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DETERMINATION REPORT

DETERMINATION OF THE JOINT IMPLEMENTATION PROJECT "POWER GENERATION AT HPPS OF PJSC "ZAKARPATTYAOBLENERGO"

Report No. 01 998 9105071653 - DR
Revision No. 02

Customer: Carbon Management Company GmbH

DETERMINATION REPORT

Date of first issue: 26/08/2012	Project No: 01 998 9105071653
Executor: TÜV Rheinland Japan Ltd. (TÜV Rheinland)	Organizational unit: TÜV Rheinland Ukraine Ltd. Technical Competence Center
Customer: Carbon Management Company GmbH	Client ref.: Alain Girardet

Summary:

TÜV Rheinland Japan Ltd. (TÜV Rheinland) has performed a determination of the project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination serves as project design objective and complete assessment, and is a requirement of all projects. It consists of the following three phases: i) a desk review of the project design documents including analysis of the baseline justification and monitoring plan; ii) follow-up interviews with project stakeholders including on site visit; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using TÜV Rheinland Japan Ltd. (TÜV Rheinland) internal procedures.

To address TÜV Rheinland Japan Ltd. (TÜV Rheinland) corrective action and clarification requests Carbon Management Company GmbH revised the PDD and resubmitted it on 13/09/2012 as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD version 2.0 dated 13/09/2012.

In summary, it is TÜV Rheinland's Group/TÜV Rheinland's Ukraine opinion that the project complies with the criteria for baseline setting and monitoring methodology according to developed specific approach, and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: 01 998 9105071653 - DR	Subject Group: JI	
Project title: "Power generation at HPPs of PJSC "Zakarpattyaoblenergo"		
Work carried out by: Dr. Valery Yakubovsky - Team Leader, Technical Competence Center Director Mr. Vyacheslav Gonchar - Technical Expert Mr. Rakovich Dmitry - Trainee		
Work verified by: Dr. Lixin Li – Technical Reviewer		
Determination Report approved by: Dr. Manfred Brinkmann – Accredited Independent Entity Operational manager, TÜV Rheinland Japan Ltd. (TÜV Rheinland)		
Date of this revision: 19/09/2012	Revision No.: 02	Number of pages: 84

TÜV Rheinland Japan Ltd.
(TÜV Rheinland)

Abbreviations

AIE	Accredited Independent Entity
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO_2	Carbon Dioxide
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Greenhouse Gas
I	Interview
ICC	Industrial Commercial Company
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LoA	Letter of Approval
LoE	Letter of Endorsement
MoV	Means of Verification
MP	Monitoring Plan
OSV	On Site Visit
PDD	Project Design Document
PE	Private enterprise
STHS	Stakeholder Survey
t	Tonne
tCO_2e	Tonnes of CO_2 equivalent
UNFCCC	United Nations Framework Convention on Climate Change

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1 DETERMINATION OPINION

The determination team of TÜV Rheinland Japan Ltd. (TÜV Rheinland) has performed a determination of the JI project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

The project participants of the JI project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" selected the JI specific approach for identifying the baseline, defined in paragraph 22 (a) of the "Determination and Verification Manual" (DVM).

A baseline for the project was set in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). The JI specific approach is provided in paragraph 9 of the "Guidance on criteria for baseline setting and monitoring", version 03 (hereafter The Guidelines).

(a) An approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI-specific approach).

Also for describing the baseline and monitoring, project participants based on paragraph 11 Guides using selected elements or combinations of approved CDM methodologies.

Project participants decided to use, as far as possible within the JI specific approach, the elements of the approved CDM methodology for baseline scenario and monitoring ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" – version 12.3.0 (applicable at the time of project submission) on purpose to determine the baseline scenario, demonstration of additionality and monitoring plan of this project.

The PDD version 2.0 dated 13/09/2012 provides a description of the chosen baseline in a clear and transparent manner according to "Guidelines for users of the joint implementation project design document form", version 04, as well as a justification per the "Guidance on Criteria for Baseline Setting and Monitoring" (paragraphs 23 - 29), version 03.

Project participants used the following approach defined in paragraph 44 ANNEX 1 of the Guidance: for demonstration of the project "Tool for the demonstration and assessment of additionality" version 05.2 (applicable version of the Tool at the time submission of the PDD) was used. In line with this tool, the PDD version 2.0 dated 13/09/2012 provides barrier analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

The JI project is likely to result in reductions of GHG emissions in accordance with the project description. An analysis of the investment, technological barriers and prevailing practice demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (2.0 dated 13/09/2012) and the subsequent interviews have provided TÜV Rheinland Japan Ltd. (TÜV Rheinland) with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for JI projects and the relevant host country criteria.

