



VALIDATION REPORT

DONG NATURGAS A/S

SONG ONG HYDROPOWER PROJECT

Report No: MY-VAL 09/16 <09/328>

Date: 2010-11-10

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Summary:	☒ positive validation opinion ☐ negative validation opinion

DONG Naturgas A/S has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project "Song Ong Hydropower Project" with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

In the course of the pre-validation 14 Corrective Action Requests (CARs), 11 Clarification Requests (CLs) were raised and closed successfully. 2 Forward Action Request (FAR) were raised that will checked during the 1st verification..

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Vietnam) and all relevant UNFCCC requirements for CDM. Project activity host country approval has been issued by Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment of Viet Nam (MONRE), as the DNA of Vietnam vide Letter of Approval (HCA) dated 2008-06-30. The Annex 1 party letter of approval was issued by Danish Energy Agency, DNA of the Kingdom of Denmark dated 2010-06-04.
- The project additionality is sufficiently justified in the PDD;
- The monitoring plan is transparent and adequate;
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 149,912tCO₂e are most likely to be achieved within the 1st renewable crediting period of 7 years.

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

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Indexing terms

Climate protection
Kyoto Protocol
CDM

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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DNA	Designated National Authority
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
FS	Feasibility Study
GHG	Greenhouse gas(es)
HPP	Hydropower Plant
IPCC	Intergovernmental Panel on Climate Change
MoU	Memorandum of Understanding
PDD	Project Design Document
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 OBJECTIVE / SCOPE

The purpose of a validation is to have an independent third party assess the project design. In particular the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability criteria

are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the project design including especially: the correct application of the methodology, the project's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PDD and other relevant supporting documents, to ensure that the proposed CDM project activity meets all relevant and applicable CDM criteria.

The information included in the PDD and the supporting documents were reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Manual^{VVM}, carried out a full assessment of all evidences to assess the compliance of the project with the key areas as outlined in section V.E. and V.F. of the VVM (version 1.1 EB 51).

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions. TÜV NORD JI/CDM CP cannot be held liable by any entity for making its validation opinion based on any false or misleading information supplied to it during the course of validation.

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

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	Song Ong Hydropower Project
Project size	☐ Large Scale ☒ Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	☒ 1 Energy Industries (renewable- /non-renewable sources)
	☐ 2 Energy distribution
	☐ 3 Energy demand
	☐ 4 Manufacturing industries
	☐ 5 Chemical industry
	☐ 6 Construction
	☐ 7 Transport
	☐ 8 Mining/Mineral production
	☐ 9 Metal production
	☐ 10 Fugitive emissions from fuels (solid, oil and gas)
	☐ 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	☐ 12 Solvents use
	☐ 13 Waste handling and disposal
	☐ 14 Afforestation and Reforestation
	☐ 15 Agriculture
Applied Methodology	AMS-I.D, Version 16: Grid Connected Renewable Electricity Generation.
Technical Area(s)	S: Renewable – Hydro
Crediting period	☒ Renewable Crediting Period (7 y) ☐ Fixed Crediting Period (10 y)
Start of crediting period ¹	2011-03-01 or date of registration whichever is later

2.2 Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-2).

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Vietnam	Song Ong Hydropower Joint Stock Company
	Vietnam	Energy and Environment Consultancy Joint Stock Company
Other involved party/ies	Denmark	DONG Naturgas A/S

¹ As per the published PDD (version 1)

2.3 Project Location

The project activity is a hydropower plant and the details are given in table 2-3:

Table 2-3: Project Location

Description	Project Location	
Host Country	Vietnam	
Region:	Ninh Thuan province	
Project location address:	Quang Son commune, Ninh Son district.	
Location	Latitude	Longitude
Power House	11 ⁰ 44'56" N	108 ⁰ 49'20" E
Water Intake	11 ⁰ 45'13" N	108 ⁰ 48'19" E

2.4 Technical Project Description

As described in the PDD sections A.2 and A.4.3, the project activity is a run-off river hydro power project with a capacity of 8.1MW.

The estimated power generated is approximately 39,994MWh per annum and connected to the Vietnam national electricity grid.

At the time of the on-site visit, the project activity is in operation and implemented as described in the PDD.

The proposed technical key data of the project activity is indicated in Table 2-4 below.

Table 2-4: Technical data of the project activity:

Technical Data of Main Equipments	
Turbine:	
Manufacturer	Chongqing Yunhe Industry (Group) Co. Ltd.
Model	HLA551-LJ-140
Type	Francis Vertical
No. of Units	3
Design Output	2.7MW each
Weighted Average Efficiency	86.91%%
Nominal speed	300 rpm
Generator	
Manufacturer	Chongqing Yunhe Industry (Group) Co. Ltd.
Model	SF2700-20/3250
No. of units	3
Output	3,375 kVA
Rated Capacity	2,700kW
Rated Voltage	6,300 V
Excitation Type	Brushless
Frequency	50 Hz
Speed	300 rpm

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the project consisted of the following steps:

- Contract review;
- Appointment of team members and technical reviewers;
- Publication of the project design document (PDD);
- A desk review of the PDD^{/PDD/} submitted by the client and additional supporting documents with the use of customised validation protocol ^{/CPM/} according to the Validation and Verification Manual ^{/VVM/};
- Validation planning;
- On-Site assessment;
- Background investigation and follow-up interviews with personnel of the project developer and its contractors;
- Draft validation reporting;
- Resolution of corrective actions (if any);
- Final validation reporting;
- Technical review;
- Final approval of the validation.

The sequence of the validation is given in the table 3.1 below:

Table 3-1: Validation sequence

Topic	Time
Assignment of validation	2009-09-29
Submission of PDD for global stakeholder commenting process	2009-09-11
On-site visit	2009-11-16 to 2009-11-18
Draft reporting finalised	2010-01-05 to 2010-01-10
Final reporting finalised	2010-11-05
Technical review on final reporting finalised	2010-11-10

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held;
- the necessary competences to carry out the verification can be provided;
- Impartiality issues are clear and in line with the CDM accreditation requirements;

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consistent of one team leader and 2 additional team members, were appointed. Furthermore, also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence	Technical competence ⁴⁾	Host country Competence	Team Leading competence
☒ Mr. ☐ Ms.	Cheong, Chun Yuen (Robert)	TUV NORD Malaysia	TL	A	☒	S	☐	☒
☒ Mr. ☐ Ms.	Cheong, Weng Wai	TUV NORD Malaysia	-	T	☐		☐	☐
☒ Mr. ☐ Ms.	Pham, Van Trung	TUV NORD Vietnam	TM	TE	☐	S	☒	☐
☐ Mr. ☒ Ms.	Meyer, Sabine	TUV NORD Cert GmbH	TR ³⁾	E	☒	--	☐	☐
☒ Mr. ☐ Ms.	Schubert, Jochen	TUV NORD Cert GmbH	TR ³⁾	A	☒	S	☐	☒
☒ Mr. ☐ Ms.	Saalmann, Martin	TUV NORD Cert GmbH	FA	SA	☒	-	☐	☒

- ¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; FA: Final approval
- ²⁾ GHG Auditor Status: A: Assessor; E: Expert; SA: Senior Assessor; T: Trainee; TE: Technical Expert
- ³⁾ No team member
- ⁴⁾ As per S01-MU03 or S01-VA070 A2 (such as A, B, C.....)

Certificates of appointment for the above mentioned team members are enclosed in annex 6 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PDD, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the validation activity commenced. Stakeholders have been invited to comment on the PDD within the 30 days public commenting period.

In case comments were received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 5 of this report.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from pre-validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as project specific issues as applicable. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CDM project is expected to meet;
- It ensures a transparent validation process where the validating entity will document how a particular requirement has been validated and the result of the determination.

The validation protocol as described in Figure 1.

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	Validation Team Comment	Reference	Draft Conclusion	Final Conclusion
<i>The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVM shall be covered in this section.</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CR or FAR (see below) is raised. The assessment refers to the draft validation stage.</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

Figure 1: Validation protocol tables

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PDD (version 1) and supporting background documents related to the project design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Follow-up Interviews

The validation team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Song Ong Hydropower Joint Stock Company Mr. Nguyen Hai Quynh Mr. Nguyen Anh Tuan Mr. Hoang Van Nham Vietnam Energy and Environment Consultancy Joint Stock Company Mr. Hoang Thanh Ha Mrs. Dang Hong Hanh Mr. Nguyen Tien Hai	• Project Title • Project Participant • CDM Consideration • Operation permits and license • Water Usage Permits • Methodology Applicability. • Baseline Emissions • Project Emissions • Project design include technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project • Host Government Approval • Operation data and records • Methodology applicability • Project technology • Project equipment specification and list • Power generated • Internal power consumption • Monitoring and measurement equipment and system. • Crediting period • Project activity starting date • CER allocation / ownership • Additionality • Sustainable development • Environmental • Analysis of local stakeholder consultation • Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting • Training • Editorial issues of the PDD • Local Stakeholders Consultation

Vietnam DNA Mr. Hoang Manh Hoa	• Grid Emission Factor data • Host Country Approval
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A comprehensive list of all interviewed persons is part of section 7 'References'.

3.8 Project comparison

The validation team has compared the proposed CDM project activity with similar projects or technology that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Project technology;
- Additionality issues;
- Reasons for reviews, requests for reviews and rejections within the CDM registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results;
- the requirements deemed relevant for validation of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation

After reviewing all relevant documents and taken all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

3.9.3 Final Validation

The final validation starts after issuance of the proposed corrective action (CA) of the CARs CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore, reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PDD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic ¹⁾	No. of CAR	No. of CL	No. of FAR
General description of project activity (A) - Project specification - Technical project description - Participation - Contribution to sustainable development - PDD editorial aspects - Technology to be employed	3		1
Project Baseline, Additionality and Monitoring Plan (B) - Application of the Methodology - Project Boundary - Baseline identification - Calculation of GHG emission reductions - Project emissions - Baseline emissions - Leakage - Additionality determination - Monitoring Methodology - Monitoring Plan - Project management planning	10	9	1
Duration of the Project / Crediting Period (C)	1		
Environmental impacts (D)			
Stakeholder Comments (E)		2	
SUM	14	11	2

¹⁾ The letters in brackets refer to the validation protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

General	Finding A1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.A1: The Annex I approval will further to be assessed when submitted. Checklist: A.1.1, A.1.2, A.1.3, A.1.4, A.1.6, A.1.7, A.1.8, A.1.9, A.1.10		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The information of the CERs buyer has been added in section A.3 and Annex I of the revised PDD The Letter of Approval of Denmark will be submitted by Dong Naturgas A/S before submitting for registration.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Section A.3 and Annex I of latest revised PDD has include information of Annex 1 participant and a CER buyer for the project. However, the Annex 1 party LoA has not been submitted		
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The Letter of Approval of Denmark has been submitted by Dong Naturgas A/S.		
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The Annex I party Letter of Approval has been submitted by the project participant. The LoA dated 2010-06-04 issued by the Danish Energy Agency, DNA for the Kingdom of Denmark. ^{/LoA/} The LoA confirms the followings: 1. DONG Naturgas A/S as project participant to the project activity "Song Ong Hydropower Project"; 2. Denmark ratified Kyoto Protocol on 2002-05-31, participates voluntarily in CDM; 3. Approves "Song Ong Hydropower Project" as CDM under Article 12 of Kyoto Protocol; 4. Authorise and approves the voluntary participation of DONG Naturgas A/S in the project. The project title stated in the LoA is same as the project title stated in respective sections of the PDD. There are no other Annex I participants stated in the LoA. The MoC dated 2010-08-02 has being submitted that confirms that the project participants are the same as in Section A.3 and Annex I of the PDD. ^{/MoC/} a) DONG Naturgas A/S b) Song Ong Hydropower Joint Stock Company c) Energy and Environment Consultancy Joint Stock Company CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

General	Finding A2		
Classification	☒ CAR	☒ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.A2: Information in Table 1 of section A.4.2.2 is not in accordance with the project implemented. Checklist A.4.1, A.4.2, A.4.3		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The information in Table 1 of section A.4.2.2 of the revised PDD has been corrected. The evidence for the information in Table 1 of section A.4.2.2 has been submitted to the DOE.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Table 1 of section A.4.2.2 of latest revised PDD has been corrected Supporting evidences have been submitted that refer to the project activity equipment. CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

General	Finding A3		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.A3: There are several typing and spelling errors in the PDD. Checklist A.4.1		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The typing and spelling errors have been corrected in the revised PDD/version 2.0.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Typing errors and spelling had been corrected in latest revised PDD. CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

General	Finding A4		
Classification	☐ CAR	☐ CL	☒ FAR

General	Finding A4
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	FAR.A4: Although the plant personnel had received training, there are no records to show the type of training attended. This will be checked during the 1 st verification. Checklist: A.4.6
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The records which show the type of training will be available at the 1 st verification.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	This will be checked during 1 st verification.
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B1
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B1: The project boundary as shown in Section B.3 should include the auxiliary internal power consumption of the hydropower plant. In addition the coordinates for the project powerhouse and water intake locations need to be corrected. Checklist: B.2.1
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The project boundary has been corrected in section B.3 of the revised PDD. The coordinates of the project powerhouse and water intake have been added in the revised PDD. The coordinates of this project was measure during the onsite visit that has been confirmed by the DOE.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Project boundary in section B.3 of latest revised PDD. The project coordinates have been amended in section A.4.1.4 of latest revised PDD. The coordinates were checked with a hand-held GPS unit during the on-site visit. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B2		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B2: Section B.3 described the project boundary and a table is required to indicate the sources and GHGs of the baseline and project activity in the PDD. Checklist: B.2.2, B.2.3		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Section B.3 described the project boundary and a table contains the sources and gases for baseline and project has been added in the revised PDD.		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Sources and GHGs gases have been included in Table 4, section B.3 of latest revised PDD. Thus, the project is in compliance with EB 51 Annex 3, §§67 (a), 77 - 79 CAR is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Project Baseline, Additionality and Monitoring Plan	Finding B3		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B3: Section B.4 of PDD did not indicate whether the project activity baseline has considered the relevant national and or sectoral policies. Checklist: B.3.7		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The consideration of National and/or Sectoral policies in the project activity baseline has been added in section B.4 of the revised PDD. Please refer to the supporting documents with note "Finding B03" in column "Note" of the excel sheet "0. Index"		
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Section B.4 of revised PDD has been updated with consideration of national and/or sectoral policies that the host country has not implemented any E+/E- policies. Kindly provide further information for the document mentioned on the title and document number.		

Project Baseline, Additionality and Monitoring Plan	Finding B3
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly find the document No.100 with title "100. Decision 110.2007.QD-TTg - relevant pages 1-2-5-13_vn".
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The mention document refers to the electricity master plan of the host country Viet Nam that did not indicate any E+/E- policies.^{/D110/} CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B4
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B4: Although CDM has been considered at the initial stage, Table 4 in section B.5 need to be updated to include additional information on decisive decision taken by the project owner on CDM being considered seriously in the development of the project activity. Checklist B.4.2.3, B.4.2.4
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	More detailed information on CDM early consideration has been added in section B.5 of the revised PDD. The documents for CDM early consideration have been submitted to the DOE
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Section B.5 CDM Consideration table had been updated with further information as regards to the project owner in securing CDM status to support the viability of the project. Supporting documents have been submitted to validation team to justify CDM consideration has been consistent. /MoU/PCDM/FDBOD/RPO/DBOD/TC/NMCDM/LDNA/LNT/PPCS/CDMC/ CAR is closed
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan		Finding B5		
Classification	☐ CAR	☒ CL	☐ FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B5: Financial Spreadsheet. Kindly provide the source for the financial data stated in the financial section of the FS. Checklist: B.4.4.1, B.4.4.16			
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The source for the financial data in the financial section of the FS has been submitted to the DOE (document No.14). Please refer to the supporting documents with note "Finding B05" in column "Note" of the excel sheet "0. Index"			
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The source for the financial data from FS has been provided. However, the reference to the supporting documents cannot be traced.			
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly find page 5 of document No.14 with title "14. 20040701_Finally Feasibility study report_vn".			
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The mention Finally FS document had been submitted that confirmed the source of the financial data. ^{/FSR/} CL is closed.			
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements			

Project Baseline, Additionality and Monitoring Plan		Finding B6		
Classification	☒ CAR	☐ CL	☐ FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B6: Financial spreadsheet. In lieu of lack of data available to support WACC calculation, the financial analysis needs to be corrected to apply a more suitable benchmark indicator in support of the project is not viable without CERs. Checklist: B.4.4.2, B.4.4.3			

Project Baseline, Additionality and Monitoring Plan	Finding B6
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The financial analysis has been re-written in the revised PDD. The benchmark is defined as the local commercial lending rate of 12.6% per year for commercial medium-term and long-term loan rate in rural area published the State Bank of Vietnam. The rate is eligible as the Guidelines on the assessment of Investment Analysis Version 03, EB 51 Report Annex 58 stated "local commercial lending rates...are appropriate benchmarks for a project IRR". The benchmark chosen is conservative as it is lower than the lending rate of 13.6% per annum for medium term in 2005 published by the IMF. Please refer to the supporting documents with note "Finding B06" in column "Note" of the excel sheet "0. Index"
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The benchmark for the financial analysis has been changed from using WACC to the host country state bank commercial lending rate and is in accordance with EB 51 Annex 58 guidance document paragraph 12. The rate applied is conservative as compared to rate issued by the IMF report 2005. The referred document cannot be traced. Kindly update.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The referred documents are attached herewith. Kindly find document No.98with title "98. 200712_IMF Country Report No 07-386_en" and document No.99with title "99. Annual Report 2004_the State Bank of Vietnam_vn,en".
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The supporting document for bank rate has been submitted that confirm the applied benchmark is the bank commercial lending rate issued by the State Bank of Viet Nam. ^{/ARSBV/IMF/} CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B7
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B7: Section B.5: Kindly revised whether the technical lifetime of the project has taken into consideration of EB 50 Annex 15. Checklist: B.4.4.4, B.4.4.11, B.4.4.12, B.4.4.13
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The technical lifetime of the project has been corrected by referring to version 01 of tool to determine the remaining lifetime EB 50 Annex 15 in the revised PDD.

Project Baseline, Additionality and Monitoring Plan	Finding B7
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The tool applied to determine the technical lifetime of the project of EB 50 Annex 15 is for remaining lifetime of equipment. As such is not applicable to this project due to it is new. Kindly provide evidences from equipment supplier to support the stated lifetime.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Although the methodology AMS I.D did not refer to the “Tool to determine the remaining lifetime of equipment” to determine the lifetime of equipment for the Greenfield project but in the previous version of PDD, the project participant refer to that tool because it mentioned about the default lifetime of hydropower equipment. However, to confirm the lifetime of hydropower equipment, the project owner has request the equipment supplier to confirm about the technical lifetime of equipment. The document has been attached herewith. Kindly find document No.104 with title “104. Technical lifetime from equipment supplier_en,vn”.
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The submitted document mentions a technical lifetime of the equipment of 30 years. ^(TLE) CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B8
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B8: Financial Spreadsheet Kindly advice what is the fair value considered in the financial analysis? Checklist: B.4.4.5, B.4.4.6
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Because the project IRR calculations has reflected “the period of expected operation of the underlying project activity (technical lifetime)”, the fair value is not need to be considered at the end of the lifetime as explained in “Guidelines on the Assessment of Investment Analysis” (version 03), Annex 58, EB 51: “or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period”

Project Baseline, Additionality and Monitoring Plan	Finding B8
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The technical lifetime of the project activity is not clear. Kindly provide supporting document in support of the 30years that fair value is not required to demonstrate in the financial analysis.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	In the last PDD version, the project participant choose the fair value as zero in the final year of investment analysis as explained in the recent response above and also according to the accounting regulations, the fair value of an asset is its remaining value after depreciation. Because the depreciation period of the proposed project was 20 years, so the remaining value (fair value) from the year 21 onward is zero. The applied fair value is in line with the paragraph 4 of "Guidance on Assessment of Investment Analysis" (version 03), Annex 58, EB 51, the fair value "should be calculated in accordance with local accounting regulations where available, or international best practice."
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The latest PDD revision did not stated that the fair value is considered as zero after year 21. In addition, kindly provide the local accounting regulations to support that the fair value will be considered as zero after depreciation of year 21.
Corrective Action #3 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The information has been added in the revised PDD. Furthermore, the Vietnamese Accounting Standard or the local accounting regulation for determining the fair value is attached herewith.
DOE Assessment #3 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The project depreciation period is 20 years which is based on the Vietnamese Accounting Standard. As such, the fair value will be considered zero at the end of the depreciation period of 20 years. The latest revised PDD has been updated accordingly. ^{/FAS/D149/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B9
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B9: Section B.5. It is not clear how the operating hours being determined to calculate the total electricity generated per year. Checklist: B.4.4.9, B.4.4.16

Project Baseline, Additionality and Monitoring Plan	Finding B9
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The operation hour is determined based on the total electricity generation divided by gross capacity of the project. The electricity generation is determined based on the hydrologic statistic records of the Ong river in 21 years. The operation hour has been mentioned in the FS. Please refer to the supporting documents with note "Finding B09" in column "Note" of the excel sheet "0. Index"
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Kindly provide the page number and section of the FS in support of the operating hours of 5,000. This has to be insert in the key assumptions Table 5 of Section B.5.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly find the operating hours on page 3 of document No.14 with title "14. 20040701_Finally Feasibility study report_vn". The operating hours has been inserted in table 6 of section B.5 of the revised PDD.
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The document Finally Feasibility study report provided states the operating hours. Table 6 of Section B.5 of revised PDD had been updated. ^{/FSR/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B10
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B10: Financial spreadsheet. It is not clear whether the auxiliary consumption is taken in account to determine the net power exported to the grid. Checklist: B.4.4.9
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The gross power and net power generated have been specified in FS. According to FS, the auxiliary consumption and loss load is 1.25%. Please refer to the supporting documents with note "Finding B10" in column "Note" of the excel sheet "0. Index"

Project Baseline, Additionality and Monitoring Plan	Finding B10
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Kindly provide the page and document title of FS in support of the auxiliary consumption and load loss of 1.25%. Document link is not traceable.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Kindly find the page 3 of document No.101 with title "101. 20030700_General explanations_vn".
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The document provided states the expected load loss of 1.25%. /GEFS/ CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B11
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B11: Section B.5. It is not clear how the feed-in tariff is being determined basing on the rates indicated in the PPA. Checklist: B.4.4.9, B.4.4.16
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The feed-in tariff that was available for the financial analysis is the average of the two tariffs for the dry and rainy seasons agreed with the EVN at the negotiation report on the purchase of the power generated by the Song Ong hydropower project (The dry season is lasted from 01 October to 30 June and rainy season is from 01 July to 30 September). The calculation of feed-in tariff has been specified in the excel sheet. The Negotiation report on the purchase of the power generated by the Song Ong hydropower project has been submitted to the DOE as the document No.10. For cross check purpose, the PPA that was signed recently applies the same two tariffs or the same average tariff as those applied in the financial analysis. Please refer to the supporting documents with note "Finding B11" in column "Note" of the excel sheet "0. Index"

Project Baseline, Additionality and Monitoring Plan	Finding B11
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The feed-in tariff is based on the PPA that states wet and dry season rates. The link document cannot be traced.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The negotiation report on the purchase of the power and the PPA are attached herewith. Kindly find document No.10 with title "10. 20040202_Negotiation report on the purchase of the power generated by the Song Ong HPP_en,vn" and document No.103 with title "103. 20081111_PPA of Song Ong Hydropower plant_vn".
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The documents submitted states the tariff rate for both wet and dry seasons and the tariff determined is considered conservative. ^{/NR/PPA/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B12
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B12: Section B.5. The approval of the FS is not made available to the validation team to confirm that it has been approved by the relevant authorities for the project studies. Checklist: B.4.4.9
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The FS of the project has been approved by Ministry of Industry. The approval document is submitted to the DOE as the document No. 35
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The FS approval has been submitted. ^{/RFSA/FFSA/} CL is closed.

