: 15/07/2011</p>	OK	Ok
If yes: (EB38 para.54)					
<p>6.3.23</p> <p>i. Has the FSR been the basis of the decision to proceed</p>	VVM113		<p>Yes.</p> <p>The finalization date of FSR is January 2011. The approval date</p>	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
with the 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?			of FSR is 15/07/2011. And the date that board meeting was held and decided to develop the proposed project as a CDM project is 20/07/2011. The period of time between the two dates is no longer than 1 year. Thus, the validation team considers that it's sufficiently short.		
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR? If not, was the appropriateness of the values validated?	VVM113		Yes, the validation team checked the values in the PDD and associated annexes against those in the FSR thus confirmed they are fully consistent with each other.	OK	Ok
iii. Are the input values from the FSR valid and applicable at the time of the investment decision? (confirm that by cross-checking or other appropriate manner)	VVM113		Yes. The input values from the FSR have been checked with the actual regulations, rules or industry practice etc. Refer to section 3.6 of the report for detailed analysis.	OK	Ok
6.4 Barrier analysis					
6.4.1 Has barrier analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM115		No.	OK	Ok
If yes:					
6.4.2 i. <i>Are the barriers real</i>	VVM115		N.A.	N.A.	N.A.
6.4.3 ii. <i>Do the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives?</i>	VVM115		N.A.	N.A.	N.A.