The determination is based on the information made available to the determination team of TÜV Rheinland Japan Ltd. (TÜV Rheinland) and the engagement conditions detailed in this report.

2 INTRODUCTION

Carbon Management Company GmbH has commissioned TÜV Rheinland Japan Ltd. (TÜV Rheinland) to determinate its JI project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" (hereinafter called "project") at Zakarpattya Region of Ukraine.

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

2.1 Objective

The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JISC, as well as the host country criteria.

2.2 Scope

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

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

2.3 JI Project Description

The brief information regarding the project is provided in table 1.

Table 1 - JI project brief information

Project Parties involved:	1.Ukraine (host Party); 2. Switzerland

Title of the project:	"Power generation at HPPs of PJSC "Zakarpattyaoblenergo"
Type of JI activity:	Large-scale
Baseline and monitoring methodology:	JI specific approach
Project entity participant:	PJSC "Zakarpattyaoblenergo"
Other project participants:	Carbon Management Company GmbH
Location of the project:	Zakarpattya Region, Ukraine
Starting date of the project:	17/03/2004
Before the1st part of crediting period:	From 01/01/2005 to 31/12/2007
1st part of crediting period:	From 01/01/2008 to 31/12/2012
2nd part of crediting period:	From 01/01/2013 to 31/12/2024

The main purpose of the project is to reduce greenhouse gas emissions by power plants by replacing electricity generated by power plants on traditional fuels, due to reconstruction, rehabilitation and modernization of outdated Hydro Power Station (HPS). Recovery production capacity and reliability of hydroelectric power production will reduce greenhouse gas emissions from Power Generating Companies UES of Ukraine.

In Ukraine the small hydro power plants were used for production of both mechanical and electric energy since fifties. However, the advantages of the centralized production of electric power and highvoltage transmission in the recent half-century have led to that a lot of small hydro-electric power plants became neglected and fall into decay.

At the beginning of the project implementation the growing significance of ecological problems, promoted interest to the renewing energy sources as well as the necessity of improving the reliability of power supply to rural area caused the interest to renewing of the small HPPs.

The Project foresees technical and structural reconstruction and further exploitation of hydropower plants that owned by JSC "Zakarpattyaoblenergo" for production of clean electricity. The project provides a number of measures that will provide reliable (accident-free) mode of operation of hydropower plants included in the project. Through the use of water energy for power generation and supply to consumers will replace a certain amount of electricity network. In this project, any emissions from the implementation of the project activities are absent, therefore the electricity is produced by hydroelectric in project scenario, will partially replace electricity that comes from the Ukrainian grid, and thereby reduce carbon emissions from the combustion of fossil fuels in thermal power plants.

The proposed project is aimed at reducing anthropogenic emissions due to the following factors:
- Partial reduction of carbon-electricity generated from the power station or power plant that uses natural gas or coal for electricity production.

3 METHODOLOGY

The determination consists of the following three phases:

I) a desk review of the project design documents including analysis of the baseline justification and monitoring plan;

II) follow-up interviews with project stakeholders including on site visit;

III) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The following sections outline each step in more detail.

3.1 Desk Review of the Project Design Documentation

The Project Design Document (PDD) submitted by Carbon Management Company GmbH and additional background documents related to the project design to be checked by an Accredited Independent Entity were reviewed.

The list of submitted documentation is provided below.

To address TÜV Rheinland Japan Ltd. (TÜV Rheinland) corrective action and clarification requests Carbon Management Company GmbH revised the PDD and resubmitted it on 13/09/2012 as version 2.0.

The determination findings presented in this report relate to the project as described in the PDD 2.0 dated 13/09/2012.

The following tables outline the documentation reviewed during the determination. Documents provided by Carbon Management Company GmbH that relate directly to the components of the project are indicated in table 2. Background documents related to the design and/or methodologies employed in the design or other reference documents are provided in table 3.

Table 2 - Category 1 Documents

No.	Title of the document
/1/	PDD "Power generation at HPPs of PJSC "Zakarpattyaoblenergo", version 1.0 dated 18/06/2012.
/2/	PDD "Power generation at HPPs of PJSC "Zakarpattyaoblenergo", version 2.0 dated 13/09/2012.
/3/	GHG emission reduction calculation spreadsheet in Excel format (*20120521_ZOE_Hydro_calculations.xls*).
/4/	GHG emission reduction calculation spreadsheet in Excel format (*20120915_ZOE_Hydro_calculations.xls*).