Project Baseline, Additionality and Monitoring Plan	Finding B12
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B13
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B13: Section B.5: Although reducing O&M cost will not be feasible to operate the plant to achieve the intended power generation capacity and electricity to be supplied to the national grid, it is not clear how the cost stated in FS is determine. Checklist. B.4.4.16
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The O&M cost as determined in the excel sheet (1.41%) is an weighted average rate based on Decision No.709 of Ministry of Industry. The O&M cost chosen is conservative because it is lower than the O&M cost as stated in FS (1.57%). Please refer to the supporting documents with note "Finding B13" in column "Note" of the excel sheet "0. Index"
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	From the Decision No. 709 of Ministry of Industry, the O&M cost for hydropower plant of 3 – 30MW is between 1 to 1.5% of investment costs. Kindly advice how was 1.41% being considered as the weighted average? In addition, kindly advice page of FS that states the O & M cost of 1.57%.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	According to Decision No. 709 of Ministry of Industry, the O & M cost for hydropower plant are as follow: Capacity bigger than 30 MW: 0.5% Capacity from 3 to 30MW is from 1.5% to 1% Capacity from 0.2 MW to 3 MW: 2% It means that the bigger power capacity, the less O & M cost. In the financial analysis, the project participant chose 1.41% as the weighted average rate because it was calculated based on the capacity of this proposed project as follow: The capacity of Song Ong HPP is 8.1MW, therefore, O & M cost of Song Ong HPP = $1.5\% - (1.5\% - 1\%) * (8.1 - 3) / (30 - 3) = 1.41\%$. Kindly find page 3 of document No.101 with title "101. 20030700_General explanations_vn" that stated the O & M cost of 1.57%.

Project Baseline, Additionality and Monitoring Plan	Finding B13
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The justification in determining the O&M cost for the project activity is calculated using the weighted average of the power plant capacity in accordance with Decision 709. Thus, is considered conservative. The value is applied in the financial analysis. ^{/D709/GEFS/FSR/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B14
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B14: Section B.6.3. The baseline equation is incorrect and not in accordance with the methodology. Checklist B.5.1, B.6.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The baseline equation has been corrected in the revised PDD.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The baseline equation had been corrected in section B.6.3 of revised PDD. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B15
Classification	☒ CAR ☐ CL ☐ FAR

Project Baseline, Additionality and Monitoring Plan	Finding B15
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B15: Since there will a likelihood that grid electricity will be imported in the event of power outage or complete shutdown for maintenance, Section B.6.3 on the statement of project emissions need to be revised in lieu of grid electricity will be likelihood to be imported. Checklist. B.5.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	In the event of power outage or complete shutdown for maintenance, electricity will be imported from the grid or diesel backup generator. For ex-ante emission calculation in Section B.6.3., because the imported electricity from the grid is much less than the export electricity so it was neglected for more simple. In ex-post emission calculation, the import electricity will be monitored and take into accounted by deducted from the export electricity generation. Project emission from operation of diesel backup generator has been added in section B.6.3 of the revised PDD.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Electricity supplied from the grid in the event of power outage or complete shutdown for maintenance was included in section B.6.3. The supply of grid electricity during the monitoring period is monitored as indicated in section B.7.1. As for usage of diesel genset, there is no indication of the monitoring of this parameter in section B.7.1.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The monitoring of the diesel genset has been added in section B.7.1 of the revised PDD.
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Section B.7.1 of revised PDD is updated to include the monitoring of diesel usage by the standby genset. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B16
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B16: According to the tool, the most recent data will be applied during the submission for validation. Kindly clarify why year 2008 data are not used? Checklist: B.5.5

Project Baseline, Additionality and Monitoring Plan	Finding B16
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The data for EF calculation in Viet Nam is published and requested to use by the Vietnam DNA. At the date of submission the PDD for the global stakeholder consultation, no new notification on the EF has been made by the DNA. Please refer to the supporting documents with note "Finding B16" in column "Note" of the excel sheet "0. Index"
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The clarification is on why year 2008 data are not used in the emission factors calculation. In this aspect which year is the most recent applied in the calculation? In addition, the link to the document is not traceable.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The most recent result calculation of Vietnamese grid emission factor is for year 2008 which has just been public on 26 Mar 2010. Please find in the Vietnam DNA website for more details. http://www.noccop.org.vn/Data/vbpg/Airvariable_idoc_vnHe%20so%20phat%20thai.pdf However, the data source for the calculation of EF in 2008 is impossible for the project participant to access and could not be validated by the DOE. So the project participants have to apply the emission factor of year 2007. It was the only available data source at time of submission the PDD. Kindly find the attached document No.65 with title "65. EF Calculation".
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The data for the calculation of the emission factor available at the time for the submission of PDD for validation was year 2007. The link provided shows the EF for the year 2008 which was released on 2010-03-26. The EF calculation had been reviewed and checked and considered correct. /DEF/ CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B17		
Classification	☐ CAR	☒ CL	☐ FAR

Project Baseline, Additionality and Monitoring Plan	Finding B17
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.B17: Financial Spreadsheet: Project Info Sheet: - How were the electricity generated for rainy and dry season determined in cells F32 and F33? - Cells F4 to F5, F9, F13 to F16 indicate a sum of 2 cells, however, one of the cell is empty. Assumption Sheet: - Cell I49. Kindly provide the exchange rate applied for VND to USD, source and date of exchange. - Cell D42. How is the formula been derived?
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Project Info Sheet: - In the previous version of the Excel sheet, the electricity generated was calculated with the assumption that in rainy season, the power plant will operate with 100% capacity, therefore, the electricity generated in rainy season determined gross power capacity multiply operation time in rainy season (cell F32). The electricity generated in dry season determined gross electricity generated subtracts electricity generated in rainy season (cell F33). However, for more conservative and accurate, in the latest version of the Excel sheet, the electricity generated for rainy and dry season are determined based on the monthly water flow of Ong river. Kindly find in the attached document No.108 with title "108. CL17_Assumption of monthly electricity generation" and document No.109 with title "109. 20040716_Potential hydropower of Ongriver_vn" for more details. - The cells have been corrected in the revised excel sheet/version 2.1. Assumption Sheet: - Kindly refer to cell E5 and H5 for the exchange rate applied value, source and date of exchange. - The formula was revised to be simpler. It was the weighted average rate calculation of the OM cost. Please also refer to Finding 13 for more details.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The revised excel sheet submitted is incomplete and not able to view the respective sheets. Kindly resubmit as a viewable and unprotected version.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Please find the supporting document named "20100706_ Song Ong HPP Financial (Risk) Assessment_V2.2_Submitted" in the attached files.

Project Baseline, Additionality and Monitoring Plan	Finding B17
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	A viewable and unprotected spreadsheet has been submitted. The link to the values and cells in the respective sheets had been corrected with explanation. ^{/FAS/AMEG/PHP/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B18
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B18: Financial Spreadsheet: Project sensitivity sheet. 1. Correction for project title 2. The link for variation and project IRR cells are not traceable.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The project title has been corrected in the revised excel sheet. 2. The link for variation and project IRR cells have been corrected in the revised excel sheet.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Financial spreadsheet provided is not viewable and cannot be assessed. Kindly resubmit the correct version.
Corrective Action #2 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Please find the supporting document named "20100706_ Song Ong HPP Financial (Risk) Assessment_V2.2_Submitted" in the attached files.
DOE Assessment #2 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. The revised financial spreadsheet submitted indicated the correct project title. 2. The link for variation and project IRR had been corrected and traceable. ^{/FAS/} CAR is closed.

Project Baseline, Additionality and Monitoring Plan	Finding B18
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B19
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.B19: Section B.7.1: According to methodology version 15, paragraph 14, it is necessary to monitor emissions from reservoir of hydro power plants.
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The PPD has been updated according to version 16 of AMS-I.D. The emission from reservoir has been added in the revised PDD
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The PDD version had been updated to version 16 and the emission from the reservoir had been included in the monitoring. CAR is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B20
Classification	☐ CAR ☐ CL ☒ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	FAR.B20: During the 1 st periodic verification period, the QA/QC procedures have to be checked that it has been established and implemented. Checklist: B.6.4, B.6.5, B.6.6
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The QA/QC procedures will be available during the 1 st periodic verification period.

Project Baseline, Additionality and Monitoring Plan	Finding B20
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	This will be reviewed during the 1 st verification.
Conclusion <i>Tick the appropriate checkbox</i>	☒ To be checked during the first periodic verification ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements

Project Baseline, Additionality and Monitoring Plan	Finding B21		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	1. Taxation: According to the IRR calculation, taxation is included in the investment analysis. Clarification is requested if a post tax calculation is compared with a pre tax benchmark. 2. PLF: Please check whether the PLF is in accordance with EB48 Annex 11. A comparison of the PLF with other PLF of hydro power projects in Vietnam is requested. 3. B.5: Table 5: It is not clear what the difference is between 2005-08-01 and 2005-08-15. It has been assessed that 2005-08-01 is the investment decision. However, in the description under "Activities taken to secure CDM status" it doesn't say that an investment decision has been taken. However, this is mentioned on 2005-08-15. Please clarify. 4. C.1.1: Please change the start date of the crediting period to a realistic date considering at least one month for registration.		
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	1. The taxation has been removed from the IRR calculation because the benchmark is pre tax benchmark. There is no impact on the additionality of this proposed project. 2. The Plant Load Factor (PLF) for this proposed project was determined by the annual electricity output and the capacity which was determined in the Feasibility Study which was prepared by the independent technical consultant party (HYDRAULIC CENTER - IRRIGATION SCIENCE INSTITUTE) contracted by the project owner. So it is in line with the EB 48 annex 11 "The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)" PLF = (Total electricity output / Maximum electricity could be generated) or PLF = (the annual electricity output / (the capacity*8760) * 100%).		

Project Baseline, Additionality and Monitoring Plan	Finding B21																																																																																																
	In which 8760 is hours of one year. So PLF for this proposed project PLF = 40,500 / (8.1 * 8760) * 100% = 57.08%. According to the UNFCCC website, the Plant load factor of the registered project in Viet Nam are listed below: <table><tr><th>Registered Hydropower project</th><th>Capacity MW</th><th>Electricity output (MWh/year)</th><th>Load factor</th></tr><tr><td>Phu Mau</td><td>5.6</td><td>22,320</td><td>45.50%</td></tr><tr><td>Muong Sang</td><td>2.4</td><td>8,199</td><td>39.00%</td></tr><tr><td>Suoi Tan</td><td>5.5</td><td>24,680</td><td>51.22%</td></tr><tr><td>So Lo</td><td>8.7</td><td>26,760</td><td>35.11%</td></tr><tr><td>Nam Pia</td><td>15.0</td><td>61,320</td><td>46.67%</td></tr><tr><td>Ta Niet</td><td>3.6</td><td>18,100</td><td>57.39%</td></tr><tr><td>An Diem 2</td><td>15.6</td><td>78,280</td><td>57.28%</td></tr><tr><td>Nam Gion</td><td>20.0</td><td>81,450</td><td>46.49%</td></tr><tr><td>Nam Khoa 3</td><td>18.0</td><td>75,780</td><td>48.06%</td></tr><tr><td>Nam Khot</td><td>14.0</td><td>56,620</td><td>46.17%</td></tr><tr><td>Yan Tann Sien</td><td>19.5</td><td>78,670</td><td>46.05%</td></tr><tr><td>Ha Rao Quan</td><td>6.4</td><td>24,200</td><td>43.16%</td></tr><tr><td>Coc Dam</td><td>7.5</td><td>32,600</td><td>49.62%</td></tr><tr><td>Chieng Cong</td><td>11.4</td><td>44,720</td><td>44.78%</td></tr><tr><td>Dak Ne</td><td>8.1</td><td>37,960</td><td>53.50%</td></tr><tr><td>Dak Rung</td><td>8</td><td>31,810</td><td>45.39%</td></tr><tr><td>Suoi Sap 3</td><td>14</td><td>49,130</td><td>40.06%</td></tr><tr><td>Ea Drang 2</td><td>6.4</td><td>25,640</td><td>45.73%</td></tr><tr><td>Pa Khoang</td><td>2.4</td><td>12,000</td><td>57.08%</td></tr><tr><td>La Hieng 2</td><td>15</td><td>56,900</td><td>43.30%</td></tr><tr><td>Thai An</td><td>82</td><td>357,500</td><td>49.77%</td></tr><tr><td>Average</td><td></td><td></td><td>47.21%</td></tr><tr><td>Song Ong</td><td>8.1</td><td>40,500</td><td>57.08%</td></tr></table> The statistic data in the table above shows that the load factor of this proposed project (57.08%) is in the range (35.11% to 57.39%) of registered projects in Vietnam. In addition, the load factor of this proposed project (57.08%) is higher than the average load factor of hydropower plants (43.33%) of the largest hydroelectric producer that is referred in the following link: http://tripatlas.com/Hydroelectricity. Therefore, the PLF value of this project makes the additionality approach of the project more conservative (the higher load factor, the higher project IRR). 3. On 01 August 2005, the vice director of the company organized an internal meeting to present the financial analysis of Song Ong Hydropower project with CDM consideration. The meeting presented that the proposed hydropower project would not be economic attractive without the CDM consideration. Then it recommended the Board to make the final decision on the investment in the project with	Registered Hydropower project	Capacity MW	Electricity output (MWh/year)	Load factor	Phu Mau	5.6	22,320	45.50%	Muong Sang	2.4	8,199	39.00%	Suoi Tan	5.5	24,680	51.22%	So Lo	8.7	26,760	35.11%	Nam Pia	15.0	61,320	46.67%	Ta Niet	3.6	18,100	57.39%	An Diem 2	15.6	78,280	57.28%	Nam Gion	20.0	81,450	46.49%	Nam Khoa 3	18.0	75,780	48.06%	Nam Khot	14.0	56,620	46.17%	Yan Tann Sien	19.5	78,670	46.05%	Ha Rao Quan	6.4	24,200	43.16%	Coc Dam	7.5	32,600	49.62%	Chieng Cong	11.4	44,720	44.78%	Dak Ne	8.1	37,960	53.50%	Dak Rung	8	31,810	45.39%	Suoi Sap 3	14	49,130	40.06%	Ea Drang 2	6.4	25,640	45.73%	Pa Khoang	2.4	12,000	57.08%	La Hieng 2	15	56,900	43.30%	Thai An	82	357,500	49.77%	Average			47.21%	Song Ong	8.1	40,500	57.08%
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Project Baseline, Additionality and Monitoring Plan	Finding B21
	the CDM consideration. The final decision to develop this proposed project with the CDM consideration was officially issued by the Management Board in the official meeting of the Board on 15 August 2005 which is then defined as the date of making the investment decision. 4. The starting date of the first crediting period has been changed in revised PDD/Version 2.5.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	1. Taxation has been deleted from the IRR financial analysis spreadsheet since the benchmark is pre-tax. ^{/FAS/} 2. The PLF has been justified and demonstrated appropriately and compared with registered projects. The FS was prepared by an approved consultant and is hence in accordance with EB 48 Annex 11. ^{/CISI/ALF/PLFRP/} 3. 2005-08-01 is the date where the financial analysis of the project activity with CDM consideration was presented to the Board an internal meeting for the decision making to invest in the project. The Board made the final investment decision on 2005-08-15 to invest the project with CDM consideration. ^{/FDBOD/DBODI/} 4. The starting date of crediting period had been revised in PDD. CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Duration of the Project/ Crediting Period	Finding C1
Classification	☒ CAR ☐ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.C1: The start date of the crediting period needs to be corrected to a realistic date. Checklist: C.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The start date of the crediting period has been corrected in the revised PDD.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The start date of crediting period had been revised in section C.2.1.1 of revised PDD. CAR is closed.

Duration of the Project/ Crediting Period	Finding C1
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Stakeholder Comments	E1
Classification	☐ CAR ☒ CL ☐ FAR
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CAR.E1: Section E.1. Although a stakeholder meeting is held, kindly provide the following for further assessment. - Minutes of stakeholder consultation submitted to local authority - Topics of discussion during the consultation Checklist: E.2, E.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Detailed information on stakeholder meeting has been added in section E.1 of the revised PDD. - Minutes of stakeholder consultation is submitted to the DOE as the document No.23. - Topics of discussion are specified in the invitation letter submitted as the document No.20.
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The respective stakeholders consultation documents have been submitted. - Minutes of meeting - Topics of discussion Stakeholders consultation was carried out accordingly. /SMIL/MCP/ CAR is closed
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Stakeholder Comment	Finding E2
Classification	☐ CAR ☒ CL ☐ FAR

Stakeholder Comment	Finding E2
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	CL.E2: Section E.2: The local people expect that the project activity will employ local people for construction as well as operation phases if suitable and will minimise negative impacts during the construction phase. What are the negative impacts and what is the mitigation plan to address the impacts? Checklist E.3
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The negative impacts and mitigation plan have been included in section D.1 of the PDD. The negative impacts and mitigation plan have been specified in EIA report and Minutes of meeting to consult public opinions. The EIA report is submitted to the DOE as the document No.7
DOE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Summary of the EIA report and approval by the local authority had been submitted as evidence on the mitigation plan and negative impacts that have been raised during the stakeholders consultation. During the on-site visit, the validation team had found local communes had been hired in operating the project. ^{/EIA/MCP/} CL is closed.
Conclusion <i>Tick the appropriate checkbox</i>	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

The Letter of Approval for project activity “Song Ong Hydropower Project” has been issued by the host country, Viet Nam DNA, Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment of Viet Nam (MONRE) dated 2008-06-30. ^{/HCA/}

The host country LoA confirms the following:

1. The Government of Viet Nam ratified the Kyoto Protocol on 2002-09-25.
2. Approval for voluntarily participation in the proposed project activity.
3. The project contributes sustainable development in host country.

According to the regulation as set out in the CDM VVM, EB 51, Annex 3 §45 the following has to be validated by a DOE:

The DOE shall determine whether each letter confirms that:

- (a) The Party is a Party to the Kyoto Protocol;
- (b) Participation is voluntary;
- (c) In the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country;
- (d) It refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

All the relevant aspects have been validated by TÜV NORD and no deviation was observed. Since the HCA confirms the participation of the entities of the host country, the validation team is convinced that the host country approval along with the confirmation letter is sufficient to confirm that the project complies with all relevant requirements applying to the validation of the requirements set out in CDM VVM, EB 51, Annex 3 §44.

The Annex I party Letter of Approval ^{/LoA/} issued by Danish Energy Agency, DNA for the Kingdom of Denmark dated 2010-06-04, noting that DONG Naturgas A/S has confirmed that they are a project participant to the proposed project activity “Song Ong Hydropower Project”.

The approval declares as follows:

1. Denmark ratified the Kyoto Protocol to UNFCCC on 2002-05-31 and participates voluntarily in Clean Development Mechanism;

2. Denmark approves "Song Ong Hydropower Project to be a CDM project under Article 12 of Kyoto Protocol and its underlying decision;
3. Denmark approves and authorises voluntary participation of the DONG Naturgas A/S in the project.

There is 1 CAR raised and closed successfully.

Project Participants

The project participants from the host country are Song Ong Hydropower Joint Stock Company and Energy and Environment Consultancy Joint Stock Company who have been approved by Viet Nam National Steering Committee for UNFCCC and Kyoto Protocol, Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment of Viet Nam.

The project participant from the Annex I country is DONG Naturgas A/S, who has been authorised by the Danish Energy Agency, DNA for the Kingdom of Denmark, in accordance with the Articles 12.5(a) and 9 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

The project participants listed in table of section A.3 of the PDD and this information is consistent with the contact details provided in annex 1 of the PDD^{/PDD/} and Modalities of Communication. ^{/MoC/}. No entities other than those approved as project participants are included in these sections of the PDD. All above information have been checked against the host country approval^{/HCA/} and Denmark LoA^{/LOA/}.

5.1.2 Contribution to Sustainable Development

In the letter of approval of the host Party^{/HCA/}, it is confirmed that the proposed CDM project activity complies with the national criteria and assists Viet Nam in achieving sustainable development

5.1.3 PDD editorial Aspects

The PDD of the project is based on the latest PDD Template (Version 03) dated 2006-12-22 approved at EB 28 meeting on 2006-12-12 to 2006-12-15 and complies with the Guidelines for Completing the PDD (Version 05) dated 2007-09-14. ^{/PPDG/}

There were 2 CARs raised and closed successfully.