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
6.5 Common practice analysis					
6.5.1 Is this a large-scale CDM project activities, or first-of-its kind?	VVM119		Yes. It is large-scale CDM project.	OK	OK
6.5.2 If yes, was common practice analysis be carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM119		Yes. Common practice analysis was carried out in the section B.5 to assess additionality.	OK	OK
6.5.3 Was it assess whether the geographical scope (e.g. the 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 transnational/global)	VVM120		Yes. The geographical scope of Xinjiang Uygur Autonomous Region has been chosen for the assessment of common practice.	OK	OK
6.5.4 Was a region other than the entire host country chosen?	VVM120		Yes. The geographical region for the common practice analysis of hydropower projects is Xinjiang Uygur Autonomous Region, a Province/Region of China.	OK	OK
6.5.5 If yes, was the explanation why this region is more appropriate assessed?	VVM120		Yes. The activities in the same Province/Region have the similar grid structure, geological and transportation conditions, economic developing states; hence the validation team considered that delineating Xinjiang as the border is reasonable.	OK	OK
6.5.6 Using official sources and local and industry	VVM120		Hydropower projects constructed in Xinjiang Uygur	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
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?			Autonomous Region, with the capacity between 50MW to 150MW are selected for the common practice analysis. The hydro power projects in the PDD are identified by crosschecking the public statistics i.e. Yearbook of China Water Resources and UNFCCC website.		
6.5.7 Are similar and operational projects, other than CDM project activities, already “widely observed and commonly carried out” in the defined region?	VVM120		Yes. $N_{all} = N_{all,hydropower} + N_{all,other} = 4 + N_{all,other}$	OK	OK
6.5.8 If yes, was it assess whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM120		Yes. $F = 1 - N_{diff} / N_{all} = 1 - (4 + N_{diff,other}) / (4 + N_{all,other}) = 1 - 1 = 0 < 0.2$ $N_{all} - N_{diff} = (4 + N_{all,other}) - (4 + N_{diff,other}) = 0 < 3$ As per “ <i>Tool for the demonstration and assessment of additionality (version 6.0.0)</i> ”, the proposed project activity is not deemed as a common practice.	OK	OK
7. Monitoring plan					
7.1 Does the PDD include a monitoring plan? Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM122		Yes. The monitoring plan based on the approved baseline and monitoring methodology ACM0002 (version 12.3.0).	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
7.2 Was the list of parameters required by the selected methodology identified?	VVM123		Yes. Parameters required were listed in PDD B.7.1	OK	OK
7.3 Does the monitoring plan contain all necessary parameters?	VVM123		Yes. The following parameters were identified to monitor. <ul style="list-style-type: none"> ● $EG_{\text{facility},y}$ ● Cap_{PJ} ● A_{PJ} 	OK	OK
7.4 Are the parameters clearly described?	VVM123		Yes. All the parameters are clearly described in PDD B.7.1.	OK	OK
7.5 Do the means of monitoring described in the plan comply with the requirements of the methodology?	VVM123		Yes. The means of monitoring described in the plan comply with the requirements of the methodology ACM0002.	OK	OK
7.6 Are the monitoring arrangements described in the monitoring plan are feasible within the project design?	VVM123		<p><i>CL-7: Please further describe the monitoring system in an appropriate diagram in PDD B.7.2.</i></p> <p>Conclusion: The updated PDD has been checked OK. The detailed monitoring arrangements are described. The validation team confirms that the MP is feasible.</p> <p><i>CL-8: The explanation needs to be provided regarding:</i></p> <p><i>(1) The roles of the electricity meters.</i></p> <p><i>(2) The accuracy of the electricity meters.</i></p> <p>Conclusion: The updated PDD has been checked OK. M is a</p>	CL-7 CL-8	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			bidirectional electricity meter that will be installed at the Grid Company, which is treated as the main recording system that can monitor both the electricity supplied to the grid and electricity imported by the project plant from the grid in year, which is used for the calculation of net electricity generation supplied by the project plant to the grid in year y ($EG_{\text{facility}, y}$). The accuracy of the electric meters is no less than 0.5s. If the error of the meter is out of the permissible limits, then the electricity generated during this period will be neglected for conservative approach.		
<p>7.7 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?</p> <p>i. data management procedures?</p> <p>ii. quality assurance procedures?</p> <p>iii. quality control procedures?</p>	VVM123		<p><i>CL-9: Please further describe the procedures about QA & QC, Emergency Management and Personnel training in PDD B.7.2</i></p> <p>Conclusion: The updated PDD has been checked OK. The procedures about QA & QC, Emergency Management and Personnel training are described clearly. The validation team confirms it is feasible.</p> <p>The data management procedure, the quality assurance procedures and the quality control procedures are considered complete and sufficient.</p>	CL-9	OK
8. Sustainable development					
8.1 Do CDM project activities assist Parties not included in Annex I to the Convention in achieving sustainable development?	VVM125		Yes. Validation team confirmed that the project activity with the officials of Development and Reform Bureau and Environment and Protection Bureau of Xinjiang Uygur	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Autonomous Region: 1) Contributing to local economy development by providing electricity to meet local increasing energy demands; 2) Reducing GHG emissions compared to a business-as-usual scenario; 3) Reducing the emission of other pollutants resulting from local coal-based power plants, compared to a business-as-usual scenario; 4) Creating many permanent jobs and many short-term employment opportunities for local people during the project construction and operation period.		
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?	VVM126		<i>Pending on close CAR-1.</i> Closed: Yes, the LoA issued by China DNA confirms the contribution of the project to the sustainable development of the host Party.	Pending	OK
9. Local stakeholder consultation					
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 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	VVM128		Yes. 60 questionnaires were randomly distributed to the stakeholders around the project site for commenting the construction of the Project, prior to the publication of the PDD on the UNFCCC website. 55 pieces of the questionnaires were returned.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
website?					
9.2 Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, been invited?	VVM129		Yes. Local stakeholders were invited to express their opinions on the project.	OK	OK
9.3 Is the summary of the comments received as provided in the PDD complete?	VVM129		<p><i>CL-10: The answers in the E.2 cannot cover all of the questions in the questionnaire.</i></p> <p>Conclusion: PDD has summarized all comments received and analyzed the survey.</p>	CL-10	OK
9.4 Have the project participants taken due account of any comments received and described this process in the PDD?	VVM129		The Project Entity has adopt patient explanation to the questions or issues concerned by local stakeholders and promise that they will strictly follow the regulations about land requisition compensation, environment protection during construction according to EIA and welcome supervision from local government and villagers. They promise to take prudential care about the natural reservation. They will do all to decrease the destroy of water loss and soil erosion.	OK	OK
10. Environmental impacts					
10.1 Have project participants submitted documentation to CEPREI on the analysis of the environmental impacts of the project activity?	VVM131		Yes. The EIA report completed by Xinjiang Academy of Environmental Protection Science has been provided and verified during the on-site visit.	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
10.2 Have the project participants undertaken an analysis of environmental impacts?	VVM132		Yes. The original EIA has been reviewed by validator in site visit.	OK	OK
10.3 Does the host Party require an environmental impact assessment?	VVM132		Yes. The original EIA has been reviewed by validator in site visit.	OK	OK
10.4 If yes, have the environmental impact assessment approved by local government?	VVM132		Yes. The approval of EIA has been issued by local government. Issued authority: Department of Environmental Protection of Xinjiang Uygur Autonomous Region Issued Date: 11/05/2011	OK	OK
11. Stakeholder consultation process					
Have Parties, stakeholders and UNFCCC accredited NGOs been invited to comment on the validation requirements for minimum 30 days? (large A/R project for minimum 45 days) Have the project design document and comments been made publicly available?	VVM 40-42		Yes. CEPREI has made the PDD version 01, dated 28/11/2011 of the project activity public available on the web of UNFCCC. The period for comments was 02/12/2011 ~ 31/12/2011, and no comments received during the period.	OK	OK
12. Project design of small-scale CDM project activities					
12.1 Does the project activity fall within the thresholds of the three possible types of Small-scale project activities?	VVM136		N.A. This is a large-scale CDM project activity.	N.A.	N.A.
12.2 Does the project activity conforms to one of the	VVM136		N.A.	N.A.	N.A.