No.	Title of the document
/5/	"Guidelines for users of the Joint implementation project design document form", version 04.
/6/	"Guidance on Criteria for Baseline Setting and Monitoring", version 03, JISC.
/7/	Approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" – version 12.3.0
/8/	"Tool for the demonstration and assessment of additionality", version 05.2.
/9/	Kyoto Protocol to the United Nations Framework Convention On Climate Change.
/10/	Marrakech Accords, JI Modalities.
/11/	JI guidelines. Annex II to decision 9/CMP.1.
/12/	"Joint implementation determination and verification manual", version 01, JISC.
/13/	"Methods of calculating the specific carbon dioxide emissions in the production of electricity at power plants and in its consumption" approved by the National Environmental Investment Agency of Ukraine from 21.03.2011 № 39.
/14/	"Glossary of joint implementation terms", version 03, JISC.

Table 3 - Category 2 Documents:

№	Name of document
/1/	Protocol #4. Meeting of the EC "Zakarpattyaoblenergo" Administration the dated March 17, 2004
/2/	Examination certificate of waterworks (GTS) Tereblya-Ritska HPS on August 8, 2002
/3/	"Energy Strategy of Ukraine till 2030", dated 25/09/06
/4/	Passport - Protocol of measuring complex from 06/06/2012
/5/	Protocol #20. Commission meeting on examination of work safety and fire safety unit SOPs dated 05/04/2012
/6/	Protocol #65. Commission meeting on examination of work safety and fire safety unit SOPs dated 09/09/2011
/7/	Protocol #12. Commission meeting on examination of work safety and fire safety unit SOPs dated 22/03/2010
/8/	Protocol #16. Commission meeting on examination of work safety and fire safety unit SOPs dated 16/03/2012
/9/	Protocol #24. Commission meeting on examination of work safety and fire safety unit SOPs dated 20/05/2011
/10/	Protocol #7. Commission meeting on examination of work safety and fire safety unit SOPs dated 15/07/2011
/11/	Protocol #28. Commission meeting on examination of work safety and fire safety unit SOPs dated 15/04/2011
/12/	Protocol #22. Commission meeting on examination of work safety and fire safety unit SOPs dated 19/05/2011

№	Name of document
/13/	Law of Ukraine "Changing in the Law of Ukraine on "On Electricity" to encourage the use of alternative energy sources from 01/04/2009
/14/	Law of Ukraine "Changing in some Certain Laws of Ukraine to establish "green tariff" from 25/09/2008
/15/	Report on Tereblya-Ritska hydropower station for 2004
/16/	Report of Uzhgorod hydropower station for 2004
/17/	Report on Onokivska hydropower station for 2004
/18/	Report on Tereblya-Ritska hydropower station for 2005
/19/	Report of Uzhgorod hydropower station for 2005
/20/	Report on Onokivska hydropower station for 2005
/21/	Report on Tereblya-Ritska hydropower station for 2006
/22/	Report of Uzhgorod hydropower station for 2006
/23/	Report on Onokivska hydropower station for 2006
/24/	Report on Tereblya-Ritska hydropower station for 2007
/25/	Report of Uzhgorod hydropower station for 2007
/26/	Report on Onokivska hydropower station for 2007
/27/	Report on Tereblya-Ritska hydropower station for 2008
/28/	Report of Uzhgorod hydropower station for 2008
/29/	Report on Onokivska hydropower station for 2008
/30/	Report on Tereblya-Ritska hydropower station for 2009
/31/	Report of Uzhgorod hydropower station for 2009
/32/	Report on Onokivska hydropower station for 2009
/33/	Report on Tereblya-Ritska hydropower station for 2010
/34/	Report of Uzhgorod hydropower station for 2010
/35/	Report on Onokivska hydropower station for 2010
/36/	Report on Tereblya-Ritska hydropower station for 2011
/37/	Report of Uzhgorod hydropower station for 2011
/38/	Report on Onokivska hydropower station for 2011
/39/	"Thirdly, the fourth and fifth National report in Ukraine Question Changing Climate" from 2009
/40/	Order # 62 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2011" dated 15/04/2011
/41/	Order # 63 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2011" dated 15/04/2011
/42/	Order # 43 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2011" dated 28/03/2011
/43/	Order # 75 of National Environmental Investment Agency of Ukraine "On Approval of Carbon Dioxide Specific Emission Factors in 2011" dated 12/05/2011
/44/	Standardized emission factors for the Ukrainian electricity grid for 2006-2007 dated 17.08.2007
/45/	STATE LAND POLICY IN UKRAINE: CURRENT STATE AND DEVELOPMENT STRATEGY 2009