5.1.4 Technology to be employed

A physical site visit was conducted on 2009-11-16 to 2009-11-18 to confirm that the description in the PDD will reflect the real situation of the proposed CDM project activity, and the technological parameters of the hydro power plant indicated in A.4.3 of the PDD are consistent with the equipment agreement. The project does not involve alteration of the existing installation or process. ^{/IM/PIS/ECD/PCD/ETS/CA/TD/}

A clear description of the project scenario and the scenario existing prior to the start of the implementation of the project which is also the baseline scenario is provided in

A.2, A.4.2 and A.4.3 of the PDD. The project supply renewable energy using hydropower to generate electricity and supply to the Viet Nam national grid. The technology employed is environmentally safe and sound.

5.1.5 Small Scale Projects

The project is a small scale CDM project activity as defined in decision 4 / CMP.1 annex II.

1. The project activity is Type I renewable energy project activity.
2. The maximum electricity energy output capacity 8.1MW which is below the threshold of the maximum output capacity of 15 MW in accordance with Annex 2 Recommendations for revision of definition of small scale project activities of SSC WG 07 on 2006-08-31.^{/ETS/}

The project activity is not a debundled from any large scale project.

1. The host country project participant had not registered any projects within the previous 2 years.^{/cd4cdm/unfccc/vdna/}
2. There are no projects implemented within 1km of the project activity by the same project participants.
3. There are no projects in the same project category and technology/measure registered by the same host country project participants.

Further checking the CD4CDM CDM pipeline and UNFCCC websites, there are no projects registered and/or to be registered by the host country project participants.

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The project applied the approved methodology AMS-I.D “**Grid connected renewable electricity generation**” version 16, Scope 1 approved at EB 54 meeting.

The applied methodology version is available at UNFCCC website and valid from 2010-06-11 onwards and registration can be submitted anytime.

The latest version of methodological tools, “Tool to calculate the emission factor of electrical system” is applied.

The applied methodology and methodological tools are available at UNFCCC website of <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html> and <http://cdm.unfccc.int/Reference/tools/index.html> respectively.

All the applicability conditions of the methodology AMS-I.D are met, and the project activity is not expected to result in emissions including project emissions, leakage, and any other significant emissions not addressed by the applied methodology.

5.2.2 Project Boundary

The project spatial boundary as stated in section A.4.1.4 of PDD is in accordance with feasibility studies. At the time of the on-site assessment, the validation team visited the project site to confirm the actual location with a handheld GPS unit. This was further check with google earth on the coordinates at the project location.

According to the applied methodology AMS-I.D, the spatial extent of the project boundary covers the hydropower plant and the Viet Nam national grid. ^{/PDD/}

The justification of the sources and sinks of greenhouse gases of the baseline and project boundary are identified in section B.3 of the PDD.

Through observations of the physical site of the project, the validation team confirms that the project boundary of the project includes the hydropower plant and the Viet Nam national grid. The baseline emission source is CO₂ emissions from the Viet Nam national grid electricity. There are no other emission sources which are impacted by the project and not addressed by the applied methodology.

The project emissions source is CO₂ emissions that will be from the diesel backup generator, electricity from the grid and emissions from the reservoir.

2 CARs were raised and closed successfully.

5.2.3 Baseline Identification

The validation team confirms that the procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied, and the description of baseline identification in the PDD is transparent and verifiable.

According to applied methodology AMS-I.D, the project activity is the installation of a new renewable energy power plant using hydropower that supplies electricity to and/or displaces electricity from an electricity distribution system. The baseline is the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in kg CO₂e/kWh) calculated in a transparent and conservative manner 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”. At the time of the project validation, version 1.1 of the tool is valid.

No alternative scenarios are to be considered in the identification of the most reasonable baseline scenario according to the approved methodology AMS-I.D.

1 CAR is raised and closed successfully.

5.2.4 Calculation of GHG Emission Reductions

The emission reduction calculation is conducted as per applied methodology AMS-I.D and the methodological tool “Tool to calculate the emission factor for an electricity system”. At the time of the validation, version 1.1 is valid.

The emission reductions (ER_y) of the project activity are the difference between the baseline emissions (BE_y), project emissions (PE_y) and the leakage emissions (L_y) as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Baseline emission:

BE_y is calculated by multiplying the net electricity generated (EG_y) with the combined margin emission factor ($EF_{grid,CM,y}$) as follows:

$$BE_y = EG_y \times EF_{grid,CM,y}$$

The emission factor ($EF_{grid,CM,y}$) is calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” in a conservative manner.^{/TCEF/} It is determined as ex-ante and calculated as a combined margin (CM), consisting of the weighted average factors of operating margin (EF_{OM}) and build margin (EF_{BM}). Default data from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, were applied where publicly data are not available.^{/IPCC/}

Since there are no publicly available data for the OM, BM and CM, the project participant had calculated the *Baseline Emission Factor of Vietnam national grid* with data provided by the Department of Meteorology, Hydrology and Climate Change Viet Nam. The emission coefficient was determined using the data for vintage year 2005 to 2007 available at the time of the publication.

The data issued by DNA Vietnam had been reviewed to confirm the source of the information is from Electricity Vietnam (EVN).

The following steps are applied to determine the emission factors.

Step 1: Identify the relevant electricity systems.

The electricity system identified to which this project activity will be connected is the Vietnam national grid system where all power plants are physically connected. The grid system is operated and managed by Electricity Vietnam (EVN)

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)

There are 2 options in the tool and the option selected by the project participants is option 1 where only grid connected power plants are included in the calculation.

Step 3: Select a method to determine the operating margin (OM)

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods:

- a) Simple OM;
- b) Simple adjusted OM;
- c) Dispatch data analysis OM;
- d) Average OM.

Due to the low-cost/must-run resources in Vietnam is 36.08% and constitute less than 50% of total grid generation as indicated in table below, method (a) simple OM is selected.

Year	2003	2004	2005	2006	2007	Average
Rate of low cost/must-run sources generation (%)	46.04	38.40	30.90	32.41	32.66	36.08

The Operating Margin (OM) is calculated ex-ante using the most recent 3 years, available vintage data for 2005 – 2007 at the time of this validation stage. ^{/DEF/COE/A7/FI/}

Step 4: Calculate the operating margin emission factor according to the selected method

The simple OM emission factor is calculated as the generation-weighted average CO₂ emissions per unit net electricity generation (tCO₂/MWh) of all generating power plants serving the system, not including low-cost/must-run power plant units.

There are 2 options stated in the tool and Option A is selected, based on data on the net electricity generation and a CO₂ emission factor of each power unit. As such, “*Calculation based on average efficiency and electricity generation of each plant*” is applied.

To determine the CO₂ emission factor of each power unit, Option A2 is selected.

Option A2. If for a power unit m only data on electricity generation and the fuel types used is available, the emission factor should be determined based on the CO₂ emission factor of the fuel type used and the efficiency of the power unit.

According to the tool where several fuel types are used in the power unit, the fuel type with the lowest CO₂ emission factor for $EF_{CO_2,m,i,y}$ are used. This is stated in the PDD.

For the plant efficiency, $\eta_{m,y}$, the project participant applies the actual data of the plants issued by the Viet Nam DNA instead of the default values in Annex I of the tool.

All equations applied for the calculation of OM are according to the tool.

For details of the calculation, refer to Annex 3 of PDD ^{/PDD/} and spreadsheet.

Thus, $EF_{OM, grid}$ calculated is 0.6202 tCO_{2e}/MWh.

Step 5: Identify the group of power units to be included in the build margin

The tool states 2 sample groups of power units m used to calculate the build margin.

The project participant has made a comparison of the 2 groups of power units and found the set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) that have been built most recently has higher annual generation of 13,960,040MWh as compared to the set of five power units that have been built most recently in 2007 is 1,181,040MWh.

For the total electricity generated, the data provided by DNA Vietnam did not indicate the total electricity generation. It does not include all plants especially those which were built more than 10 years. To determine the total electricity generated, the project participant obtained the data from another source that states the total electricity generation from the system which is 68,699GWh as compared to the data provided by DNA is 25,969 GWh.

The project participant has further demonstrated in the PDD that Option 1 is selected for the vintage data to calculate the build margin emission factor.

Step 6: Calculate the build margin emission factor

The calculation of the build margin emission factor is the generation-weighted average emission factor (tCO_2/MWh) of all power units during the most recent year for which power generation data is available ^{/DEF/LCMR/}. For details of the calculation, refer to Annex 3 of PDD ^{/PDD/} and spreadsheet ^{/DEF/}

Thus, $\text{EF}_{\text{BM, grid}}$ calculated is $0.4508 \text{ tCO}_{2\text{e}}/\text{MWh}$.

Step 7: Calculate the combine margin emissions factor

The combine margin emission factor is the weighted average of the Operating Margin emission factor ($\text{EF}_{\text{OM, grid}}$) and the Build Margin emission factor ($\text{EF}_{\text{BM, grid}}$) is **0.5355 $\text{tCO}_{2\text{e}}/\text{MWh}$** for the 1st crediting period and fixed throughout the crediting period.

Hence, the emission factors are calculated in a conservative approach.

Project emissions:

Project emissions are from diesel backup generator, electricity supply from the grid during blackout or maintenance and reservoir. The electricity generated by the diesel backup generator and from the grid will be monitored ex-post and will be accounted for as project emissions.

Since a new reservoir is constructed, the surface area needs to be monitored to determine the power density is greater than $10\text{W}/\text{m}^2$.

.Leakage:

According to the methodology AMS-I.D, leakage need not be considered unless the used technology equipment is transferred from another project activity.

Emission reductions:

The annual net generated electricity of the project is estimated to be 39,994MWh based on the FSR. According to above information, the emission reductions of the project is calculated as following:

$$\text{ER}_y = \text{BE}_y - \text{PE}_y - \text{LE}_y$$

PE_y is the amount electricity generated by the diesel backup generator and surface area of the reservoir for the determination of power density if less than $10\text{W}/\text{m}^2$. These two parameters will be monitored ex-post. Since the project is newly installed, for the purpose of validation will be considered as zero.

LE_y is considered to be zero since the project is new as according to methodology AMS-I.D version 16 paragraph 20.

The emission reductions as follows:

$$ER_y = BE_y - PE_y$$

$$BE_y = EG_y \times EF_{grid}$$

For the purpose to determine electricity generated at the validation stage, EG_y is represented as below:

$$EG_y = 39,994 \text{ MWh}$$

The total ex-ante electricity generated that will be fed to the grid is 39,994MWh/year is based on the confirmation as stated in the feasibility study report.

The average plant load factor is approx 57.1% with the operating hours 5,000hours per annum based on the feasibility study report.

The 1.25% internal consumption and parasitic loss is established based on feasibility study report, general explanation and according to industry standard which is considered conservative. ^{/GEFS/LLIU/}

$$\text{Therefore, } BE_y = 39,994 \text{ MWh} \times 0.5355 \text{ tCO}_{2e} / \text{MWh} = 21,416 \text{ tCO}_{2e} / \text{year}$$

$$ER_y = 21,416 \text{ tCO}_{2e} - 0 \text{ tCO}_{2e} = 21,416 \text{ tCO}_{2e} / \text{year}$$

Hence, the annual GHG emission reductions over the first crediting period are estimated ex-ante as **21,416tCO_{2e}**.

It is confirmed by the validation team by cross-checking the emission reduction calculation process against all referenced data sources and the requirements of applied methodology and methodological tools that:

- a) All data sources and assumptions used by the project are listed and referenced in the PDD, appropriate and calculations are correct, applicable to the proposed CDM project activity and will result in a conservative estimate of the emission reductions;
- b) All documentation used by project participants as the basis for assumptions and source of data such as:
 - i) 2006 IPCC default values; ^{/IPCC/}
 - ii) Type of fuel used by plant, fuel heat rate and power generated for vintage year 2005 to 2007;
 - iii) Viet Nam National Grid Emission Factor; (calculated) ^{/D427/EFDNA/}
 - iv) Other available data
- c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

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

2 CARs and 1 CL were raised and closed successfully.

5.2.5 Additionality Determination

Consideration of CDM in decision making (if project start before validation)

The project start date is defined as 2005-12-22 which is the date of signing the construction contract for dam, water intake and water diversion channel with Cosevco Aluminium Production and Construction Company, is taken as the earliest starting date according to the PDD. This date is considered as the earliest date for implementation or real action that is in line with the "Glossary of CDM Terms". ^{/DWCC/}

According to VVM Version 1.1 §99 and EB 49 Annex 22, the DOE has to determine whether the project start date is on or after 2008-08-02 or an existing project with a start date before 2008-08-02. The project start date as describe above is on 2005-12-22 which is before 2008-08-02. At the time of project activity start, version 1 of the guidelines was not available (EB 41, Annex 46). Therefore, no notification to the Host country DNA and UNFCCC was required to be submitted. However, the project participant has submitted application to host country DNA for approval of the project on 2007-01-05. The LoA was issued on 2008-06-30. ^{/LDNA/HCA/}

Based on EB49 Annex 22, paragraph 6, the project participant must indicate, by means of reliable evidence, that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation.

Therefore,, the chronicle events for CDM consideration is listed in table 5, Section B.5 of PDD and a summary as below:

- MoU between CDM Consultant and project owner Song Ong Hydropower Joint Stock Company dated 2005-07-15; ^{/MoU/}
- Proposal from CDM consultant to project owner dated 2005-07-25 to develop the project as a CDM status; ^{/PCDM/}
- Presentation of the financial analysis with CDM consideration to the BOD on 2005-08-01; ^{/FDBOD/}
- The project owner responded to the CDM consultant on 2005-08-08 to develop the project with CDM benefits; ^{/RPO/}
- Decision by the Board of Directors dated 2005-08-15 to develop the project activity with the benefits of the CDM in order for the project to be financial attractive. The decision of the Board was the decisive factor to proceed with the project. ^{/DBOD/}
- The project owner submitted application to DNA on 2007-01-05 to obtain approval as CDM project; ^{/LDNA/}

- The project start date is 2005-12-22 and before the date of publication of the PDD for global stakeholder consultation at UNFCCC website on 2009-09-11 to 2009-10-10.
- Other evidences indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation as follows:
 - Letter from project owner to Ninh Thuan People's Provincial Committee, Department of Natural Resources and Environment and Department of Industry dated 2007-01-08 ^{/LNT/}
 - Letter from Ninh Thuan People's Provincial Committee to DNA dated 2007-04-23 ^{/PPCS/}

The validation team had reviewed documents provided and confirms that project participant's prior consideration of the CDM and satisfy the requirements of Guidance on the Demonstration and Assessment of Prior Consideration of the CDM (EB49, Annex 22). ^{/MoU/PCDM/FDBOD/RPO/DBOD/NMCDM/LDNA/LNT/{{CS/CDMC/DBODCDM/CDMCC/}

There was no CAR or CL raised.

Application of methodology / methodological tools

The additionality of the project activity was demonstrated and assessed using the latest version of the "Attachment A to Appendix B" for the demonstration and assessment of additionality.

Alternatives

According to paragraph 103 of the VVM^{VVM/}, the applied methodology AMS-I.D prescribes the baseline scenario and no further analysis is required in identification of alternatives.

Additionality

According to Attachment A of Appendix B, to demonstrate the project activities additionality, the project participants can select any one of the four barriers – investment, technological, prevailing practice and other.

Investment analysis

The latest version of the Guidance on the Assessment of Investment Analysis^{/GAIA/} was applied in the assessment.

The proposed project generates economic benefits from sales of electricity to Vietnam national grid other than CDM related income and therefore, simple cost analysis (Option I) is not applicable, benchmark analysis (Option III) is chosen to conduct the investment analysis.

The submitted spreadsheets for investment calculations correspond to the feasibility study for the required investments, operating and maintenance costs. ^{/FAS/FSR/}

The validation team has reviewed the documents during on-site assessment and compared the total investment cost of the project with studies done by the US Energy

International Agency ^{/ECCPG/} where it is indicated that the unit cost of electricity generation is USD1,500/kW whilst the project is USD1,214/kW. In another report ^{/PFSR/} the investment cost for a 3MW small hydro power is approx: USD1,263/kW. Thus, the investment cost of the project activity is lower than the studies reports.

The investment cost is in accordance with the feasibility study and is considered to be conservative. ^{/FSR/}. Although the project owner (Board of Directors) had approved to adjust the investment cost in 2007-12-25, this cost was not applied in the financial analysis. The cost from the approved FSR was maintained for conservativeness. ^{/AMB/FSR/TIC/}

The operational and maintenance cost was derived using the government circular Decision 709/QD-NLDK, Decision of the Ministry of Industry, Temporary Instruction on contents of investment financial-economic analyses and price frame for electricity sale and purchase from power generation projects dated 2004-04-13 by Ministry of Industry that states hydropower projects with capacity from 3 to 30MW will be 1 to 1.5% of the total investment costs. The project owner applies 1.41% on the total investment calculated in a pro-rated basis as compared to FSR, General Explanation states 1.57%. The rate applied is thus considered conservative. ^{/FAS/D709/GEFS/}. Refer to CL.B13.

The electricity feed-in tariff of 573.5VND/kWh is based on the negotiation report on the power purchase agreement with EVN. The recommended feed-in tariff stated in Decision 709/QD-NLDK, issued by Ministry of Industry, have 2 level prices for the dry and wet seasons. The average price for the wet and dry season is 571.4VND/kWh which is lower than the negotiated price as indicated in the report. The project activity is classified as a medium hydropower plant in accordance to Decision 709 QD/NLDK. Therefore, the average tariff rate during the dry season is VND587.3/kWh (USD0.037/kWh x 15,873VND at the time of decision made) and wet season average is VND555.6/kWh (USD0.035 x 15,873VND). ^{/PPA/D709/NR/}

To demonstrate the additionality of the project, a project IRR was applied to compare with a benchmark financial indicator that the project is not financially attractive without CERs.

In the webhosted PDD, the benchmark applied was a WACC project IRR. However, due the fact that the local data was not available to support the calculation of the WACC at the time of decision made by the project owner Board of Directors, the benchmark was changed to local commercial bank rate issued by the State Bank of Viet Nam. Refer CAR.B6.

Thus, the benchmark applied for the project activity is 12.60% which has been issued by the State Bank of Viet Nam at the time of investment decision of the Board of Directors. The rate is lower than the interest rate of the host country stated in the IMF report for the same period when the decision has been made for the investment. ^{/ARSBV/IMF/}

From the calculations of the financial analysis, the project IRR was 10.15% without CERs. For the project to be financial attractive, the project IRR has to be above the rate in order for the project owner to consider to invest in the project.

Therefore,, the CDM project activity cannot be considered as financially attractive without the income of the CERs.

A sensitivity analysis was performed to determine if with the changes in investment cost, O&M cost, annual export of electricity and tariff rates the proposed project would be financially attractive when undertaken without CDM consideration. According to EB guidance document ^{/GAIA/} a $\pm 10\%$ variation is applied in the sensitivity analysis.

The parameters selected for sensitivity analysis are as below:

1. Investment Cost: This is based on the feasibility study report and approval issued by the Ministry of Industry ^{/FSR/RFSA/}. The project owner applies +/- 10% to demonstrate whether the project is financial attractive without CDM. Reducing the investment costs by -10%, the project IRR is not able to meet the benchmark.

The validation team has replicated by lowering the investment cost by 20%, the project is just above the benchmark selected. This test conducted indicates that it is not possible to lower the project cost.

2. O&M cost has relatively low influence on the IRR and even there are no costs incurred to operate and maintain the project, is not able to meet the benchmark.
3. Annual Export to National Grid. Due to the hydrological conditions of the river, it is not possible to increase electricity generation to export to the grid since the river power generation potential is limited.
4. Exported Electricity Tariff. The tariff is replicated by increase to the average of kWh recommended price of 573.5VND ^{/FSR//PPA/}, the project IRR is not able to meet the benchmark. Even if the tariff rate increases by 20%, the project IRR is still below the benchmark.

As to the accuracy of financial calculations carried out for any investment analysis, the validation team has:

- a) Conducted a thorough assessment of all parameters and assumptions used in calculating the project IRR, bank rate and the accuracy and suitability of these parameters. This is summarized in Annex A.3 using the available evidence and expertise in relevant accounting practices;
- b) Cross-checked the parameters against third-party or publicly available sources, such as governmental statistics and industry yearbook;
- c) Reviewed the necessary reports and documents related to the proposed CDM project activity and the project participants;
- d) Assessed the correctness of computations carried out and documented by the project participants by reproducing the calculations in accordance with industry / local regulations;
- e) Assessed the sensitivity analysis by the project participants and summarized in Annex A3 to determine under what conditions variations in the result would occur, and the likelihood of these conditions.

The validation team confirms the suitability of the benchmark applied in the investment analysis in that:

- a) IRR was identified as the financial/economic indicator which is suitable for the project development and decision context;
- b) It is reasonable to assume that no investment would be made at a rate of return lower than the benchmark, and the same benchmark is applied by any similar projects for new development.

Since the project participant rely on values from previous projects undertaken and market analysis, the values used were conservative and appropriate. The validation team ensures that:

- a) The technical and investment summary has been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the feasibility study report and the investment decision is within a year, that it is unlikely in the context of the underlying project activity that the input values would have materially changed; ^{/FSR/FAS/TIC/}
- b) The values used in the PDD and IRR calculation spreadsheet are fully consistent with the FSR and minor inconsistencies occur only due to numerical calculation, e.g. decimal digits reservation and references;
- c) The input values from the FSR and total investment cost can be confirmed as valid and applicable at the time of the investment decision by cross-checking on the basis of specific local and sectoral expertise, all relevant information are summarized in Annex A3.

For details of the assessment of financial parameters used in investment analysis, please refer to Annex A3 and financial spreadsheet. ^{/FAS/}

The project activity did not apply the following to further demonstrate additionality:

- 1. Technological Barriers
- 2. Barrier due to prevailing practices
- 3. Other barriers

Summary

There are 4 CARs and 8 CLs have been raised for this section and have been successfully closed.

The validation team was able to verify that CDM has been introduced and considered prior to the project starts.