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
approved small-scale categories and applies the relevant tool or methodology?					
12.3 Is the project activity a debundled component of a large-scale project?	VVM136		N.A.	N.A.	N.A.
12.4 Is an assessment of the environmental impacts required by the host party?	VVM136		N.A.	N.A.	N.A.
12.5 Does the additionality of small scale project activities conform to relevant specific requirements of additionality?	VVM137		N.A.	N.A.	N.A.



CEPREI

Table 2: Resolution of GSP comments

NO.	Topics	Standpoints	PP's Response	Validator's Conclusion
N.A. There are no comments received during the GSP.				



Table 3 Resolution of CARs and CLs

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

No.	CAR	Refer to Validation Protocol	Summary of project owner response	Validation team conclusion
1	Any LoAs from the DNA involved in the proposed CDM project activity are still not available during the process of desk review.	1.1	The LoAs from the DNAs of China and United Kingdom have been provided to DOE.	<p>The LoA from DNA of China has been provided and verified and the official website of NDRC has also been verified.</p> <p>The LoAs from DNA of United Kingdom has been provided and verified by the confirmation mail of Environmental Agency.</p> <p>Hence, this CAR has been closed.</p>
2	The area of reservoir is 2,970,000 m ² and the calculated power density of the project is 33.67 W/m ² as described in the PDD; however, by reviewing of the FSR, the area of reservoir is 2,940,000 m ² .	5.3.4	The area of reservoir is 2,940,000 m ² . That has been revised in the updated PDD.	<p>The updated PDD has been checked OK. The area of reservoir is 2,940,000 and the power density of the project is 34.01 W/m².</p> <p>Hence, this CAR has been closed.</p>
3	The starting date of the project activity is 03/09/2011 which is the date of signing construction contract as described in the PDD; however, by reviewing of the construction contract, the signing date of is 15/09/2011.	6.1.2	The signing date of the construction contract of power factory, diversion tunnel and dam has been revised in the updated PDD	<p>The updated PDD has been checked OK. The starting date of the project is 15/09/2011, which is the date of signed construction contract of power factory, diversion tunnel and dam of the project activity.</p> <p>Hence, this CAR has been closed.</p>



4	The IRR with CERs is 9.11% as described in the PDD which is inconsistency with IRR spreadsheet.	6.3.14	The IRR with CERs has been revised in the PDD	The updated PDD has been checked OK. The IRR with CERs is 8.12% which is confirmed by validation team. Hence, this CAR has been closed.
5	Clarification is required on the impact of the VAT refund policy issued the Notice of Taxation on Several Issues concerning the National Implementation of Value-added Tax Reform (CaiShui[2008]170) at the time of investment decision.	6.3.14	We have calculated the IRR include the deduct VAT on purchase. The IRR change to 4.27% while the original IRR is 4.17%. The influence on the IRR is little. The IRR sheet include the deduct VAT would be submit to DOE for check.	The revised IRR calculation process has been checked and the validation team confirms that the VAT refund for the main equipment has been taken into account in accordance with the regulation (CaiShui [2008]170). Hence, this CAR has been closed.