№	Name of document
/46/	Development of the electricity carbon emission factors for Ukraine from 14 October 2010
/47/	Calculation methodology of specific carbon dioxide emissions in the production of electricity at the power plants and in its consumption № 39 from 21.03.2011
/48/	LAW OF UKRAINE "About Power» № 575/97-VR from 16.10.1997
/49/	LAW OF UKRAINE "On metrology and metrology activities» №113/98-VR on 02/11/1998
/50/	RESOLUTION dated February 22, 2006 #206 "On validation of the preparation procedure, review, approval and implementation of projects aimed at reducing anthropogenic emissions of greenhouse gases"
/51/	STATUTE PUBLIC JOINT STOCK COMPANY "Zakarpattyaoblenergo" (new version) on March 23, 2011.

3.2 Interviews with project stakeholders

TÜV Rheinland Japan Ltd. (TÜV Rheinland) performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Carbon Management Company GmbH, PJSC "Zakarpattyaoblenergo" were interviewed are summarized in Table 4. The main topics of the interviews are summarized in Table 5.

Table 4 - Persons interviewed

No.	Name	Position	Organization
/1/	Ihnatko Oleg I.	General Director	Tereblya-Ritska HPP
/2/	Bilak Alexander O.	Deputy General Director, Technical Director	Tereblya-Ritska HPP Onokivska HPP Uzhgorod HPP
/3/	Dobriansky Taras B.	Acting chief of metrology and repair of metering devises	Tereblya-Ritska HPP Onokivska HPP Uzhgorod HPP
/4/	Bokotey Lyudmyla G.	Environmental Engineer	Tereblya-Ritska HPP Onokivska HPP Uzhgorod HPP
/5/	Onys'ko Olga I.	Director of Economics and Finance	Onokivska HPP Uzhgorod HPP
/6/	Herzanych Vladimir	General Director	Onokivska HPP Uzhgorod HPP
/7/	Rzhanov Denis M.	Deputy General Director for	Carbon Management Company GmbH

No.	Name	Position	Organization
		Technical Issues	

Table 5 - Interview topics

No.	Date	Interviewed organization	Interview topics
/1/	07/09/2012	PJSC "Zakarpattyaoblenergo"	➢ Project related legal issues ➢ Technical equipment ➢ Monitoring plan ➢ Training history ➢ Management system ➢ Environmental impacts ➢ Stakeholder comments
/2/	07/09/2012	Carbon Management Company GmbH	➢ Project design ➢ Project related legal issues ➢ Additionality ➢ Crediting period ➢ Monitoring plan ➢ Stakeholder comments

3.3 Resolution of Clarification and Corrective Action Requests

The overall determination, from Contract signing to Determination Report and Opinion, was conducted using TÜV Rheinland Japan Ltd. (TÜV Rheinland) internal procedures. The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for TÜV Rheinland Japan Ltd. (TÜV Rheinland) positive conclusion on the project design.

In order to ensure transparency, a determination protocol (Annex A to the Determination report) was customized for the project, in accordance with the Annex to "Joint Implementation Determination and Verification Manual", version 01 /12/. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

- it organizes, details and clarifies the requirements a JI project is expected to meet;
- it ensures a transparent determination process where the verifier will document how a particular requirement has been determined and the result of the determination.

The determination protocol consists of three tables. The different columns in these tables are described in Figure 1 below.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol (Annex A to the Determination report).

The PDD, final version 2.0 dated 13/09/2012, was submitted to the determination team for final determination. The final version of the PDD (version 2.0 dated 13/09/2012) was revised based on the determination protocol (Annex A to the Determination report) with the issued corrective action requests and clarification requests. The major changes include: starting date of project activity and crediting period; monitoring plan; estimate of GHG emission reductions.

Determination Protocol Table 1: Mandatory Requirement for Joint Implementation (JI) Project Activities			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR), a Clarification Request (CL) or a Forward Action Request (FAR) of risk or non-compliance with stated requirements. The CAR's, CL's and FAR's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, to show how the specific requirement is determined. This is to ensure a transparent determination process.

Figure 1 Determination protocol tables

Determination Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comments**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided **(OK)**, or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification. **Forward action request (FAR)** informs the project participants of an issue that needs to be reviewed during the verification.

Determination Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 1, 2**	**Summary of project owner response**	**Determination team conclusion**
If the conclusions from the Determination are a Corrective Action Request, a Clarification Request or a Forward action request, these should be listed in this section.	Reference to the checklist question number in Tables 2 where the Corrective Action Request, Clarification Request or a Forward action request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, under "Final Conclusion".