From the analysis of investment using the local bank rate and sensitivity analysis, the proposed CDM project activities are assessed as additional. Without the support of the CERs, the implementation of the project activities as CDM projects greatly increases the confidence of the project developers to take first steps to implement the project. ^{/IM01/IM02/} CDM was considered early during planning stage of the project.

Finally, the assessment of the arguments presented above is deemed sufficient to demonstrate that the project is not likely the baseline scenario and the emission reductions resulting from the project are additional.

In conclusion, from the investment analysis, the proposed CDM project activity is assessed as additional. Without the CERs, the project is not financial attractive for implementing.

5.2.6 Monitoring Methodology

The monitoring plan of the proposed CDM project activity is based on and is in compliance with the applied monitoring methodology AMS-I.D “Grid connected renewable electricity generation” Version 16.

It has been assessed that the project correctly addresses all factors required by the methodology as provided in the most recent PDD guidelines. Section B.7.1 contains further information of the monitoring plan (e.g. tables measurement equipment, procedures, etc.).

The following data are determined ex-ante:

The following data and parameters were available during the validation and will remain fixed ex-ante throughout the crediting period:

1. Viet Nam Grid Emission Factor (tCO₂/MWh)

It was calculated using the approved UNFCCC tool, with data presented in Annex 3-of PDD.

2. Net calorific value (energy content) of diesel.
3. CO₂ emission factor of diesel.

The validation has reviewed the documents provided and the calculations of the grid emission factor is deemed appropriate and considered conservative.

Parameters monitored ex-post

The baseline and project emission parameters that are monitored ex-post are indicated in Section B.7.1 of the PDD and as follows:

1. Electricity supplied by the proposed hydropower plant to the national grid;
2. Electricity supplied by the national grid to the proposed hydropower plant;
3. Net electricity supplied to the national grid by the proposed hydropower plant;
4. Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full;
5. Installed capacity of the hydro power plant after the implementation of the project activity;

6. The quantity of fuel type I combusted during the year in the event of black out of the plant.

The GHG indicators, parameters, monitoring methods, frequency of measurement, measuring instrument & equipments and calibration are acceptable. ^{/D65/}

Where applicable, the parameters and assumptions are according to the respective default and available values of IPCC 2006. ^{/IPCC2006/}

The monitoring of emission reductions generated by the project activity will be carried out systematically according to the monitoring plan. All relevant parameters are monitored as required by methodology and throughout the project activity implementation.

It has been assessed that all parameters required by the methodology have been included in the PDD Section B.7.1.

All monitoring data will be electronically archived for a period of 2 years after the crediting period.

5.2.7 Monitoring Plan

The validation team applied a two-step process to assess compliance with the requirements of monitoring plan, as follows:

- a) Compliance of the monitoring plan with the approved methodology:
 - (i) Identified the list of parameters required by the selected approved methodology by means of document review;
 - (ii) Confirm that the monitoring plan contains all necessary parameters, that they are clearly described and that the means of monitoring described in the plan complies with the requirements of the applied methodology AMS-I.D and relevant tools.
- b) Implementation of the plan:
 - (i) The monitoring arrangements described in the monitoring plan are feasible within the project design;
 - (ii) The means of implementation of the monitoring plan, including the data management, quality assurance and quality control procedures will be developed when project is in operation to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified.

The assessment conducted by the validation team is by means of review of the PDD annex 4, interviews with relevant personnel, project plan and inspections of the proposed CDM project activity program and schedule. ^{/PIC/IM02/}

1 CAR was raised and closed successfully.

5.2.8 Project Management Planning

The validation team assessed the proposed management system and how quality will be assured by the proposed project activity.

The operational and management structure will be implemented when the project begins operation to monitor emission reductions as described in the monitoring plan of section B.7.2 and Annex 4 of the PDD. It also indicates the responsibilities of personnel in managing the project activity.

A formal set of monitoring procedures will be established including control and steps required for the monitoring and records keeping such as:

- a) Data recording and archiving
- b) Training
- c) Monitoring
- d) Calibration
- e) Emergency

All measurements will use calibrated measurement equipment that will be maintained regularly and checked for its functioning.

Hence, all indicators of importance for controlling and reporting of projects performance have been incorporated in the monitoring plan.

A CAR was raised and closed successfully.

A FAR regarding QA/QC procedures was raised and this will be check during the 1st verification.

5.2.9 Crediting Period

The project activity will use a renewable crediting period and the length of the first crediting period is 7 years according to the PDD.

The starting date of the 1st renewable crediting period of the proposed CDM project is 2011-03-01 or the date of registration, whichever is later. This is assessed as appropriate.

A CAR was raised on the start date of the crediting period and was successfully closed

5.2.10 Environmental Impacts

According to the host country Circular No.490/1998/TT-BKHCNMT of April 29, 1998 guiding the making and evaluation of Reports on the assessment of environmental impacts of investment projects, an EIA is required to be conducted for hydropower projects. ^{/C490/}

An EIA was conducted by Hydropower Center, Institute of Water Resources, an independent organisation and the report dated July 2003 was submitted to the local authority for approval.^{/EIA/}

The approval was issued by the Ninh Thuan People's Committee dated 2003-11-04.^{/EIAA/}

There are no major environmental impacts caused by the project. The project owner has to submit an annual report on the monitoring of air, water and pollution during the project operations.^{/D175/LEP/}

There are no transboundary issues for this project.

5.2.11 Comments by Local Stakeholders

A local stakeholders' consultation was conducted on 2005-08-15 to invite comment on the proposed CDM project activity by invitation letter and public announcement prior to the publication of the PDD on the UNFCCC website.^{/SMIL/}

The stakeholder consultation is held at the Quang Son commune, Ninh Son District, Ninh Thuan Province conducted by the representatives of the owner of Song Ong Hydropower JSC. The meeting was held to consult the commune and district people's representatives about the socio-economic and environmental impacts of Song Ong hydropower project to implement the CDM project corresponding to Kyoto Protocol.^{/SMIL/MCP/}

Brief description of how comments by local stakeholders have been invited and compiled was presented in the section E.2 of PDD.

The validation team confirmed by means of document review and interviews with local stakeholders that:

- a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity have been raised. There are no residents directly influenced by the proposed project;^{/MCP/IM11/IM12/}
- b) The summary of the comments received as provided in section E.2 of the PDD is complete;
- c) There are no major negative comments or opinions received during the stakeholders' consultation.

2 CLs were raised and closed successfully after the supporting documentation of the stakeholder consultation was submitted to confirm the stakeholder consultation was conducted.

6 VALIDATION OPINION

DONG Naturgas A/S has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: "Song Ong Hydropower Project" with regards to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

A risk based approach has been followed to perform this validation. In the course of the initial validation, 14 Corrective Action Requests (CARs), 11 Clarification Requests (CLs) were raised and closed successfully. 2 Forward Action Requests (FARs) were raised that will be checked during the 1st verification.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Vietnam) and all relevant UNFCCC requirements for CDM. Project activity host country approval has been issued by the Department of Meteorology, Hydrology and Climate Change, Ministry of Natural Resources and Environment of Vietnam (MONRE), as the DNA of Viet Nam vide Letter of Approval (HCA) dated 2008-06-30. Annex 1 party letter of approval was issued by Danish Energy Agency, DNA of the Kingdom of Denmark dated 2010-06-04.
- The project additionality is sufficiently justified in the PDD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 149,912tCO₂e are most likely to be achieved within the 1st renewable crediting period of 7 years.

Malaysia, 2010-11-10



Cheong, Chun Yuen (Robert)
TÜV NORD JI/CDM CP
Validation Team Leader

Germany 2010-11-10



Martin Saalman
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
CDM Consideration	
/MoU/	17. Memorandum of Understanding (MOU) between Consultant and Project Owner dated 2005-07-15
/PCDM/	18. Proposal from CDM consultant to project owner dated 2005-07-25
/FDBOD/	19. Financial Analysis of Song Ong presented to BOD with CDM benefits for Song Ong HPP dated 2005-08-01
/RPO/	21. Response from PO on the proposal for developing as CDM project by the independent consultant dated 2005-08-08
/DBODI/	22. Decision of BOD on the implementation of Song Ong hydropower project under CDM dated 2005-08-15
/NMCDM/	36. Negotiation minutes with CDM consultant dated 2006-10-28
/LDNA/	39. Official letter from PO to DNA dated 2007-01-05
/LNT/	40. Official letter from PO to Ninh Thuan PPC dated 2007-01-08
/PPCS/	45. Official letter from PPC support to CDM development to Ministry of Natural Resources and Environment dated 2007-04-23
/CDMC/	44. Negotiating on a CDM contract dated 2007-03-05
/DBODCDM/	48. Decision of BOD to appoint CDM consultant dated 2007-12-24
/CDMCC/	49. CDM consultancy contract dated 2007-12-28
/PIS/	80. Project Implementation Schedule excel undated
Company	

/BL/	27. Business Certificate (Change of Name) dated 2005-12-08
/ODA/	64. Declaration of ODA undated
/COAMol/	34. Change of ownership approval from Ministry of Industry dated 2006-09-26
/COAPPC/	38. Change ownership approval from Ninh Thuan PPC dated 2006-12-18
/SWL/	58. Commitment to submit license for surface water use of Song Ong hydropower project dated 2008-01-09
/BDCC/	80. Board decision on increase of charter capital dated 2008-03-18
/DBODT/	16. Decision of BOD transferred the right to invest in the Song Ong HPP dated 2005-06-17
Compensation	
/ACPPC/	12. Approval of compensation by Ninh Thuan PPC dated 2004-05-07
/ACNCD/	13. Approval of compensation by Ninh Son District Committee dated 2004-05-14
/MCP/	94. Minutes on compensation program dated 2004-06-28
/MCT/	95. Minutes of compensation tariff for household dated 2004-05-06
/MIC/	96. Minutes of inventory to compensate for land clearance undated
/DDPC/	82. Decision of District PC on compensation and support for land, crop and buildings dated 2005-02-06
/DPPCS/	83. Decision of PPC on the settlement of claimant dated 2006-05-25
/NTPI/	84. Ninh Thuan Province Inspectorate awarded Decision of PPC to claimant dated 2005-05-30
/SA/	86. Settlement of claimant who prevented construction of project dated 2007-06-26
/FSCC/	87. Final settlement with claimant who prevented construction of project dated 2007-09-26

/FSC/	88. Final settlement with claimant dated 2008-04-23
Contracts	
/DWCC/	28. First Construction contract (Dam, Water Intake, Water Diversion channel dated 2005-12-22
/EPC/	29. Engineering, procurement and construction contract dated 2006-01-16
/PCC/	30. Penstock construction contract dated 2006-01-17
/PWCC/	31. Pressurised Well Construction Contract dated 2006-01-17
/SEC/	32. Second Equipment Contract dated 2006-03-27
/PPDC/	46. Power Plant and Discharge Channel contract undated
EIA	
/EIAR/	07. EIA Report dated 2003, July
/EIAA/	08. EIA Report Approval by Ninh Thuan DONRE dated 2003-11-04
Equipment	
/ETS/	54. Equipment Technical Specifications 2008, November
/CA/	35. Capacity Approval from Ministry of Industry dated 2006-06-27
/TLT/	71. Technical Lifetime of Transformer from EVN
/TD/	76. Tender document for supply of equipments dated 2004, November
/TLE/	104. Technical lifetime of equipment from Ministry of Construction dated 2010-05-25
/LLIU/	Load Loss and Internal Use
ERPA	
/EDE/	51. Email from Danish Embassy seeking for CERs buyer dated 2008-02-18

/ENB/	57 & 59. Email on negotiation with buyer dated 2009-01-07 and 2009-03-12
/EA/	61. Exclusivity Agreement dated 2009-03-15
Footnotes	
/D709/	11. Decision 709/QD-NLDK on Temporary Instruction on Contents of Investment Financial-Economic Analyses and Price Frame for Electricity Sale and Purchase from Power Generation Projects dated 2004-04-13
/D164/	09. Decree no. 164/2003/ND-CP of December 22, 2003 detailing the implementation of the law on enterprise income tax
/C153/	05. Circular No. 153/1998/TT-BTC dated November 26, 1998 Providing guidelines to the implementation of Governmental Decree 68/1998/ND-CP dated September 3, 1998
/D65/	06. Decision No. 65/2002/Qd-BKHCNMT of August 19, 2002 Promulgating the list of Measuring Devices subject to Expertise and Expertise Registration
/FSR/	14. Feasibility Study report dated 2004, July
/EIAR/	07. Environmental Impact Assessment Report dated 2003, June
/D347BOD/	15. Decision No.347 of BOD approved the design and total investment cost (the first stage) dated 2004-08-20
/DBOD/	22. Decision by BOD On the implementation of Song Ong hydropower project under Clean Development Mechanism (CDM) dated 2005-08-15
/A7/	50. Appendix 7 Summation of national grid operation year 2007
/TLT/	71. Technical Life time of Transformer from EVN
Feasibility Studies	
/CISI/	115. Certification of Irrigation Science Institute (for FS study) dated 2004-02-02
/FSR/	14. Finally Feasibility study report dated 2004, July
/RFSA/	35. Revised Approval of FS by Ministry of Industry to Song Ong JSC dated 2006-09-27
/FFSA/	75. First Approval of FS by Ministry of Industry to Mien Trung Corporation dated

	2003-12-30
/FSIR/	103. Feasibility Study Inspection Report dated July 2003
/GEFS/	101. General Explanation FS report dated 2003, July
DNA Documents	
/D427/	Document 427 KTTVBKDH 29.07.09 - Emission factor of Viet Nam National Grid dated 2009-07-29
/EFDNA/	Emission factor issued by DNA dated 2010-03-26
LoA/ MoC	
/HCA/	Host Country Approval issued by Department of Meteorology, Hydrology and Climate Change, DNA Vietnam dated 2008-06-30
/LoA/	Annex I country approval issued by Danish Energy Agency dated 2010-06-04
/MoC/	Modalities of Communication Form dated 2010-08-02
Project Operations	
/ECD/	56. Electricity connection diagram to ENV grid undated
/PCD/	62. Project commissioning dated 2009-08-03
/TC/	79. Training contract for operation worker by Thac Mo HPP JSC dated 2006-10-31
/PIS/	81. Project Implementation Schedule (Excel) undated
Regulations	
/ADOI/	41. Providing guidelines to develop, verifying and approving CDM project by Ninh Thuan Department of Industry dated 2007-01-11
/ADONRE/	42. Providing guidelines to develop, verifying and approving CDM project by Ninh Thuan Department of Natural Resources and Environment dated 2007-01-17
/D110/	100. Decision 110.2007.QD-TTg on approve the Master Plan of Electricity

	Expansion for period of 2006-2015 dated 2007-07-18
/D149/	Decision 149/2001/QD-BTC Minister of Ministry of Finance on issuing the Vietnamese accounting standard dated 2001-12-31
/D206/	37. Decision 206 by Ministry of Finance regulations in fixed assets utilization and depreciation dated 2003-12-12
/LEP/	26. Law of Environmental Protection no. 52.2005.QH11 dated 2005011-29
/D65/	06. Decision No. 65/2002/Qd-BKHCNMT of August 19, 2002 Promulgating the list of Measuring Devices subject to Expertise and Expertise Registration
/C490/	03. Circular No.490/1998/Tt-BKHCNMT of April 29, 1998 Guiding the Making and Evaluation of Reports on the Assessment of Environmental Impacts of Investment Projects
/D175/	02.Decree No.175-CP on the 18th of October 1994 of the Government guiding the implementation of the Law of Environmental Protection
Power Purchase Agreement	
/PPA/	103. Power Purchase Agreement on Song Ong HPP with EVN dated November 2008 10. Power Purchase Agreement Negotiation Report dated 2004-02-02
/NR/	10. Negotiation Report on the purchase of power generated by Song Ong HPP with EVN dated 2004-02-02
/AMEG/	108. Assumption of monthly electricity generation
Stakeholder Consultation	
/SMIL/	20. Stakeholder meeting invitation letter dated 2005-08-04
/MCP/	23. Minutes of the compensation program dated 2005-08-15
EF Calculation	
/DEF/	65. Data EF from EVN, Excel undated
/COE/	47, Contract to Outsource Experts for Scientific Consulting, Designing and

	Researching Services dated 2007-08-28
/A7/	50. Appendix 7 Summation of national grid operation year 2007
/FI/	68. Fuel Importation Chapter 6 page 67
Financial	
/FAS/	Financial Assessment Spreadsheet Version 2.6
/D709/	11. Decision 709/QD-NLDK on Temporary Instruction on Contents of Investment Financial-Economic Analyses and Price Frame for Electricity Sale and Purchase from Power Generation Projects dated 2004-04-13
D/347/	15. Decision No.347 of MB approved the total investment cost (the first stage) dated 2004-08-20
/D68/	04. Decree No.68/1998/ND-CP dated September 3, 1998 on Regulating in detail the implementation of the amended Ordinance on Resource Tax
/D164/	09. Decree no. 164/2003/ND-CP of December 22, 2003 detailing the implementation of the law on enterprise income tax
/FCC/	24. First Credit Contract with Agir Bank, Ninh Thuan Province Branch dated 2005-11-09
/SCC/	25. Second Credit Contract with Development Support Fund, Ninh Thuan Province Branch dated 2005-11-10
/PPA/	55. Power Purchase Agreement dated 2008-11-11
/ERSBV/	53. Exchange rate from State Bank of Vietnam
/DFV/	107. Depreciation Fair value
/ARSBV/	99. Annual report 2004, State Bank of Viet Nam
/AMB/	77. Approval by Management Board of Song Ong on adjusted total investment cost dated 2007-12-25
/IMF	98. IMF Country Report No. 07-386 dated 2007, December
/AMEG/	108. Assumption of monthly electricity generation (excel) undated

/TIC/	97. Total Investment Cost report dated 2004, July
/PHP/	109. Potential hydropower of Ong River received date 2004-07-16

Table 7-2: Background investigation and assessment documents

Reference	Document
/AAAB/	Attachment A of Appendix B
/AMSID/	Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities, Category I.D. (AMS-I.D) Version 16
/ALF/	Average Load factor
/AppC/	Appendix C of the simplified M & P for small scale CDM project activities.
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/D4/	Decision 4 / CMP.1 Annex II
/ECCPG/	Estimated Capital Cost of Power Generating Plant Technologies (USD per kW) Jcmiras_Net_02 dated 2008-06-28
/GAIA/	Guidance on the Assessment of Investment Analysis Version 03 EB 51 Annex 58
/GCP/	UNFCCC: Guidelines for completing CDM-PDD and CDM-NM
/GT/	Glossary of CDM Terms version 05 EB47
/IPCC/	2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/KPSR/	Kyoto Protocol Status of Ratification version dated 2008-10-16
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/NBBP/	Non-binding best practice examples to demonstrate additionality for SSC project activities EB35 Annex 34
/PLFRP/	PLF of Registered hydropower Projects in Vietnam

/PFSR/	Pre-Feasibility Study Report by PREGA National Technical Experts from Institute of Energy, Viet Nam dated 2006, March
/PDDG/	Guidelines for PDD
/PDD/	Project Design Document Version 1 (Webhosting) Project Design Document Version 2.5 dated 2010-11-02
/TCEF/	Tool to calculate emission factor for an electricity system Version 01.1
/TDAA/	Tool for demonstration assessment and of additionality Version 5.2
/VC/	Validation Contract between Annex I participant, DONG Natargas A/S and DOE dated 2009-09-21
/VVM/	Validation and Verification Manual (Version 1.1, Annex 3; EB 51)

Table 7-3: Websites used

Reference	Link	Organisation
/cd4cdm/	www.cd4cdm.org	UNEP Riso Centre
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/unfccc/	http://cdm.unfccc.int	UNFCCC
/vdna/	http://www.noccop.org.vn/	Viet Nam DNA

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Nguyen Hao Quynh	Song Ong Hydropower Joint Stock Company / General Director
/IM02/	V	☒ Mr. ☐ Ms	Nguyen Anh Tuan	Song Ong Hydropower Joint Stock Company / Vice Director General
/IM03/	V	☒ Mr. ☐ Ms	Hoang Van Nham	Song Ong Hydropower Joint Stock Company / Finance Manager
/IM04/	V	☒ Mr. ☐ Ms	Hoang Thanh Ha	Vietnam Energy and Environment Consultancy Joint Stock Company /

Reference	Mol ¹		Name	Organisation / Function
				Project Manager
/IM05/	V	☒ Mr. ☐ Ms	Nguyen Tan Hai	Vietnam Energy and Environment Consultancy Joint Stock Company / Project Manager
/IM06/	V	☐ Mr. ☒ Ms.	Dang Hong Hanh	Vietnam Energy and Environment Consultancy Joint Stock Company / Deputy Executive Director
/IM07/	V	☒ Mr. ☐ Ms.	Hoang Manh Hoa	Vietnam DNA

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Baseline Identification
- A3:** Assessment of Financial Parameters
- A4:** Assessment of Barrier analysis
- A5:** Outcome of the GSCP
- A6:** Appointment certificates of the team members