Table 3.2: List of Requests for Clarification (CL)

No.	CL	Refer to Validation Protocol	Summary of project owner response	Validation team conclusion
1	Please further describe the geographical coordinates of the dam and the plant respectively.	3.6	The geographical coordinates of the dam of the Project is 87°47'42"E, 48°13'23"N. The geographical coordinates of the plant of the Project is 87°56'00"E, 48°13'08"N	The updated PDD has been checked OK. The geographical coordinates of dam and plant of the Project which describe in the updated PDD is accurate. Hence, this CL has been closed.
2	The description of baseline scenario in A.4.3 of the PDD is promiscuous.	3.8	The scenario existing prior to the start of the implementation of the project activity is the same as the baseline scenario, and it	The updated PDD has been checked OK. Hence, this CL has been closed.



	Clarification is required to justify it.		has been revised in the PDD.	
3	It is description in the PDD that the project activity is a run of river hydropower station, but according to the FSR, The type of project activity is a hydropower plant with an accumulation reservoir. Clarification is required to justify it.	3.8	The type of project activity is a hydropower plant with an accumulation reservoir has been revised in the PDD.	The updated PDD has been checked OK. Hence, this CL has been closed.
4	The type of turbine and generator is inconsistent with the technical agreement.		The type of turbine and generator has been revised in the PDD.	The updated PDD has been checked OK. Hence, this CL has been closed.
5	The expected starting date of the crediting period is 01/07/2012 as describe in the PDD; however, during the on-site validation, PP estimated that the project will be completed in 2013.	3.9	The expected starting date of the crediting period has been revised to be 01/07/2013 as the project may be completed in 2013.	The updated PDD has been checked OK. Hence, this CL has been closed.
6	The version of ACM0002 is not the latest one.	5.2.1	The version of ACM0002 has been revised to be the version 12.3.0	The version of ACM0002 has been updated to 12.3.0 which is latest one issued by EB 66. Hence, this CL has been closed.
7	Please further describe the monitoring system in an appropriate diagram in PDD B.7.2.	7.6	The monitoring system in an appropriate diagram in PDD B.7.2 has been further described.	The updated PDD has been checked OK. The detailed monitoring arrangements are described clearly. The validation team confirms that the MP is feasible. Hence, this CL has been closed.



8	<p>The explanation needs to be provided regarding:</p> <p>(1) The roles of the electricity meter.</p> <p>(2) The accuracy of the electricity meter.</p>	7.6	<p>M is a bidirectional electricity meter that will be installed at the Grid Company, which is treated as the main recording system that can monitor both the electricity supplied to the grid and electricity imported by the project plant from the grid in year, which is used for the calculation of net electricity generation supplied by the project plant to the grid in year y ($EG_{\text{facility}, y}$). The accuracy of the electric meters is no less than 0.5s.</p>	<p>The updated PDD has been checked OK.</p> <p>Hence, this CL has been closed.</p>
9	<p>Please further describe the procedures about QA & QC, Emergency Management and Personnel training in PDD B.7.2</p>	7.7	<p>The procedures about QA & QC, Emergency Management and Personnel training in PDD B.7.2 have been further described.</p>	<p>The updated PDD has been checked OK. The procedures about QA & QC, Emergency Management and Personnel training are described clearly. The validation team confirms it is feasible.</p> <p>Hence, this CL has been closed.</p>
10	<p>The answers in the E.2 cannot cover all of the questions in the questionnaire.</p>	9.3	<p>E.2 part has been revised in the updated PDD.</p>	<p>The updated PDD has been checked OK.</p> <p>PDD has summarized all comments received and analyzed the survey.</p> <p>Hence, this CL has been closed.</p>

**Table 4: Forward Action Requests**

Table 4: List of Forward Action Requests (FARs)				
No.	FAR	Reference	Summary of project owner response	Validation team conclusion
N.A. There is no FAR of the project.				

ANNEX B

Certificate of Appointment