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A. General Description of Project Activity				
A.1. Approval <i>The written approval of the parties involved is a mandatory requirement</i>				
A.1.1. Has the project provided written approvals of all parties involved? (EB 51 Annex 3 §44) <i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.</i> <i>Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA</i>	<i>Description:</i> The host party is Vietnam ratified the Kyoto Protocol on 2002-09-25. The PP has submitted the approval dated 2008-06-30 The annex I party is Denmark ratified the Kyoto Protocol on 2002-05-31. Annex I party approval has not been obtained. <i>Justification of evidences:</i> The host country approval has been reviewed and deemed appropriate. <i>Conclusion: CAR.A1:</i> The Annex I approval will be further assessed when submitted.	/PDD/ /HCA/ /LoA/	CAR.A1	OK
A.1.2. Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website?	<i>Description:</i> The host country approval has been submitted and Annex I party approval has not been received. <i>Justification of evidences:</i> The host country DNA the is Department of Meteorology, Hydrology and Climate Change. The Ministry of	/PDD/ /HCA/	CAR.A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 3 §§ 44, 47, 48, 49 (b), 49 (c), 53) <i>Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.</i>	Environment and Natural Resources (MONRE) is the same organisation listed in UNFCCC CDM website. The Annex I party approval has not been submitted. <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.			
A.1.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? (EB 51 Annex 3 §45, (a))	<i>Description:</i> The host country approval confirms that Viet Nam is a party to Kyoto Protocol. Annex I party approval has not been received. <i>Justification of evidences:</i> The HCA has been reviewed that states Viet Nam is party to Kyoto Protocol. <i>Conclusion:</i> This will be further assessed when the approvals are submitted. Refer to CAR.A1 above.	/HCA/	CAR.A1	OK
A.1.4. Do the written approvals confirm that the participation is voluntary? (EB 51 Annex 3 §45, (b))	<i>Description:</i> The host country approval confirms participation is voluntary. <i>Justification of evidences:</i> HCA has been reviewed that states participation is voluntary. Annex I party approval has not been received. <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.	/HCA/	CAR.A1	OK
A.1.5. Does the written approval from the host	<i>Description:</i> The host country approval confirms the project will	/HCA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
country confirm that the project contributes to the sustainable development in the country? (EB 51 Annex 3 §45, (c))	contribute to sustainable development. <i>Justification of evidences:</i> The HCA has been reviewed. <i>Conclusion:</i> The HCA states that the project will contribute to sustainable development.			
A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration or an additional specification of the project activity, e.g. PDD version number? (EB 51 Annex 3 §§45 (d), 50)	<i>Description:</i> The host country approval states that the project title is the same as the project title stated in the PDD. <i>Justification of evidences:</i> Review of HCA. Annex I party approval has not been received <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.	/PDD/ /HCA/	CAR.A1	OK
A.1.7. Are the written approvals unconditional with regard to A.1.3 to A.1.6? (EB 51 Annex 3 §46)	<i>Description:</i> The host country approval is unconditional with regard to A.1.3 to A.1.6. <i>Justification of evidences:</i> Review of the HCA. Annex I party approval has not been received. <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.	/PDD/ /HCA/	CAR.A1	OK
A.1.8. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other? (EB 51 Annex 3, § 51)	<i>Description:</i> The project participant listed in section A.3 and Annex 1 of PDD is consistent to each other. <i>Justification of evidences:</i> The validation has reviewed the PDD respective sections and conduct interviewed of project participant during on-site visit on 2009-11-16 to 2009-11-18.	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<i>Conclusion:</i> The information of the project participants are consistent in section A.3 and Annex I.			
A.1.9. Are all project participants listed in the PDD approved at least by one Party involved? (EB 51 Annex 3, § 51) <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.</i> <i>Describe the means of validation employed to draw this conclusion.</i>	<i>Description:</i> The host country participants listed in PDD have been approved by host country DNA. <i>Justification of evidences:</i> Review of the HCA. The Annex I approval has not been received for review <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.	/PDD/ /HCA/	CAR.A1	OK
A.1.10. Are any other project participants approved but not listed in the PDD? (EB 51 Annex 3, § 52)	<i>Description:</i> The host country approval did not state any other project participants as listed in PDD section A.3 and Annex I. <i>Justification of evidences:</i> Review of HCA. Annex I party approval has not been received. <i>Conclusion:</i> This will be further assessed when the approvals are submitted Refer to CAR.A1 above.	/PDD/ /HCA/	CAR.A1	OK
A.1.11. Does the DoE have a direct contractual relationship with the PP? (EB 51 Annex 3, §51 and EB 50, Annex 48, §§ 7-9) <i>Check whether the PPs listed in the published PDD are still listed in the PDD going to be submitted to request for registration.</i>	<i>Description:</i> The DOE has a direct contractual relationship with the Annex I participant, DONG Natargas A/S. <i>Justification of evidences:</i> The service contract between the DOE and Annex I participant had been reviewed that confirms the contractual relationship with the PP listed in published PDD section A.3 and Annex I. <i>Conclusion:</i> The contractual relationship is in accordance with EB	/PDD/ /VC/ /VVM/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	51 Annex 3, §51 and EB 50, Annex 48, §§ 7.			
A.2. Contribution to Sustainable Development <i>The project's contribution to sustainable development is assessed.</i>				
A.2.1. Has the host country confirmed that the project assists it in achieving sustainable development? (EB 51 Annex 3, §§ 123 – 125) <i>Contain a statement confirming whether the letter of approval by the DNA of the host party confirmed the contribution of the project to the sustainable development of the Host Party.</i>	<i>Description:</i> The host country confirms the project will assist in achieving sustainable development. <i>Justification of evidences:</i> The HCA had been reviewed to confirm the project will contribute to sustainable development. <i>Conclusion:</i> Thus, the project is in compliance with EB 51 Annex 3, §§ 124 – 125	/HCA/ /VVM/	OK	OK
A.2.2. Will the project create other environmental or social benefits than GHG emission reductions? (EB 51 Annex 3, §§ 123 – 125) <i>Describe the other positive aspects not related to GHG emission reduction on the environment.</i>	<i>Description:</i> Besides the GHG emission reductions, the project will contribute to the followings: i) Provide employment during construction and operations ii) Reduce the dependency of fossil fuel in power generation iii) An opportunity to encourage other development around the project location during construction and operation. <i>Justification of evidences:</i> The PDD has been reviewed and an interview has been conducted during the on-site visit. <i>Conclusion:</i> By means of document review and on-site interview, the validation team concludes the project activity will bring social and economic benefits to the local community such as job	/PDD/ /IM/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	opportunities and road access.			
A.3. PDD editorial aspects <i>The PDD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.</i>				
A.3.1. Has the latest version of the PDD form been applied? (EB 51 Annex 3, § 55)	<i>Description:</i> The CDM-SSC- PDD applied is version 03 dated 2006-12-22 approved at EB 28 meeting (annex 34) on 2006-12-12 to 2006-12-15. It is the latest version of CDM-SSC-PDD published by UNFCCC on its official website. <i>Justification of evidences:</i> The following website has been checked: http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html <i>Conclusion:</i> The PDD template applied is consistent with the publish template on the UNFCCC website.	/PDDT/ /unfccc/	OK	OK
A.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)? (EB 51 Annex 3, §§ 56, 57)	<i>Description:</i> The PDD has in general been filled in accordance with the latest PDD guidelines applied version 05 with effective date 2007-09-14 on EB Meeting 34 (Annex 09) 2007-09-12 to 2007-09-14. <i>Justification of evidences:</i> The following website has been checked: http://cdm.unfccc.int/Reference/Guidclarif/pdd/PDD_guid02_v05.pdf	/PDDG/ /unfccc/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<i>Conclusion:</i> The PDD is duly filled in accordance with the latest guidance and is therefore, in compliance with EB 51 Annex 3, §§ 56, 57.			
A.4. Technology to be employed <i>Validation of project technology focuses on the project engineering, choice of technology and competence/maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.</i>				
A.4.1. Does the PDD contain a clear, accurate and complete project description? (EB 51 Annex 3, §§ 58, 59) <i>The PDD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.</i> <i>Pl. consider esp. chapters A.2, A.4.2 and A.4.3 (in case of LSC PDD) for assessment.</i> <i>Describe the process undertaken to validate the accuracy and completeness of the project description.</i> <i>Contain the DOE's opinion on the accuracy and completeness of the project description.</i>	<i>Description:</i> Section A.2 and A.4.2 of the PDD describe the project activity, technology and proposed technical data. This project activity is a hydropower project which use run-of-river technology to generate electricity for connection to the Vietnam national grid – Electricity Vietnam (EVN). <i>Justification of evidences:</i> During the on-site assessment, the project has been in operation. The following documents were reviewed and the project entities were interviewed. • Detail review of information in PDD • Review of the technical specifications • Location of the project activity and the coordinates. • Technology employed <i>Conclusion:</i> The following findings were found:	/PDD/ /IM/	CAR.A2 CAR.A3	OK OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	CAR.A2: Information in Table 1 of section A.4.2.2 is not in accordance with the project implemented. CAR.A3: There are several typing and spelling errors in the PDD.			
A.4.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc to the project description	<i>Description:</i> Section A.2 and A.4.3 of PDD describe the project activity, technology and proposed technical data. This project is a hydro electric power plant using a run-of-river technology to generate electricity and will be connected to the Viet Nam national grid – Electricity Viet Nam (EVN). This was confirmed during the on-site visit. <i>Justification of evidences:</i> During the on-site visit from 2009-11-16 to 2009-11-18, the project has already been implemented and in operation. The validation team has interviewed the project technical personnel, reviewed the technical specifications and approvals from authorities to confirm on the design and implementation of the project. <i>Conclusion:</i> From the interview and review of project technical documentation, the project will be implemented as stated in PDD. However,, refer to A.4.1 above CAR.A2.	/PDD/ /IM/	CAR.A2	OK
A.4.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation? (EB 51 Annex 3, §§63, 64) <i>Describe the steps taken to validate this issue.</i>	<i>Description:</i> The project activity as stated in the PDD is a new installation and does not involve alteration of any existing installation. This has been confirmed during on-site visit by the validation team. <i>Justification of evidences:</i> The validation team has reviewed the relevant approved documents, technical documentation and interview of project technical personnel. <i>Conclusion:</i> The project activity has been in operation during the	/PDD/ /IM/	CAR.A2	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	on-site visit and implemented according to the technical documentation provided for review. Thus, the project is in compliance with EB 51 Annex 3, §§63, 64 Refer A.4.1 above CAR.A2			
A.4.4. Does the project design engineering reflect current good practices? <i>Consider the equipment specifications, literature (e.g. EU BREF papers) and professional experiences. Describe the process undertaken to assess the engineering.</i>	<i>Description:</i> The project design engineering reflects good practices that are not available in the host country. The proposed hydro power plant technology and generation equipment will be imported from China. <i>Justification of evidences:</i> An interview with the project owner and a document review have been conducted during the on-site assessment about the technology employed for construction. <i>Conclusion:</i> By means of knowledge of the validation team and document review it can be confirmed that the the project engineering and design reflects good practices in hydro power generation in host country. China is a leading country in supplying hydro power generation equipment.	/PDD/ /IM/	OK	OK
A.4.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country? <i>Describe the process undertaken to assess the state of the art technology.</i>	<i>Description:</i> The project applies hydropower electricity generation equipment technology that is not available in the host country. The equipment selected for the project activity is suitable for the proposed power generation design and is acceptable to the host country. <i>Justification of evidences:</i> The validation team has checked the technical data by reviewing the technical information and the nameplate of the equipment since the project has been in operation. <i>Conclusion:</i> The technology and equipment applied are appropriate	/PDD/ /IM/ /FSR/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	and in accordance with the design stipulated in the FSR.			
A.4.6. Does the project make provisions for meeting training and maintenance needs? <i>Describe the process undertaken to assess the maintenance and training needs.</i>	<i>Description:</i> There are provisions for training and maintenance provided by the equipment supplier since the project has been in operation. <i>Justification of evidences:</i> A training contract was signed between the equipment supplier and project owner. The validation team has interviewed the plant engineer to confirm training has been provided. <i>Conclusion:</i> FAR.A4: Although the plant personnel had received training, there are no records to show the type of training attended. This will be check during the 1st verification.	/PDD/ /TC/	FAR.A4	OK
A.5. Small scale project activity <i>It is assessed whether the project qualifies as small-scale CDM project activity</i>				
A.5.1. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II? (EB 51 Annex 3, § 134 & 135 (a))	<i>Description:</i> The project activity is a small scale Type I Renewable Energy Project with a maximum output capacity of 8.1MW. <i>Justification of evidences:</i> The validation team has reviewed the feasibility studies, approval issued by the authority and technical documentation for hydropower plant capacity of 8.1MW which is lower than the threshold of Type I Renewable Energy Project of maximum 15MW. <i>Conclusion:</i> By means of document review, it can be confirmed that the project activity qualifies as small scale with a maximum output capacity of 8.1MW and in compliance with EB 51 Annex 3, § 134	/PDD/ /TE/ /MOIT/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	and 135 (a).			
A.5.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein? (EB 51 Annex 3, § 135 (b)) <i>Check, if applicable the expiry dates of the applied methodology. Further, take into consideration the general guidance to the methodologies², which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.</i>	<i>Description:</i> The project activity applies the approved methodology for small scale methodology AMS-I.D: “Grid connected renewable electricity generation” Version 14 Scope 1 approved at EB 48 meeting. However,, through the validation, the methodology had been revised to version 16. The tool applied for the calculation of the grid emission factor for this project activity is “Tool to calculate the emission factor for an electricity system” version 01.1 approved at EB 35 (Annex 12). <i>Justification of evidences:</i> The applied methodology version is available on the UNFCCC website and valid from 2010-06-11 onwards. Request for registration can be submitted until further notice. http://cdm.unfccc.int/methodologies/DB/Q3VOK1HPBFTLSP7ZXFMY8R8Y4BEVJX/view.html The tool applicable is available at the below UNFCCC website. http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v1.1.pdf <i>Conclusion:</i> The methodology and tool applied to the project is consistent with the version published on the UNFCCC website. It is recommended to consider the latest version of the tool available on the UNFCCC website in determining the emission factor.	/PDD/ /AMSID/	OK	OK

² <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.5.3. Is the small scale project activity not a debundled component of a larger project activity? (EB 51 Annex 3, § 135 (c)) <i>Describe the steps taken to validate this issue. Pl refer to the Compendium of guidance on debundling (EB 54, Annex 13).</i>	<i>Description:</i> The project activity is not a debundled project from any large scale projects. 1. The host project participant has not registered any projects within the previous 2 years. 2. There are no projects implemented within 1km of the project activity by the respective project participants. 3. There are no projects in the same project category and technology/measure registered by the respective project participants. <i>Justification of evidences:</i> By checking the CD4CDM CDM pipeline, the UNFCCC website and host country DNA website, there are no projects registered and/or to be registered by the host project participant. <i>Conclusion:</i> The project activity is not a debundled component of a large scale project which is in accordance with the rules defined in Appendix C of the simplified M & P for small scale CDM project activities and is in compliance with EB 51 Annex 3, § 135 (c).	/unfccc/ /cd4cdm/ /AppC/ //vdna/	OK	OK
A.5.4. Is an assessment of the environmental impacts of the proposed SSC CDM project activity required by the host Party? (EB 51 Annex 3, § 135 (d))	<i>Description:</i> The host party requires an environmental impact assessment for this type of project. <i>Justification of evidences:</i> The validation team has reviewed the EIA approval issued by the local authority, Ninh Thuan People's Committee, Department of Natural Resource and Environment. <i>Conclusion:</i> The project complies with host country requirements that an EIA has been conducted and approved by the relevant authorities. Thus, the project is in compliance with EB 51 Annex 3, § 135 (d).	/PDD/ /EIA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B. Project Baseline, Additionality and Monitoring Plan				
B.1. Application of the Methodology				
B.1.1. Does the project apply an approved and applicable CDM methodology and a valid version thereof? (EB 51 Annex 3, §65) <i>Describe the steps taken to validate this issue.</i>	<i>Description:</i> Refer to A.5.2. <i>Justification of evidences:</i> To ensure that the applied methodology is approved by the EB, the PPs have chosen the latest available version at the time of PDD submitted for publication: http://cdm.unfccc.int/methodologies/DB/Q3VOK1HPBFTLSP7ZXFMY8R8Y4BEVJX/view.html Furthermore, to assess the applicability of the project, the PDD was reviewed and the applicability determination of the PDD was counterchecked against the criteria given in the applicability section of the methodology. The information in the PDD was further reviewed during on-site visit to confirm the PDD information is valid and reflects the reality of the project activity. <i>Conclusion:</i> The project meets the applicability criteria stated in the applicability section of the methodology.	/PDD/ /AMSID/ /unfccc/	OK	OK
B.1.2. Is the applied CDM methodology identical with the version available on the UNFCCC website? (EB 51 Annex 3, §§65, 69)	<i>Description:</i> The methodology applied is identical with the version available on UNFCCC website. <i>Justification of evidences:</i> This has been reviewed during validation	/PDD/ /AMSID/ /unfccc/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe the steps taken to validate this issue.</i>	and visit UNFCCC website http://cdm.unfccc.int/methodologies/DB/Q3VOK1HPBFTLSP7ZXFMY8R8Y4BEVJX/view.html <i>Conclusion:</i> The methodology stated in PDD is identical to the version available on the UNFCCC website.			
B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? (EB 51 Annex 3, §§66 (a), 66 (b), 68, 70, 75) <i>Describe for each applicability criterion listed in the selected approved methodology the steps taken to assess the information contained in the PDD.</i>	<i>Description:</i> The methodology AMS-I.D applicability criteria are summarized as follows: 1. This category comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass, that supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit. 2. If the unit added has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel ¹ , the capacity of the entire unit shall not exceed the limit of 15 MW. 3. Combined heat and power (co-generation) systems are not eligible under this category. 4. In case of the project activity that involves the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	/PDD/ /AMSID/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	5. Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. http://cdm.unfccc.int/methodologies/DB/Q3VOK1HPBFTLSP7ZXFMY8R8Y4BEVJX/view.html <i>Justification of evidences:</i> The methodology and the PDD have been checked and the criteria have been assessed as follows: 1. The project activity is hydro generation unit that supplies the electricity to an electrical distribution system. The project activity will supply electricity generated to the national grid of Vie Nam – Electricity Viet Nam. 2. The total installed capacity of the project activity is 8.1MW. This was confirmed by reviewing the relevant documents during the on-site visit on 2009-11-16 to 2009-11-18. 3. The project activity is not a combine heat and power system but a hydro power renewable generating unit. 4. The project activity is a new generating facility unit. This was confirmed during the on-site visit on 2009-11-16 to 2009-11-18. 5. The project activity is a new facility for renewable energy generation. This was confirmed during the on-site visit on 2009-11-16 to			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	2009-11-18. <i>Conclusion:</i> The project activity meets the applicability of the methodology as a renewable energy hydro power unit with a total installed capacity of 8.1MW. Thus, it is in compliance with EB 51 Annex 3, §§66 (a), 66 (b), 68, 70, 75.			
B.1.4. In case one or more applicability criteria have not been met, has the validation team requested clarification to, revision of or deviation from the methodology in accordance with the latest guidelines? (EB 51 Annex 3, §§ 71 -74)	<i>Description:</i> The project meets the methodology applicability. <i>Justification of evidences:</i> By review of PDD with methodology. <i>Conclusion</i> No request for clarification or revision required. Please refer to B.1.3	/PDD/ /AMSID/	OK	OK
B.1.5. Is the project in accordance with every other stipulation or requirement mentioned in all sections of the methodology? (EB 51 Annex 3, §70) <i>Describe the steps taken to check whether the proposed project activity meets <u>all the other possible stipulations and /or limitations</u> mentioned in all sections of the approved methodology selected</i>	<i>Description:</i> The project is in accordance with every other stipulation or requirement mentioned in all sections of the applied methodology. <i>Justification of evidences:</i> No deviation has been found in the PDD. <i>Conclusion:</i> The project activity meets the applicability of the methodology and is in accordance with EB 51 Annex 3, §70.	/PDD/ /AMSID/ /VVM/	OK	OK
B.2. Project Boundaries <i>Project Boundaries are the limits and borders defining the GHG emission reduction project</i>				
B.2.1. Are the project's spatial boundaries	<i>Description:</i> The project spatial boundaries as stated in PDD section B.3 consists of the project activity site and Viet Nam	/PDD/	CAR-B1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(geographical) clearly defined? (EB 51 Annex 3, §§67 (a), 77 - 79) <i>Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	national grid where the existing power generations are connected to the baseline grid. <i>Justification of evidences:</i> Since the project is in operation the validation team has reviewed the drawing for electrical connection to grid during the on-site visit to confirm the project boundary and the grid transmission line is 22KV. <i>Conclusion:</i> The following findings are found: CAR.B1: The project boundary as shown in Section B.3 should include the auxiliary internal power consumption of the hydropower plant. In addition the coordinates for the project powerhouse and water intake locations need to be corrected.			
B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology? (EB 51 Annex 3, §§67 (a), 77 - 79) <i>Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.</i>	<i>Description:</i> Although the methodology did not describe the sources and GHGs, the PP has to include a table in section B.3 of the PDD to demonstrate the sources and GHGs in the project boundary. <i>Justification of evidences:</i> This was validated by reviewing the PDD, methodology and documents provided during the on-site visit. During the interview of the project owners, it was confirmed that electricity will be imported from the grid for operational purposes during major maintenance and any power outage. <i>Conclusion:</i> CAR.B2: Section B.3 described the project boundary and a table is required to indicate the sources and GHGs of the baseline and project activity in the PDD.	/PDD/ /AMSID/	CAR.B2	OK
B.2.3. In case the methodology allows to choose whether a source and/or gas is to be included,	<i>Description:</i> There is no requirement of the methodology that requires to include the sources and gases of the project boundary in the PDD. However, in accordance with EB 51 Annex 3, §§67 (a),	/PDD/ /AMSID/	CAR.B2	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
is the choice sufficiently explained and justified? (EB 51 Annex 3, §§67 (a), 77 - 79) <i>Confirm if the justification provided by the PPs is reasonable, based on assessment of supporting documented evidence provided by the PPs or by onsite observations.</i>	77 – 79, it is required to identify the sources and gases in the project boundary. <i>Justification of evidences:</i> The validation team has reviewed the PDD, project activity baseline and boundary about the sources and GHGs that will occur. <i>Conclusion:</i> The choices and justifications made need to be in line with the methodology applied for this project activity. Refer to CAR.B2.			
B.3. Baseline Identification <i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i>				
B.3.1. What possible baseline scenarios have been considered? (EB 51 Annex 3, §§ 67 (b), 82) <i>Fill in all alternatives in table A-2.</i>	<i>Description:</i> The project activity baseline is the electricity generated multiplied by the combined emission factor of the Viet Nam national grid. The project activity will be connected to Viet Nam national grid when operation starts as defined in the PDD. <i>Justification of evidences:</i> During the on-site visit, it is confirmed that the project activity has been connected to the Viet Nam national grid. <i>Conclusion:</i> The baseline of the project activity is determined correctly and appropriately as there are no alternatives to be	/PDD/ /AMSID/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	considered. Refer to Table A-2.			
B.3.2. Is the list of alternatives complete? (EB 51 Annex 3, §§67 (b), 82) <i>Describe how it was validated that all alternatives are plausible and no plausible alternative is excluded from the consideration</i>	☒ All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been omitted. ☐ The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued	/PDD/ /AMSID/	OK	OK
B.3.3. What has been identified as the baseline scenario? (EB 51 Annex 3, §§80, 81, 85) <i>Describe the chosen BL scenario, taking into consideration the technology that would be employed and / or the activities that would take place in the absence of the proposed CDM project activity.</i>	<i>Description:</i> The baseline is the electricity generated by the project activity multiplied by the combined emission factor of Viet Nam national grid. In the absence of the project activity, the electricity will continue to be supplied by the grid generated by fossil fuel. <i>Justification of evidences:</i> The validation team has reviewed the PDD and relevant documents provided on the baseline scenario. This was further confirmed during the on-site visit that the project has been connected to the Viet Nam national grid. <i>Conclusion</i> The validation team is convinced the baseline scenario will continue in the absence of the project activity.	/PDD/ /AMSID/	OK	OK
B.3.4. Has the baseline scenario been determined according to the methodology? (EB 51 Annex	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. ☒ The determination has been carried out as per the procedure	/PDD/ /AMSID/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
3, §§81, 86 (e)) <i>Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.</i>	contained in the applied methodology. ☐ The following CARs / CLs have been identified with respect to the selection of the baseline scenario:			
B.3.5. Has any plausible alternative scenario been excluded? (EB 51 Annex 3, § 82) <i>Describe how it is validated that no plausible alternative scenario has been excluded.</i>	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. ☒ No plausible baseline scenario has been excluded. ☐ The following plausible baseline scenarios have been excluded though no adequate justification has been provided for elimination. The following CARs / CLs have been issued:	/PDD/ /AMSID/	OK	OK
B.3.6. Is the identified baseline scenario reasonable and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources? EB 51 Annex 3, §§ 83 - 86(a)-(c), 88, 91 <i>Describe whether the choice of the identified baseline scenario is reasonable by validating the <u>key assumptions</u>, <u>calculations and rationales</u> used in the PDD. Describe whether these are listed, relevant and <u>conservatively interpreted</u> in the PDD.</i>	☒ The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2 and sections B.3.2 to B.3.5 above. ☐ The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative	/PDD/ /AMSID/	OK	OK
B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations? (EB 51 Annex 3, §§ 84, 86(d))	<i>Description:</i> There are no national and/or sectoral policies, macro-economic trends and political aspiration in the host country for hydro power projects <i>Justification of evidences:</i> Section B.4 of the PDD was reviewed.	/PDD/	CAR-B3	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD in accordance with the guidance by the Board. Pl. consider the guidance EB 22 annex 3 (regarding E+ and E- policies).</i>	<i>Conclusion:</i> Below finding if found CAR.B3: Section B.4 of PDD did not indicate whether the project activity baseline has considered relevant national and or sectoral policies.			
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced? (EB 51 Annex 3, § 91(a)) <i>Describe whether the documents and sources referred to in the PDD are correctly quoted and clearly referenced.</i>	<i>Description:</i> The baseline scenario is determined from the information provided by EVN (The National Utility Company of Viet Nam). <i>Justification of evidences:</i> The validation team had reviewed the data which was provided by EVN. The data in the excel sheet calculation is consistent with the data provided by DNA. The efficiency of the baseline thermal power plants are calculated based on the conversion factor of 1kWh = 860kCal. The emission factor values for the fuel source types are based on the IPCC 2006 version. The option of calculating the Operation Margin was determined according to the low-cost-must-run. The low-cost-must-run percentage shall be lower than 50% of the total power generated from the Grid. <i>Conclusion:</i> The baseline scenario is determined according to data from EVN, the Viet Nam national grid.	/PDD/	OK	OK
B.3.9. Does the PDD contain a <i>verifiable</i> description of the identified baseline scenario, including a description of the technology that would be	<i>Description:</i> The proposed project activity is a renewable hydro power plant power generation. The technology employed by the project is a conventional type of hydropower plant.	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
employed and/or the activities that would take place in the absence of the proposed CDM project activity. (EB 51, Annex 3, §85)	The electricity generated from the project activity will be exported to the National Electricity Grid of Viet Nam which is currently generated by mixed fuel. In the absence of the proposed CDM project activity, the amount of electricity which would be generated by the proposed project activity will be continued to be generated by the mixed fuel grid system. <i>Justification of evidences:</i> The validation team has made comparison of the description in the PDD with the followings: 1. Feasibility Studies Report 2. Grid emission factor calculation. 3. The fuel type, fuel emission factor, fuel inputs and power output data are provided by the DNA of Viet Nam. <i>Conclusion:</i> Please refer to B.2.1, B.3.3 and B.3.7.			
B.4. Additionality Determination <i>The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.</i>				
B.4.1. Methodology				
B.4.1.1. Does the PDD describe how the project is additional and does the additionality justification follow the requirements of the applied methodology and/or	<i>Description:</i> The project activity is described to be additional by applying Attachment A of Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity has determined to be additional with Investment	/PDD/ /AAAB/ /NBP/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
methodological tools? (EB 51 Annex 3, §§67 (d), 93,94) <i>Describe how it is validated that additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.</i>	as a barrier. The project activity is not financially attractive to invest without the assistance of CDM revenues. The project developer has also performed sensitivity analysis to further argue the barrier faced in the project activity. The project participant has performed the additional analysis with the investment barrier of the “Non-binding best practice examples to demonstrate additionality for SSC project activities”, EB35 Annex 34. <i>Justification of evidences:</i> The baseline of the project activity is the Viet Nam grid emission factor. 1. The investment barrier is demonstrated with a benchmark sensitivity analysis. 2. The investment barrier has been demonstrated according to the “Guidance on the Assessment of Investment Analysis” version 03. 3. The input values of the investment of the project activity are based on the FSR. The validation team has made comparison of the input values by interviewing an independent hydro power consultant to confirm the possible cost applied by the project activity. In the situation of Viet Nam, the FSR shall be approved by the national authority. In accordance with the VVM version 01.1 para. 112, the value of the approved FSR is considered appropriate with the condition that the investment decision and the date of the approval of the FSR was relatively close. 1. The O&M cost of the project activity was determined based on the FSR.			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	2. All other operational costs (insurance and resources tax) are determined according to the host country decision and circular. 3. The benchmark applied by the project activity is the prime interest rate issued by the State Bank of Viet Nam. 4. The validation team has confirmed the non-cash items is in accordance with the permission of the host country. <i>Conclusion:</i> The validation team concluded that the determination of additionality of the project activity is possible and in accordance with the requirements of Tool for the Demonstration and Assessment of Additionality.			
B.4.2. Consideration of CDM before project start				
B.4.2.1. Is the project starting date reported in accordance with the CDM glossary of terms? <i>Assess why the chosen starting date can be considered as the earliest date at which either the implementation or construction or real action of a project has begun or will begin.</i> <i>Check that no other activities related to the project that happened before the identified start date can be considered as start date. In this context please also take into consideration infrastructural expenses if they are relevant (in terms of costs and importance for the project implementation) in the specific context of the project activity.</i>	<i>Description:</i> The project starting date is reported in the PDD section C.1.1 is 2005-12-22 According to the CDM glossary terms for starting date of the project is the earliest date at which either the implementation or construction or real actions action of the project begins. The signing of the construction contract for the dam and water intake channel is considered as the start date of the project activity. <i>Justification of evidences:</i> The validation team had reviewed the construction contract to confirm the date in the PDD is similar during the on-site visit.. <i>Conclusion:</i> Thus, the project start date is in compliance with the UNFCCC glossary of CDM terms.	/PDD/ /GT/ /DWCC/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.2.2. In case the project start date is on or after 2nd August 2008 has the PP informed the DNA and UNFCCC about the intension to seek CDM status? (EB 51 Annex 3, §98, 99, 100)	<i>Description:</i> The project start date is before 2008-08-02. As according to EB49 Annex 22, the notification to the UNFCCC and DNA is necessary if the project start date is after 2008-08-02. <i>Justification of evidences:</i> The start date was based on the construction contract for the water intake and dam contract signed dated 2005-12-22. A copy of the contract has been provided to the validation team for review that shows the date was before 2008-08-02. <i>Conclusion:</i> Since the project start date is before 2008-08-02 therefore,, it is no need to submit notification to the UNFCCC and DNA.	/PDD/ /DWCC/	OK	OK
B.4.2.3. In case the project start date is before commencing of validation and 2nd August 2008, was the incentive from the CDM seriously considered and are details given in the PDD? (EB 51 Annex 3, §§ 98, 100) <i>Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i>	<i>Description:</i> The project start date is based on the date of the construction contract for dam and water intake and is before the commencing of validation. <i>Justification of evidences:</i> The validation team has reviewed the construction contract to confirm the start date of the project activity as stated in Table B.4, Section B.5 of the PDD. A copy of the construction contract has been provided to the validation team. The validation team has further reviewed the time lines schedule of the project development during the on-site visit and interviewed the project owner on dates stated in Table B.4 of the PDD. <i>Conclusion:</i> CAR.B4: Although CDM has been considered at the initial stage, Table B.4 in section B.5 need to be updated to include additional information on decisive decision taken by the project	/PDD/ /DWCC/	CAR.B4	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	owner on CDM being considered seriously in the development of the project activity.			
B.4.2.4. How and when was the decision to proceed with the project taken? <i>Describe the steps taken to validate the starting date.</i>	<i>Description:</i> The decision taken to proceed for the development of the project activity by the project owner was described in Table 4, Section B.5 of PDD was at the Board meeting dated 2005-08-15. <i>Justification of evidences:</i> The validation team has reviewed the information in the table B.4, Board meeting minutes and discussed with project owner during the on-site visit. <i>Conclusion:</i> Although the decision to proceed with the project was taken at the Board Meeting, refer to B.4.2.3 above CAR.B4	/PDD/ /FDBOD/ /DBODI/	CAR.B4	OK
B.4.2.5. Is the project start date consistent with the available evidences? (EB 51 Annex 3, §100) <i>Describe the evidence assessed regarding the prior consideration of the CDM (if necessary). Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.</i>	<i>Description:</i> The project start date was consistent with the evidence provided and based on the date of signing the construction contract for the water intake and dam contract signed dated 2005-12-22. <i>Justification of evidences:</i> he validation team has reviewed the construction contract date and interview the project owner to confirm the start date of the project is based on the construction contract for water intake and dam. <i>Conclusion:</i> The start date stated in the PDD has been consistent with the construction contract of the water intake and dam which is adequate and in a transparent manner.	/PDD/ /DWCC/	OK	OK
B.4.2.6. Was the decision to proceed with the project taken by a person which has the authority to do so? (EB 51 Annex 3, §100 101 (a))	<i>Description:</i> The decision to proceed with project was taken by the Board of the company. <i>Justification of evidences:</i> The Board meeting held on 2005-08-15 where decision was made to proceed with the project. The validation team has reviewed the Board Meeting minutes to	/PDD/ /FDBOD/ /DBODI/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe the steps taken to validate this issue.</i>	confirm CDM has been considered to proceed with the project implementation and a consultant will be appointed to develop the project as CDM. <i>Conclusion:</i> The decision made by the Board to proceed with the project having considered income from CDM to support the project implementation.			
B.4.2.7. How was the CDM involved in the decision making process? (EB 51 Annex 3, § 100) <i>Describe why CDM was a decisive factor in the decision making process.</i>	<i>Description:</i> Prior to the Board meeting, the project owner had meeting with an independent CDM consultant. A MoU was signed between project owner and independent consultant to research and appraise the potential of applying CDM to the project activity. <i>Justification of evidences:</i> The following documents have been reviewed by the validation team. 1. MoU between project owner and independent consultant dated 2005-07-15 2. Cooperation offer from independent consultant to project owner Song Ong JSC dated 2005-07-25 3. Respond from Project Owner to Independent Consultant to develop project as CDM dated 2005-08-08. 4. BOD Investment Analysis decision dated 2005-08-01 5. BOD meeting on 2005-08-15 approved to proceed as CDM project. 6. Minutes of meeting between Project Owner and Independent Consultant date 2006-10-28 7. Letter to DNA in announcing the project dated 2007-01-09	/PDD/ /MoU/ /FDBOD/ /DBODI/ /MoU/ /PCDM/ /RPO/ /NMCDM/ /LDNA/ /PPCS/ /LNT/ /CDMC/ /CDMCC/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	8. Letter to Ninh Thuan People's Committee to announce project as CDM dated 2007-01-08. 9. Support letter from Ninh Thuan People's Committee in support of project dated 2007-04-23 10. Decision of BOD to appoint CDM consultant dated 2007-12-24 11. CDM Consultancy contract signed dated 2007-12-28 <i>Conclusion:</i> The validation team is convinced through the document review and interview of project owner during the on-site visit has been consistent that CDM has been considered seriously for the project viability.			
B.4.2.8. Do the evidences provided doubtlessly prove that continuous and real actions were taken in order to secure the CDM status? (EB 51 Annex 3, § 101; EB 49 Annex 22, §7)	<i>Description:</i> The project owners have taken a serious approach continuously to secure CDM for the project. The evidences provided provide doubtless prove that continuous and real actions were taken to secure CDM status. <i>Justification of evidences:</i> The validation team has reviewed below documents to confirm CDM has been pursued continuously. The documents reviewed are as above B.4.2.7 <i>Conclusion:</i> The validation team is convinced that the project owners have continuously pursuing to obtain CDM status for the project.	PDD/ /MoU/ /FDBOD/ /DBODI/ /MoU/ /PCDM/ /RPO/ /NMCDM/ /LDNA/ /PPCS/ /LNT/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
		/CDMC/ /CDMCC/		
B.4.2.9. Is the gap of documented evidences to secure the CDM status less than 3 years and are the evidences relevant for substantiating the action taken, credible, reliable and complete? (EB 49 Annex 22, §8)	<i>Description:</i> The gap taken to secure CDM status was less than 2 years. From the time of the project owner learn about CDM to the signing of MoU with independent consultant to develop the project with CDM status is less than 2 years. The Board meeting held to approve the project to pursue as CDM project is than 2 years from the time learn about CDM From the date where the CDM Development Agreement was signed, it is less than 2 years to develop the PDD for validation. The Host Country LoA was issued on 2008-06-03. The time taken to obtain HCA from the date of Board Management meeting is less than 3 years. The evidences provided indicate there had been continuous action taken to pursue to seek CDM status for the project. <i>Justification of evidences:</i> All necessary documents have been submitted to the validation team for review to confirm on the dates and timelines and in accordance with EB 49 Annex 22, §8 <i>Conclusion:</i> The validation team is convinced CDM has been continuously pursued in a credible, reliable and appropriate approach.	PDD/ /FDBOD/ /DBODI/ /MoU/ /PCDM/ /RPO/ /NMCDM/ /LDNA/ /PPCS/ /LNT/ /CDMC/ /CDMCC/ /HCA/	OK	OK
B.4.2.10. Did implementation of the project ceased	<i>Description:</i> Although there is compensation issue with one of the	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
after its commencement and did implementation recommence after consideration of the CDM? (EB 51 Annex 58, §7) <i>Describe the reasons for ceasing the project and explain why the incentive from CDM was necessary to recommence the implementation.</i>	claimant, the project did not cease after commencement. The project continue despite the compensation with the claimant was not resolved initially. The compensation was finally resolved on 2008-04-23. <i>Justification of evidences:</i> By means of document review and interview of the project owner during the on-site visit, the project did not ceased after commencement. <i>Conclusion:</i> The project was not ceased after commencement.	/ACPPC/ /ACNCDC /MCP/ /DDPC/ /DPPCS/ /NTPI/ /SA/ /FSCC/ /FSC/		
B.4.2.11. Can the CDM involvement in the decision assessed as serious? <i>Describe whether or not the project would have been undertaken without the incentive of the CDM.</i> (EB 51 Annex 3, § 103 (b) – (c))	<i>Description:</i> CDM involvement in the decision has been taken seriously by the project owners. <i>Justification of evidences:</i> The following documents were reviewed by the validation team.. 1. MoU signing with independent consultant to develop the project as CDM status. 2. Internal Investment decision by project owner to include CDM in project. 3. Board Meeting held by the project owner. 4. Approval from the Provincial People's Committee 5. Notification and Approval from host country DNA 6. Appointment of the CDM Consultant.	/PDD/ /HCA/ FDBOD/ /DBODI/ /MoU/ /PCDM/ /RPO/ /NMCDM/ /LDNA/ /PPCS/ /LNT/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	<i>Conclusion:</i> From the review of the above documents and interview of the project owners, the validation team is convinced that CDM has been pursuing continuously.	/CDMC/ /CDMCC		
B.4.3. Identification of alternatives Step 1 (in case of SSC projects pl. Skip steps 1 and 2 if appropriate))				
B.4.3.1. Does the list of alternatives contain the status-quo situation, the project not undertaken as a CDM project as well as all other viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity? (EB 51 Annex 3, §§ 104 – 106) <i>Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.</i>	<i>Description:</i> Not applied for this project activity <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/	OK	OK
B.4.3.2. Have all realistic alternatives been identified to the project? (EB 51 Annex 3, §§ 104 – 106) <i>Describe whether the list of alternatives is complete. Describe how it is validated that the alternatives are realistic.</i>	<i>Description:</i> Not applied for this project activity <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/	OK	OK
B.4.3.3. Do all identified alternatives comply with	<i>Description:</i> Not applied for this project activity	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
enforced legislations? (EB 51 Annex 3, §§ 103 – 105; EB 41 Annex 45 §8) <i>Describe the steps taken to validate this issue. Refer to the legislations.</i>	<i>Justification of evidences:</i> <i>Conclusion:</i>			
B.4.4. Investment analysis Step 2 <i>In case the investment analysis as per step 2 is chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additional details of the calculation parameters..</i>				
B.4.4.1. Does the PDD provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs? (EB 51 Annex 3, §107)	<i>Description:</i> In section B.5 of the PDD the project owner has demonstrated that the project is not financially attractive without the CERs revenue. <i>Justification of evidences:</i> Documents reviewed are: 1. Financial Calculations Spreadsheet 2. Feasibility Studies Financial Section 3. Investment Analysis Decision by Board Management <i>Conclusion:</i> Reviewing the financial calculations and supporting documents, the validation team confirmed the project is not financially attractive without CERs. CL.B5: Financial Spreadsheet. Kindly provide the source for the financial data stated in the financial section of the FS	/PDD/ /FAS/ /FSR/ /FDBOD/	CL.B5	OK
B.4.4.2. Is an appropriate analysis method chosen	<i>Description:</i> Since the project has income from the sale of	/PDD/	CAR.B6	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
for the project (simple cost analysis, investment comparison analysis or benchmark analysis)? (EB 51 Annex 3, §107, EB39, Annex 10) <i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.</i>	electricity, a benchmark analysis is applied. <i>Justification of evidences:</i> As stated in Section B.5 of the PDD, the Project IRR is applied as the benchmark to demonstrate additionality. The benchmark applied is using the WACC rate instead of a commercial bank rate. The evidences provided are not able to demonstrate that at the time the decision was made, the data available to determine the WACC rate was sufficient. <i>Conclusion:</i> CAR.B6: Financial spreadsheet. In lieu of lack of data available to support WACC calculation, the financial analysis needs to be corrected to apply a more suitable benchmark indicator in support of the project is not viable without CERs.	/FAS/		
B.4.4.3. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation? (EB 51 Annex 3, §109, EB51, Annex 58, §8) <i>Describe the steps taken to validate this issue.</i>	<i>Description:</i> A clear, viewable and unprotected spreadsheet is made available for the investment calculations. <i>Justification of evidences:</i> The validation team had received the financial sheet for review which is unprotected. All formulae applied in the spreadsheet can be read. <i>Conclusion:</i> The excel spreadsheet is clear, viewable and unprotected. However,, please refer to B.4.4.2. The question will be assessed again after a revised spreadsheet has been provided. CL.B17: Financial Spreadsheet: Project Info Sheet:	/FAS/	CAR.B6 CL.B17 CAR.B18	OK OK OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	- How were the electricity generated for rainy and dry season determined in cells F32 and F33? - Cells F4 to F5, F9, F13 to F16 indicate a sum of 2 cells, however, one of the cell is empty. Assumption Sheet: - Cell I49. Kindly provide the exchange rate applied for VND to USD, source and date of exchange. - Cell D42. How is the formula been derived? CAR.B18: Financial Spreadsheet: Project sensitivity sheet. - Correction for project title - The link for variation and project IRR cells are not traceable.			
B.4.4.4. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included? (EB 51 Annex 3, §108; EB 51 Annex 58 § 3 – 4) <i>Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a</i>	<i>Description:</i> The crediting period chosen is 7 years renewable to demonstrate investment analysis as stated in PDD section C.2.1.2. The technical lifespan stated in section C.1.2 is 30 years. <i>Justification of evidences:</i> The evidence provided to demonstrate the technical lifetime of the project is not sufficient. <i>Conclusion:</i> CAR.B7: Section B.5: Kindly revised whether the technical lifetime of the project has taken into consideration of EB 50 Annex 15.	/PDD/ /FAS/	CAR.B7	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>potential fair value.</i>				
B.4.4.5 Is the (remaining) technical lifetime of existing or project equipment defined in accordance with the guidance of the <i>Tool to determine the remaining lifetime of equipment?</i> (EB 50 Annex 15)	<i>Description:</i> The proposed project activity is a new installed hydropower plant project activity. <i>Justification of evidences:</i> According to the tool, the scope and applicability of the tool are used for project activities which involve the replacement of existing equipment with new equipment or which retrofit existing equipment as part of energy efficiency improvement activities. <i>Conclusion:</i> Therefore,, the tool is not applicable to this project activity.	/PDD/ /IM/	OK	OK
B.4.4.6 Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice? (EB 51 Annex 3, §108; EB 51 Annex 58 §4) <i>State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.</i>	<i>Description:</i> A fair value is not applied for this project activity. Instead an asset residue value is considered in the financial calculations. <i>Justification of evidences:</i> No documents made available to validation team for review on how the asset residue value being determined. <i>Conclusion:</i> The following is found. CL.B8: Financial Spreadsheet Kindly advice what is the fair value considered in the financial analysis?	/PDD/ /FAS/	CL.B8	OK
B.4.4.7. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation? (EB 51 Annex 3, §108; EB 51 Annex 58 §4)	<i>Description:</i> A book value or an asset residue value is not considered in the financial calculations. <i>Justification of evidences:</i> No documents available for review. <i>Conclusion:</i> Refer to B.4.4.5 above CL.B8	/PDD/ /FAS/	CL.B8	OK
B.4.4.8. Are depreciation and other non-cash	<i>Description:</i> Depreciation and other non-cash items are not	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
related items added back to net profits for the purpose to calculate the financial indicator? (EB 51 Annex 3, §108; EB 51 Annex 58 §5)	included in calculating the financial indicator. They have been considered to calculate the net profit but added back to compute the cashflow. <i>Justification of evidences:</i> Financial analysis has been reviewed by the validation team that did not show any depreciation and non-cash items included in the calculations for the cashflow. <i>Conclusion:</i> The financial calculation is an income and expenditure analysis without taking depreciation and non cash items including taxation into account.	/FAS/		
B.4.4.9. Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons? (EB 51 Annex 3, §108; EB 51 Annex 58 §5)	<i>Description:</i> Taxation was not included in the investment analysis. <i>Justification of evidences:</i> The validation team has reviewed the financial calculations to check whether taxation has been included or excluded in the analysis. <i>Conclusion:</i> However, during TR, it has been observed that taxation has been included according to the IRR cal. Clarification is requested if a post tax calculation is compared with a pre tax benchmark. Please refer to CL21.	/PDD/ /FAS/	CL21	OK
B.4.4.10. Were the input values used in the investment analysis valid and applicable at the time of the investment decision? (EB 51 Annex 3, §§108, 111; EB 51 Annex 58 §6) <i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed.</i>	<i>Description:</i> The decision to invest in the project was made on 2005-08-01. A BOD meeting was held on 2005-08-15 to decide on the implementation of the project with CDM status. The value applied in the financial analysis was in accordance with the FSR dated 2004, July. The values are from the feasibility study report approved by the Ministry of Industry. <i>Justification of evidences:</i> During the on-site visit, the validation team was provided with the feasibility study report. The values	/PDD/ /FAS/ /TIC/ /FSR/ /RFSA/ /FFSA/ /FSIR/	CLB9 CLB10 CLB11 CLB12 CLB21	OK OK OK OK OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	stated in the document are used in the financial calculations. <i>Conclusion:</i> From the review of the financial analysis and supporting documents provided, the input values are deemed appropriate. CL.B9: Section B.5. It is not clear how the operating hours being determined to calculate the total electricity generated per year. CL.B10: Financial spreadsheet. It is not clear whether the auxiliary consumption is taken into account to determine the net power exported to the grid. CL.B11: Section B.5. It is not clear how the feed-in tariff is being determined basing on the rates indicated in the PPA. CL.B12: Section B.5. The approval of the FS is not made available to the validation team to confirm that it has been approved by the relevant authorities for the project studies.			
B.4.4.11 Is the plant load factor (PLF) chosen in a conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)	<i>Description:</i> The plant load factor as stated in the PDD is 57.1% and calculated based on feasibility study report operating hours. <i>Justification of evidences:</i> The PLF is calculated based on the average operating hour of the project activity as stated in the FSR. The annual operating hours as stated in the FSR was 5,000 giving a PLF of 57.1%. The FS was conducted by the Irrigation Science Institute and approved by the Ministry of Industry. The operating hour for project activity is hours/year. It is a common practice in Viet Nam that all hydro power plants have low PLF as due to wet and dry seasons in Viet Nam. <i>Conclusion:</i> The plant load factor is based on FSR and considered	/PDD/ /FSR/ /CISI/ /FFSA/ /RFSA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	calculated in a conservative manner based on the expected annual operating hours			
B.4.4.12. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 51 Annex 3, §108; EB 51 Annex 58 §9)	<i>Description:</i> The cost of financing expenditures are excluded from the net cash flow of the project IRR. Yet, the loan repayment and interests have been used to calculate the income tax which is in compliance with relevant CDM regulations. <i>Justification of evidences:</i> Refer to B.4.4.8 <i>Conclusion:</i> However, during TR, CL.B21 has been raised.	/PDD/ /FAS/	CL.B21	OK
B.4.4.13 In cases where a post-tax benchmark is applied please ensure that actual interest payable is taken into account in the calculation of income tax. (EB 51 Annex 58 §11) <i>As per the guidance it is recommended to select a pre tax benchmark in order to Describe the steps taken in assessing this requirement.</i>	<i>Description:</i> Refer to B.4.4.3 <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD/ /FAS/	OK	OK
B.4.4.14 In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow? (EB 51 Annex 3, §108; EB 51 Annex 58 §10)	<i>Description:</i> The project consider equity IRR as the financial indicator for the financial analysis <i>Justification of evidences:</i> Financial Analysis has been reviewed and the cost of financing by the equity is not included in the net cash outflow and no debts are included in the calculations. <i>Conclusion:</i> From the review of the financial analysis, equity IRR is not applicable to this project in lieu of the financial data is not available to support the calculations. Refer to B.4.4.2 above CAR.B6	/PDD/ /FAS/	CAR.B6	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.4.15. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)? (EB 51 Annex 3, §§ 110; EB 51 Annex 58 §12-15) <i>In case risk premiums are applied precisely describe its suitability to reflect the risks associated with the project activity, considering the project type and market situation.</i>	<i>Description:</i> The benchmark chosen is the WACC to demonstrate the project IRR. <i>Justification of evidences:</i> The validation team has reviewed the financial data applied to determine the WACC calculations. However, the data applied are not supportive to the project at the time the financial analysis is developed. <i>Conclusion:</i> The benchmark indicator chosen needs to be revised. Refer to B.4.4.2 above CAR.B6	/PDD/ /FAS/	CAR.B6	OK
B.4.4.16. Is the benchmark value suitable for the project activity and is it reasonable to assume that no investment would be made at a rate of a lower return than the benchmark? (EB 51 Annex 3, §108; EB 51 Annex 58 §13 – 15) <i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i>	<i>Description:</i> Refer to B.4.4.2, the benchmark applied need to be reviewed further. <i>Justification of evidences:</i> Although the financial analysis had been reviewed and interviewing of the project owners, that without CERs considered, it is not viable to invest in the project. <i>Conclusion:</i> Refer to B.4.4.2 above CAR.B6. This will be further assessed when this CAR is responded.	/PDD/ /FAS/ /IM/	CAR.B6	OK
B.4.4.17 Is it ensured that the project cannot be developed by other developers than the PP? (EB 51 Annex 3, §108; EB 51 Annex 58 §13 – 14)	<i>Description:</i> The project activity could be developed by any other entity besides the project developer. Therefore, the benchmark demonstrated by the project developer is based on publicly available data. <i>Justification of evidences:</i> The project participant has applied a publicly available data source which is the local commercial leading rate issued by the State Bank of Viet Nam.	/PDD/ /IM/ /ARSBV/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	The validation team has reviewed the lending rates posted on the website of the State Bank of Viet Nam. <i>Conclusion:</i> The validation team concluded that the benchmark applied by the project activity is suitable since the benchmark is taken from a publicly available data source. In accordance with EB41 Annex 45, since the benchmark is a publicly source, even if the project is developed by other entity, the benchmark will remain the same. The benchmark approach reflects publicly lending rates and not a developer specific benchmark.			
B.4.4.18 Was the benchmark consistently used in the past for similar projects with similar risks? (EB 51 Annex 3, §111)	<i>Description:</i> The benchmark could be consistently used in other similar projects with similar risk. <i>Justification of evidences:</i> The project activity applied a publicly available benchmark that is the commercial lending rate issued by the State Bank of Viet Nam. Since the project activity could be developed by an entity other than the project participant, the benchmark applied was based on the publicly available data source. <i>Conclusion:</i> The benchmark applied was based on the publicly available data source.	/PDD/ /IM/ /ARSBV/	OK	OK
B.4.4.19. Does the PDD and related spreadsheets contain a sensitivity analysis and does the same contain variation of parameters which may vary throughout the project lifetime,	<i>Description:</i> The PDD and the excel spreadsheet have demonstrated the sensitivity analysis to the proposed project activity. <i>Justification of evidences:</i> The project participant applied the below parameters for the sensitivity analysis with a $\pm 10\%$ variation.	/PDD/ /FAS/ /FSR/ /PPA/	CL.B5 CL.B13 CL.B11	OK OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 3, §§108, 109 (e); EB 51 Annex 58 §17 – 18) <i>Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.</i>	The parameters applied for the sensitive analysis are as follows: a) Investment Costs b) Feed-in Tariff c) Annual amount of electricity exported to grid. d) O & M costs The investment cost is based on the financial estimates stated in the FSR. The relevant pages of FSR have been reviewed to check the investment cost which is stated in the financial spreadsheet. The tariff feed-in rate is based on the PPA signed with Viet Nam Electricity. The amount of electricity is based on the FSR. O & M cost is based on the financial data from the FSR. <i>Conclusion:</i> The parameters selected to demonstrate the sensitive analysis are deemed appropriate. The construction investment estimates are provided by the independent organisation who conducted the FS and any reduction may not have the project implemented. However,, refer to B.4.4.1 above CL.B5. CL.B13: Section B.5: Although reducing O & M cost will not be feasible to operate the plant to achieve the intended power generation capacity and electricity to be supplied to the national grid, it is not clear how the cost stated in FS is determined. Feed-in tariff refer to B.4.4.9 above CLB.11			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	The annual power generated depends on the number of hours of operation per year. Refer B.4.4.9 above CL.B9			
B.4.4.20. Were only variables that constitute more than 20% of either total project costs or total project revenues subjected to reasonable variation? (EB 51 Annex 3, §108; EB 51 Annex 58 §17)	<i>Description:</i> As demonstrated in Section B.5 of PDD, the variables applied that constitute more than 20% of total project costs or total project revenues are reasonable.. The variation applied is 10% to demonstrate sensitivity analysis of the 4 financial indicators electricity price, O&M cost, investment cost, and amount of electricity exported. <i>Justification of evidences:</i> All the parameters which are included in the sensitivity analysis have a financial impact on the financial analysis. The parameters of amount of electricity exported to the grid and tariff constitute 100% of total project revenues. As according to clause 17 of EB51 Annex58, the investment cost which includes construction, equipment, contingency and other cost) has been included as one of the parameter. The O&M cost constitute less than 20% of either total project cost or project revenues. However, due to there is a financial impact, the consideration of the analysis has been considered. <i>Conclusion:</i> All the parameters which are included in the sensitivity analysis have a financial impact on the financial analysis. The parameters of amount of electricity exported to grid and tariff constitute 100% of the total project revenues. According to clause 17 of EB51 Annex 58, the cost of project has been included as one of the parameter.	/PDD/ /FAS/ /GAIA/ /PPA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	Although the O&M cost constitute less than 20% of total project cost , the O&M cost has been considered in the analysis However, since there is a financial impact, it has been considered in the analysis.			
B.4.4.21. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material impact on the financial parameter? (EB 51 Annex 3, §108; EB 51 Annex 58 §17) <i>Describe whether those parameters are considered in the sensitivity analysis?</i>	<i>Description:</i> There are no other costs which have been considered as expenses of the project activity. <i>Justification of evidences:</i> The O&M cost constitute less than 20% of the total project cost. However, due to there is a financial impact, it has been considered in the analysis. <i>Conclusion:</i> The validation team concluded there are no other parameters which will have a potential financial impact to the financial analysis.	/PDD/ /FAS/ /GAIA/	OK	OK
B.4.4.22. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 51 Annex 3, §108; EB 51 Annex 58 §18) <i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i>	<i>Description:</i> The range of the variation applied by the project participant to demonstrate the sensitivity analysis is $\pm 10\%$ since it is assumed that the input parameters are not very volatile for hydro power projects. <i>Justification of evidences:</i> The project participant has applied the range of $\pm 10\%$ which is in accordance with the Guideline on assessment of investment analysis EB 51 Annex 58 paragraph 18. No past trends have been considered. <i>Conclusion:</i> The validation team concluded that the range of the variation is reasonable in the specific context of the project activity	/PDD/ /FAS/ /GAIA/	OK	OK
B.4.5. Barrier analysis Step 3 or SSC additionality assessment				
B.4.5.1. Are there any barriers given which have a	<i>Description:</i> There are no other barriers besides the investment	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
clear and direct impact on the financial returns of the project? (EB 51 Annex 3, §§ 114, 133, 136) <i>In case of LSC projects those issues cannot be considered as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall apply, i.e. the assessment of the investment barrier according to EB 51, Annex 58.</i>	analysis to demonstrate additionality. Refer to B.4.4.1 to B.4.4.22. <i>Justification of evidences:</i> The project activity has demonstrated to be additional due to the financial returns of the project activity is below the benchmark. <i>Conclusion:</i> Therefore, there are no other barriers besides the investment barrier.	/FAS/ /GAIA/		
B.4.5.2. Are the barriers described risk related (e.g technology failure, other performance related risks) or has the unavailability of sources of finance for the proeject been described and adequately substantiated? (EB 51 Annex 3, §§ 115, 133, 136) <i>Are there other barriers or barriers due to prevailing practice existent which would have led to higher emissions?</i>	<i>Description:</i> There are no risks related factors to technology failure or unavailable of source of funds on the project. <i>Justification of evidences:</i> The validation team has reviewed supporting documents submitted on the technology and financial analysis. The project technology applied is common for hydro power plant and readily available in the market. The project funding sourced is readily available in the host country. <i>Conclusion:</i> By means of document review and interview with the project owners, it can be confirmed that there are no risks faced by the project owner in relation to technology and funding.	/PDD/ /FAS/ /IM/	OK	OK
B.4.5.3. Has the unavailability of means of finance for the proeject been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM?	<i>Description:</i> Please refer to B.4.5.1 <i>Justification of evidences:</i> Please refer to B.4.5.1 <i>Conclusion:</i> Refer to B.4.5.1	/PDD/ /FAS/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 3, §§ 115, 136, EB 50 Annex 13, §9)				
B.4.5.4. How is it justified and evidenced that the barriers given in the PDD are real? (EB 51 Annex 3, § 115 (a))	<i>Description:</i> Please refer to B.4.5.1 <i>Justification of evidences:</i> Please refer to B.4.5.1 <i>Conclusion:</i> Refer to B.4.5.1	/PDD/ /FAS/	OK	OK
B.4.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (EB 51 Annex 3, § 115 (b))	<i>Description:</i> The project activity had demonstrated the additionality of the project activity with the financial indicator IRR. The IRR demonstrated in the investment analysis is below the applied benchmark if the project activity does not implement with CDM benefits. <i>Justification of evidences:</i> The validation team has reviewed the financial analysis where the project IRR benchmark without CERs cannot be met. <i>Conclusion:</i> By analysing the investment analysis, it can be confirmed that the project will not be implemented without the CERs earnings. Hence, the baseline scenario will continue.	/PDD/ /FAS/	OK	OK
B.4.5.6. Does the review of relevant background information on the nature of the company(ies) and entity(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, §4)	<i>Description:</i> Please refer to B.4.5.1 The project activity did not identify investment barrier as a barrier. The project activity has applied Investment analysis to demonstrate the additionality. <i>Justification of evidences:</i> Refer to B.4.4.1 to B.4.4.16 and B.4.5.1 <i>Conclusion:</i> Refer to B.4.4.1 to B.4.4.16 and B.4.5.1	/PDD/ /FAS/	OK	OK
B.4.5.7. Has it been demonstrated in an objective	<i>Description:</i> Refer to B.4.5.1	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, §5)	<i>Justification of evidences:</i> CDM alleviates the investment barrier by the investment analysis, <i>Conclusion:</i> Refer to B.4.4.1 to B.4.4.16	/FAS/		
B.4.5.8. Would provision of additional financial means lead to the mitigation of the barrier(s) demonstrated? (EB 50 Annex 13, §7) <i>Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence, analysing the project's additionality within the framework of an investment analysis is inappropriate. .</i>	<i>Description:</i> Please refer to B.4.5.1 The investment analysis approach is used to demonstrate the additionality of the project. There are no other barriers that can be mitigated by additional financial means. <i>Justification of evidences:</i> Refer to b.4.4.1 to B.4.4.16 <i>Conclusion:</i> Refer to B.4.4.1 to B.4.4.16	/PDD/	OK	OK
B.4.6. Common practice analysis Step 4 (in case of SSC projects skip this step)				
B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type? (EB 51 Annex 3, § 118 (a)) <i>Describe the why the project activity is not common practice in a transparent and unambiguous manner.</i>	<i>Description:</i> N/A as the project activity is a SSC. <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD	OK	OK
B.4.6.2. To what extent similar projects have been undertaken in the relevant region?	<i>Description:</i> N/A as the project activity is a SSC.	/PDD	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 3, § 118 (b))	<i>Justification of evidences:</i> <i>Conclusion:</i>			
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed? (EB 51 Annex 3, § 118 (c))	<i>Description:</i> N/A as the project activity is a SSC. <i>Justification of evidences:</i> <i>Conclusion:</i>	/PDD	OK	OK
B.5. Ex-Ante Calculation of GHG Emission Reductions <i>It is assessed whether the ex-ante calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore, calculation of emission reductions shall be assessed.</i>				
B.5.1. Are the equations applied correctly according to the applied approved methodology? (EB 51 Annex 3 §§67 (c), 88, 89, 91) <i>Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project</i>	☐ The equations applied for calculation are correctly applied according to the approved methodology. ☒ The following mistakes have been identified in this context: <i>Description:</i> The baseline equation stated in section B.6.3 is not in accordance with the methodology.	/PDD/ /AMSID/	CAR.B14	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.</i>	<i>Justification of evidences:</i> The PDD has been reviewed against the methodology AMS-I.D to check on the correctness of the equations applied. <i>Conclusion:</i> The following is raised: CAR.B14: Section B.6.3. The baseline equation is incorrect and not in accordance with the methodology.			
B.5.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? (EB 51 Annex 3 §§ 89, 90) <i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of the project activity and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i>	<i>Description:</i> The methodology applied to this project does not indicate any other methodological choices to other methodologies. <i>Justification of evidences:</i> Reviewing of the methodology AMS-I.D did not indicate any other methodological choices. <i>Conclusion:</i> The methodology is applicable for the project activity where the baseline is the power generated by the project activity multiplied by the grid emission factor.	/PDD/ /AMSID/	OK	OK
B.5.3. Have conservative assumptions been used when calculating the project emissions? (EB 51 Annex 3 §§ 89, 90) <i>Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the PDD including references and sources and are conservatively interpreted in the PDD.</i>	<i>Description:</i> Section B.4.2.2 of PDD states a bi-directional meter will be installed for export and import of electricity. There will be grid electricity imported to the project activity. <i>Justification of evidences:</i> The validation team has reviewed the PDD and interviewed the project developer that electricity will be imported from the grid during annual maintenance or power outage. <i>Conclusion:</i> CAR.B15: Since there will be the likelihood that grid	/PDD/ /AMSID/	CAR.B15	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	electricity will be imported in the event of power outage or complete shutdown for maintenance, Section B.6.3 on the statement of project emissions need to be revised in lieu of grid electricity will be likelihood to be imported.			
B.5.4. Does the implementation of the project activity lead to GHG emissions within the project boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology? (EB 51 Annex 3, §76)	<i>Description:</i> The only likelihood of GHG emissions within the project activity boundary is the import of grid electricity to support the auxiliary equipment during maintenance or power outage. A bi-directional meter will be installed to measure export and import of electricity. <i>Justification of evidences:</i> During the on-site visit and interviewing the project developer, it was mention that electricity will be imported for use when the plant is shut down for maintenance. The import of electricity will be less than 1% if there is any. In lieu of the bi-directional meter to be installed, it will measure both export and import of electricity. The final net electricity will be recorded. <i>Conclusion:</i> The GHG emission will be the import of electricity. This will be measured by the bi-directional meter.	/PDD/ /AMSID	OK	OK
B.5.4.1. Has a plant load factor (PLF) been defined ex-ante and considered for determination of baseline emissions? (EB 48 Annex 11, §§ 1, 3, 4) <i>Describe why the PLF is conservative in the framework of calculating emissions reductions and whether the PLF is the same in the framework of demonstrating additionality by applying the investment analysis. Note, in order to be conservative in both cases the PLF may be different.</i>	<i>Description:</i> Refer to B.4.4.11 The plant load factor is 57.1% stated in PDD and IRR is from the FSR. <i>Justification of evidences:</i> The baseline emission has been determined from ex-ante plant availability factor. The factor has been determined from hydrological study for reporting in FSR. <i>Conclusion:</i> The plant load factor is based on FSR and considered calculated in a conservative manner.	/PDD/ /FSR/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.5.5. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions? (EB51 Annex 3, §90) <i>Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the project activity. Check esp. chapter 6.2 of the PDD.</i>	<i>Description:</i> The ex-ante data and parameter are stated in section B.6.2 of PDD and remain fixed through the crediting period. <i>Justification of evidences:</i> The PDD has identified the following to remain as fixed parameters throughout the crediting period: 1. Heat rate 2. $EF_{CO_2,i,y}$ 3. $NCV_{i,y}$ 4. $EF_{CO_2,diesel,y}$ <i>Conclusion:</i> The data and parameter fixed as ex-ante are conservative and applicable to the project that lead to conservative estimation of emissions reductions. CL.B16: According to the tool, the most recent data will be applied during the submission for validation. Kindly clarify why year 2008 data are not used?	/PDD/ /DEF/ /FAS/	CL.B16	OK
B.5.6. Are all ex-ante calculation values for monitoring parameters (as defined as per chapter B.7.1) reasonable? (EB51 Annex 3, §90) <i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i>	☒ All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative. ☐ The following mistakes have been identified in this context:	/PDD/ /IPCC/	OK	OK
B.5.7. Are the emission reductions real, measurable	<i>Description:</i> The emissions reductions are real, measureable and give long term benefits to mitigate climate change as to the	/PDD/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
and give long-term benefits related to the mitigation of climate change. <i>Describe the steps taken to validate this issue.</i>	baseline scenario of mixed fossil fuel generation in the Host Country. 1. Reduce the dependency on fossil fuel for electricity generation. 2. Reduce the emissions of CO₂ into the atmosphere generated by the fossil fuel power plants. <i>Justification of evidences:</i> 1. The technology employed in general is less GHG polluting than commonly utilized power plants based on fossil fuels. 2. The data sources to determine the baseline emission factor is publically available. 3. The validation team has reviewed the calculation format provided by the DNA of Viet Nam to confirm the choice of the emission factor is correct and clearly indicated. <i>Conclusion:</i> The validation team concluded that the emission reductions of the project activity are real and possible.			
B.6. Monitoring of Emission Reductions <i>It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.</i>				
B.6.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan?	<i>Description:</i> The proposed project activity is a hydropower project activity. Therefore, the monitoring parameters that shall be included under the monitoring plan according to AMS-I.D are net electricity	/PDD/ /AMSID/	CAR.B19	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 51 Annex 3, §§ 67 (e), 120, 121 (a) , 122) <i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.</i> <i>Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.</i> <i>In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i>	supplied by the project activity to the grid. Since it is expected that the backup power of the project activity is from the grid system, the electricity generation metered should be adjusted by deducting the electricity generation from fossil fuels using the specific fuel consumption and the quantity of fossil fuel consumed. <i>Justification of evidences:</i> The validation team has interviewed the project participant to confirm the usage of grid electricity as backup power to the operation of the project activity auxiliary equipment during any emergency and maintenance. The validation team has compared the monitoring plan stated in the PDD with the requirement of AMS-I.D <i>Conclusion:</i> All parameters required to be monitored are in line with the applied methodology except the below finding. CAR.B19: Section B.7.1: According to methodology version 15, paragraph 14, it is necessary to monitor emissions from reservoir of hydro power plants.	/IM/		
B.6.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology? (EB 51 Annex 3, § 121 (a), 121 (b), 122) <i>Assess whether the provided information for all parameters w.r.t.</i> a) <i>Label (name of the data / parameter)</i> b) <i>data unit</i>	<i>Description:</i> The parameter contained in the monitoring is feasible. It has a label, data unit, description, source of data, measurement equipment, and Q/QC procedures. The monitoring plan indicates the hydropower will be monitored through the crediting period. The methodology require to monitor the following for hydropower project activities: - Electricity supplied by the proposed hydropower plant to the national grid - Electricity supplied by the national grid to the proposed	/PDD/ /AMSID/	CAR.B19	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
c) <i>description</i> d) <i>source of data</i> e) <i>measurement equipment / method / procedure</i> f) <i>monitoring frequency</i> g) <i>QA/QC procedures</i> <i>are appropriately described and in compliance with the requirements of the methodology..</i>	hydropower plant • Net electricity supplied to the national grid by the proposed hydropower plant • Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full. • Installed capacity of the hydro power plant after the implementation of the project activity. • the quantity of fuel type I combusted in process j during the year y in the event of black out of the plant <i>Justification of evidences:</i> The PDD has described the monitoring method of EG_y as in accordance with the requirement of AMS-I.D version 16. The net electricity exported will be continuously monitored at the connection point to the National Electricity Grid of Viet Nam (substation). The amount of the exported electricity can be cross-checked with the monthly invoice. The electricity meter will be calibrated by EVN or accredited metering organization authorised by EVN. <i>Conclusion:</i> The data and parameter to be monitored are referenced and labelled appropriate. Refer to CAR.B19			
B.6.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described	<i>Description:</i> Refer to B.5.2 and B.5.3 The equations applied for ex-post emissions reduction calculation are in accordance with the methodology	/PDD/ /AMSID/	CAR.B14	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
clearly and in line with the methodology? (EB 51 Annex 3 122 (b), 123) <i>Check whether all necessary equations have been provided in the PDD. Pl. consider that ex-post and ex-ante calculations might be different.</i> <i>Please consider that additional equations might be necessary to calculate auxiliary parameters.</i>	<i>Justification of evidences:</i> The project participant also did not state the monitoring of the GEF (ex-ante or ex-post). The project activity is expected to grid electricity supply as backup power <i>Conclusion:</i> However, clarification is raised in above B.5.1 CAR.B14 has to be addressed accordingly.			
B.6.4. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity? (EB 51 Annex 3 123 (c)) <i>Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.</i>	<i>Description:</i> The monitoring arrangement as described in PDD will be implemented accordingly. <i>Justification of evidences:</i> The validation team has interviewed project owners and carbon consultant during the on-site visit for the understanding of the implementation of the monitoring during operations. QA/QC procedures will be established before operations begin. <i>Conclusion:</i> The validation team is convinced, the monitoring programme will be implemented accordingly. FAR.B20: During the 1st periodic verification period, the QA/QC procedures have to be checked that it has been established and implemented.	/PDD/	FAR.B20	OK
B.6.5. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified? (EB 51 Annex 3 123 (b)) <i>Please consider the description given in section B.7.2.</i>	<i>Description:</i> A brief outline of the QA/QC procedures has been addressed in Annex 4 of PDD to ensure the emission reductions will be achieved when the project activity begins operation. <i>Justification of evidences:</i> Annex 4 of PDD described the briefly monitoring information for the project. During the on-site visit, the project developer has been interviewed that relevant QA/QC procedures will be developed.	/PDD/	FAR.B20	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.</i>	<i>Conclusion:</i> The relevant sections of PDD have addressed the necessary and relevant procedures and deemed appropriate. Refer to B.6.4 for FAR.B20 above.			
B.6.6. Are procedures identified for data management? (EB 51 Annex 3 123 (b)) <i>Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation</i> <i>Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.</i>	<i>Description:</i> Section B.7.2 and Annex 4 of PDD have identified data management. All data will be electronically archived for 2 years after expiry of crediting period. <i>Justification of evidences:</i> The validation team has reviewed the respective section of PDD and interviewed the project developer on data management. A brief organisation chart has been included in Section B.7.2 of PDD indicating the data management of the project activity. <i>Conclusion:</i> All necessary data management procedures will be developed and implemented as described in PDD. Refer B.6.4 above FAR.B20	/PDD/	FAR.B20	OK
C. Duration of the Project/ Crediting Period <i>It is assessed whether the temporary boundaries of the project are clearly defined.</i>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
C.1. Is the project's starting date clearly defined and evidenced? (EB 51 Annex 3, 98) <i>Check whether the starting date is correct. Apply the definition of the project starting date as per the "Glossary of CDM terms".</i>	<i>Description:</i> The project start date defined in Section C.1.1 of PDD as below is based on the first construction signed by the project owner for dam, water intake and channel. According to the Glossary of CDM terms, 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. As indicated in section B.5 of PDD, the project start date is based on the signing of construction contract to build the dam, water intake and channel.. <i>Justification of evidences:</i> Reviewing of construction contract to confirm the date stated are consistent in the PDD. <i>Conclusion:</i> Hence,, the start date for the project activity is in line with CDM Glossary of Terms.	/PDD/ /DWCC/	OK	OK
C.2. Is the project's operational lifetime clearly defined and evidenced? <i>Check whether the project lifetime is correctly defined. Consider the guidance on the assessment of investment analysis (annex to the additionality tool).</i> <i>Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.</i>	<i>Description:</i> The project operational lifetime stated in Section C.1.2 of PDD is 30 years. <i>Justification of evidences:</i> The technical lifetime of equipment dated 2010-05-25 has been checked where it is stated that the technical lifetime of the transformer is 25 years. <i>Conclusion:</i> It is unclear which is the correct technical lifetime of the project stated in C.1.2 as compared to the document provided. Refer to B.4.4.4 above CAR.B7.	/PDD/ /TLE/	CAR.B7	OK
C.3. Is the start of the crediting period clearly	<i>Description:</i> The start of the crediting period stated in Section C.2.1.1 of PDD is 2010-01-01 or date of registration.	/PDD/	CAR.C1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
defined and reasonable? <i>Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for validation and registration.</i>	<i>Justification of evidences:</i> Although the project is already in operation, the start date of the crediting period is not realistic as validation is still in progress. <i>Conclusion: CAR.C1:</i> The start date of the crediting period needs to be corrected to a realistic date.			
D. Environmental Impacts <i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.</i>				
D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)? (EB 51 Annex 3, §§ 130 – 132) <i>Check the host party regulations, regarding EIA.</i>	<i>Description:</i> An EIA is required for hydro power projects in host country Vietnam. <i>Justification of evidences:</i> The validation team has reviewed that an EIA has been conducted and approved by the local authorities. <i>Conclusion:</i> The hydro power plant in the project activity are in compliance with the host country environmental requirements	/PDD/ /EIA/	OK	OK
D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved? (EB 51 Annex 3, §§ 130 – 132) <i>Check the EIA and its approval, if applicable.</i>	<i>Description:</i> Refer above D.1.1 that an EIA is has been conducted by the project owner. <i>Justification of evidences:</i> The validation team has obtained a copy of the EIA approval for the hydro power plants during the on-site visit. <i>Conclusion:</i> The EIA is in compliance with host country requirements for hydro power plants.	/PDD/ /EIA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
D.1.3. Has an analysis of the environmental impacts of the project activity been sufficiently described and in line with the host party environmental legislation? (EB 51 Annex 3, §§ 129 – 131) <i>Check the PDD (section D). Check whether the project will create any adverse environmental effects.</i> <i>Check the relevant national environmental legislation.</i>	<i>Description:</i> Refer to D.1.1 and D1.2 above. <i>Justification of evidences:</i> Refer to D.1.1 and D.1.2 above <i>Conclusion:</i> Refer to D.1.1 and D.1.2 above	./PDD/ /EIA/	OK	OK
D.1.4. Are transboundary environmental impacts considered in the analysis? (EB 51 Annex 3, §§ 130 – 132) <i>Check the documents and local official sources / expertise regarding transboundary environmental impacts.</i>	<i>Description:</i> There are no transboundary issues to the project activity. The project activity is constructed at the Ong river that is not shared with any bordering countries. <i>Justification of evidences:</i> The validation tam has visited the project site to confirm that the project activity is located in the host country. <i>Conclusion:</i> The project activity is developed within the host country Vietnam.	/PDD/ /google/	OK	OK
E. Stakeholder Comments <i>The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
E.1. Have relevant local stakeholders been invited to consultation prior to the publication of the PDD? (EB 51 Annex 3, § 127) <i>Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.</i>	<i>Description:</i> Local stakeholder consultations have been conducted as stated in Section E.1 of PDD. The stakeholders were invited by letter. The invited participants were listed in Section E.1 of PDD. <i>Justification of evidences:</i> The validation team has reviewed the invitation letter to confirm the stakeholder meeting has been conducted as stated in Section E.1 of PDD. No other documents were available for review. <i>Conclusion:</i> CAR.E1: Section E.1. Although a stakeholder meeting is held, kindly provide the following for further assessment. - Minutes of stakeholder consultation submitted to local authority - Topics of discussion during the consultation	/PDD/ /SMIL/ /MCP/	CAR.E1	OK
E.2. Can the local stakeholder consultation process be assessed as adequate? (EB 51 Annex 3, § 128 (a) – 128 (c)) <i>Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.</i> <i>Please consider the following requirements in this context:</i> (a) <i>Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;</i> (b) <i>The summary of the comments received as provided in</i>	<i>Description:</i> The local stakeholder consultation process was conducted. The communities and respective government offices personnel were invited by letters. <i>Justification of evidences:</i> There are no supporting documents made available for review to assess on the stakeholder consultation. <i>Conclusion:</i> Refer above E.1 CAR.D1. CL.E2: Section E.2: The local people expect that the project activity will employ local people for construction as well as operation phases if suitable and will minimise negative impacts during the construction phase. What are the negative impacts and what is the mitigation plan to address the impacts?	/PDD/ /SMIL/ /MCP	CAR.E1 CL.E2	OK OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
<i>the PDD is complete;</i> <i>(c) The project participants have taken due account of any comments received and have described this process in the PDD.</i>				

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification

☐	Baseline is not identified
☒	Baseline is defined in applied methodology
☐	Assessment of baseline see below

Baseline Alternatives identified	Inline with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
Viet Nam National Grid	☒	☐	Not eliminated as this is the baseline scenario	/IM/ /ECD/	☒	The project activity is connected to Viet Nam national grid. This was checked during the on-site visit.
	☐	☐			☐	
	☐	☐			☐	

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters

☐	No financial parameters are used for additionality justification						
☒	Assessment of all financial parameters see below						
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment
Benchmark	12.6	%	99. Report 2004 of State Bank of Viet Nam page 47 Financial Assessment Spreadsheet IMF Country Report No. 07-386 (Table 21)	/ARSBV/ /FAS/ /IMF/	☒	☒	The benchmark applied is the investment rate issued by the State Bank of Viet Nam which is publicly available and normally applied by any project developer in considering whether the project is financially attractive or not. According to the IMF Report, the medium term lending rate in the host country for 2005 is 13.6% The rate applied is therefore considered appropriate and conservative.
Investment Cost	156,100,121	'000VND	14. Finally Feasibility study report page 5 Financial Analysis Spreadsheet	/FSR/ /FAS/ /RFSA/ /AMB/ /ECCPG/ /PFSR/	☒	☒	The investment cost is in accordance with the feasibility study and is considered to be conservative. /FSR/. Although the project owner (Board of Directors)

			35. Revised Approval of FS 77. Approval by Management Board Estimated Capital Cost of Power Generating Plant Technologies, US Energy International Agency Pre-Feasibility Study Report (page			had approved to adjust the investment cost in 2007-12-25, this cost was not applied in the financial analysis. The cost from the approved FSR was maintained for conservativeness. ^{/AMB/FSR/TIC/} The validation team has reviewed the documents during on-site assessment and compared the total investment cost of the project with studies done by the US Energy International Agency ^{/ECCPG/} where it is indicated that the unit cost of electricity generation is USD1,500/kW whilst the project is USD1,214/kW. It has to be mentioned here that the reference of the US Energy Agency dated 2008-06-26 states that the USD 1500/kWh are based on the US where the plant equipment is more likely to be sourced and the unit size of generating units are relatively bigger what other small countries, usually have. Thus, the costs per MW of constructing a power plant will be higher to other countries outside the US and Europe. Further, in another report, ^{/PFSR/} the investment cost for a 3MW small hydro power is approx: USD1,263/kW. Thus, the investment cost of the project activity is lower than the studies
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							reports and considered appropriate for the investment in Viet Nam.
Construction Cost	76,256,058	10 ³ VND	14. Finally Feasibility study report page 5 97. Total Investment Cost, page 1 35. Revised Approval of FS Financial Assessment Spreadsheet	/FSR/ /TIC/ /RFSA/ /FAS/	☒	☒	The construction cost is in accordance with the final feasibility study. Since the FSR had been approved by the Ministry of Industry, TÜV Nord assumes that the cost is appropriate. The
Equipment Cost	47,619,124	10 ³ VND	14. Final Feasibility study report page 5 97. Total Investment Cost, page 1 35. Revised Approval of FS Financial Assessment Spreadsheet	/FSR/ /TIC/ /RFSA/ /FAS/	☒	☒	The equipment cost is part of the total investment cost cited in the final feasibility study and the annex of the FS report. Since the FSR had been approved by the Ministry of Industry, TÜV Nord assumes that the cost is appropriate.
O&M Cost	2,194,074	10 ³ VND	11. Decision 709/QD-NLDK, schedule 1 (calculated) Financial Spreadsheet 101. General Explanations	/D709/ /FAS/ /GEFS/	☒	☒	O & M cost is determined based on the Decision No. 709 for hydropower plant with installed capacity ≤ 30MW is 1% – 1.5%.of investment costs. The project participant applies 1.41% instead of the 1.57% as stated in the FSR General explanation. Thus, O&M cost is considered conservative. Refer to CL.B13
Other costs	22,602,257	10 ³ VND	14. Finally Feasibility study report page 5	/FSR/ /TIC/ /FFAS/	☒	☒	The cost is extracted from the total investment cost of the FSR. The cost is the expenses for the

			97. total Investment Cost, page 1 75. First Approval of FS				implementation of the project. Since the FSR had been approved by the Ministry of Industry, TÜV Nord assumes that the cost is appropriate.
Contingency	9,622,682	10 ³ VND	14. Finally Feasibility study report page 5 75. First Approval of FS	/FSR/ /FFAS	☒	☒	This cost is approximate 6.6% of the total for construction, equipment and other cost as reported in the feasibility study. Based on the validation team industry experience, the rate applied is considered conservative and within industry rate of 5 to 10%,
Tariff Rate	573.5	VND/kWh	108. Assumption of monthly electricity generation" 103. Power Purchase Agreement on Song Ong HPP with EVN 10. Negotiation Report on the purchase of power generated by Song Ong HPP with EVN 11. D709/QD-NLDK (Schedule 1) Financial Analysis Spreadsheet.	/AMEG/ /PPA/ /NR/ /D709/ /FAS/	☒	☒	The tariff rate applied is the average rate of the dry and wet season periods. The validation team had compared the rate with the rate stated in D709, which is average at 571.4VND/kWh. The project activity is classified as a medium hydropower plant (3 to 30MW) in accordance to Decision 709 QD/NLDK. Therefore, the average tariff rate during the dry season is VND587.3/kWh (USD0.037/kWh x 15,873VND at the time of decision made) and wet season average is VND555.6/kWh (USD0.035 x 15,873VND). The applied rate is higher than the D709 rate, thus it is conservative. Refer to CL.B11
Net Annual Electricity	39,994	MWh/year	14. Finally Feasibility study report page 3	/FSR/	☒	☒	The annual electricity is from the Finally Feasibility study report which

Generated							is determined based on the expected operating hours of 5,000 multiplied by 8.1 MW = 40,500MWh less 1.25% for load loss and internal auxiliary equipment consumption.(506MWh) The 1.25% for load loss and internal consumption is within industry standard.
PLF	57.08	%	Financial Spreadsheet , Assumption Tab 14. Finally Feasibility study report page 6 (hours) 35. Revised Approval of FS PLF of registered hydropower projects in Vietnam Average Load Factor	/FAS/ /FSR/ /RFSA/ /PLFRP/ /ALF/	☒	☒	The plant load factor is the expected number of operating hours in a year divided by the number of hours in a year. The FSR had been approved by the Ministry of Industry that states the annual average generation and capacity. By calculation, the PLF is 57.08%. Based on the validation team local experiences and comparing with registered projects, the PLF is higher than the industry practice of 43 to 47%. With a higher load factor, the project has higher income due to higher electricity generated. Thus, PLF is considered appropriate to the project.
Depreciation	10 years for equipment 20 years for construction	years	37. Decision 206 by Ministry of Finance about the promulgation of regulations in fixed assets utilization and depreciation	/D206/	☒	☒	The depreciation rate is based on the number of years allowable by the host country government to depreciate equipment and construction. Thus, the rate applied is considered appropriate. A fair

							value is not considered after 40 years as revenue since the depreciation is over after year 20. This is assessed as appropriate.
Income Tax	16.33	%	09. Decree No. 164.2003.ND-CP Detailing the implementation of the law on enterprise income tax pages 13 & 14. 'Chapter V: Article 35- Item 1.đ and 2.a and Article 36 - Item 10	/D164/	☒	☒	The income tax rate is the average tax rate expected over a period of 30 years. Based on the document Decree 164, the project activity is located in a difficult socio-economic zone. Therefore, the region will enjoy 4 years of tax exemption for earned income, 50% tax reduction on earned income for 8 years and 28% after year 8. The computation has considered the different income tax scale which is in accordance with the decree. The rate has been recalculated and is deemed to be correct. Thus, the rate which is an average enterprise revenue tax rate is applied appropriately.
Resource Tax	2	%	04. Decree No. 68.1998ND-CP Regulating in detail the implementation of the amended Ordinance on Resource Tax (Article 7)	/D68/	☒	☒	This tax of 2% is for the usage of water payable to host country government. It is calculated on 2% of the tariff rate multiplied by the total electricity exported to the grid in accordance to the Decree No. 68/1998ND-CP. Therefore, the rate applied is correctly in the calculation.

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis

☒		No barrier parameters are used for additionality justification		
☐		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			☐	
			☐	
			☐	

ANNEX 5: OUTCOME OF THE GSCP

Table A-5: Outcome of the Global Stakeholder Consultation Process

(§§ 41, 42 VVM Version 1)

☒	No comments were received during the global stakeholder consultation period					
☐	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Action taken by the validation team to take due account on the comment ^{*)}	Conclusion (incl. CARs CLs or FARs)

^{*)} In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 6: APPOINTMENT CERTIFICATES OF TEAM MEMBERS



CERTIFICATE OF APPOINTMENT

Ms. Sabine Meyer

born on 1976-07-05

satisfies the requirements as specified in the TÜV NORD
JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Expert

The present appointment will terminate on 2013-10-27
Certification registration No. 10 10 06 – 197

Essen, 2010-10-28


Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH



CERTIFICATE OF APPOINTMENT

Mr. Robert Chun Yuen Cheong

born on 1952-02-28

satisfies the requirements as specified in the TÜV NORD
JI/CDM CP directives and is hereby appointed as

TÜV NORD CDM Assessor

For the following scopes: 1, 13
The present appointment will terminate on 2012-03-03
Certification registration No. 09 03 02 - 128

Essen, 2009-03-04


Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH



CERTIFICATE OF APPOINTMENT

Mr. Martin Saalmann

born on 1976-02-23

satisfies the requirements as specified in the TÜV NORD
JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Senior Assessor

The present appointment will terminate on 2013-03-31
Certification registration No. 10 04 01 – 22

Essen, 2010-04-01


Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH



CERTIFICATE OF APPOINTMENT

Mr. Dr. Jochen Schubert

born on 1970-12-24

satisfies the requirements as specified in the TÜV NORD
JI/CDM CP directives and is hereby appointed as

TÜV NORD JI/CDM Expert

For the following scopes: 1, 2, 3, 6, 7, 13, 15
The present appointment will terminate on 2011-07-22
Certification registration No. 08 07 02 - 56

Essen, 2008-07-23


Head of TÜV NORD JI/CDM Certification Program
of TÜV NORD CERT GmbH