3.4 Internal Technical Review

The determination report including the determination findings underwent a technical review before requesting registration of the project activity. The technical review was performed by an internal technical reviewer qualified in accordance with TÜV Rheinland Japan Ltd. (TÜV Rheinland) qualification scheme for JI project determination and verification.

3.5 Determination team

The determination team consists of the following personnel indicated in Table 6 below:

Table 6 - Determination team

TÜV Rheinland Japan Ltd. (TÜV Rheinland)	
Dr. Manfred Brinkmann	Accredited Independent Entity Operational manager, TÜV Rheinland Japan Ltd. (TÜV Rheinland)
Dr. Lixin Li	Technical Reviewer
Dr. Valery Yakubovsky	Team Leader, Technical Competence Center Director
Mr. Vyacheslav Gonchar	Technical Expert
Mr. Rakovich Dmitry	Trainee

4 DETERMINATION FINDINGS

In the following subsections the determination findings are stated as follows:

1) the findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol (Annex A to the Determination report);
2) in case TÜV Rheinland Japan Ltd. (TÜV Rheinland) had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following subsections and are further documented in the Determination Protocol (Annex A to the Determination report). The determination of the Project resulted in 24 Corrective Action Requests (CARs) and 12 Clarification Requests (CLs) and 1 Forward Correction Action, which will be reviewed during the first verification;
3) the conclusions for determination subject are presented in each subsection.

The considerations, findings and means of verification for areas of determination are provided below in accordance with the Determination and Verification Manual (DVM). All information indicated in the following subsections relates to the PDD version 2.0 dated 13/09/2012 /2/ (hereinafter called "PDD").

4.1 Project approval by Parties Involved

In accordance with paragraphs 19 - 20 of the DVM the assessment of this area focuses on whether the designated focal points (DFPs) of all Parties listed as "Parties involved" in the PDD have provided written project approvals. It also should be assessed whether the written project approvals referred to above are unconditional.

The project has no written project approvals by Parties involved. "Glossary of joint implementation terms", version 03 /14/ defines the following:

a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines;

b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

To obtain a written project approval by the host Party (Ukraine) a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine. Written project approval by Republic of Latvia (Party involved in the project, other than the host Party) will be obtained before submission of the first verification report for publication in accordance with paragraph 38 of the JI guidelines.

The **FAR 01** was raised. It will be closed after issuing written project approvals by Parties involved.

Identified problem areas for project approval, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report (refer to FAR 01).

4.2 Authorization of project participants by Parties involved

In accordance with paragraph 21 of the DVM the assessment of this area focuses on whether each of the legal entities listed as project participants in the PDD is authorized by a Party involved, which is also listed in the PDD, through: a written project approval by a Party involved, explicitly stating the name of the legal entity; or any other form of project participant authorization in writing, explicitly stating the name of the legal entity.

The following legal entities were listed as project participants in the PDD:

- PJSC "Zakarpattyaoblenergo";
- Carbon Management Company GmbH.

The detailed information on project participants was indicated in section A.3. of the PDD. The contact information on project participants, explicitly stating the name of the legal entities, was provided in Annex 1 to the PDD.

Identified problem areas for authorization of project participants by Parties involved, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination Report.

4.3 Baseline Setting

In accordance with paragraphs 22 - 26 of the DVM the assessment of this area focuses on various aspects of the baseline setting by project participants.

The paragraph 22 of the DVM defines two following approaches selected for identifying the baseline:

(a) By using a methodology for baseline setting and monitoring developed in accordance with Appendix B of the JI guidelines (hereinafter referred to as JI specific approach);
(b) By using a baseline and monitoring methodology approved by the CDM Executive Board in its totality (hereinafter referred to as approved CDM methodology approach).

The project participants of the project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" selected the JI specific approach for identifying the baseline.

A baseline for the project was set in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). The JI specific approach is provided in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03 /6/.

The PDD provides a description of the chosen baseline in a clear and transparent manner according to "Guidelines for users of the joint implementation project design document form", version 04, as well as a justification per the "Guidance on criteria for baseline setting and monitoring", version 03 (paragraphs 23 - 29).

The desk review of the PDD and follow-up interviews provided enough reasons for TÜV Rheinland Japan Ltd. (TÜV Rheinland) to assess that the baseline for this JI project is established:

a) **By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.**
Plausible future scenarios are listed below:

- Scenario 1. Continuation of the current situation.
- Scenario 2. Proposed project activity, which is implemented without being registered as activity under JI project.
- Scenario 3. Construction of new power plants, operating on coal.
- Scenario 4. Continuation of the current situation with disconnecting project HPPs from the grid.

Analysis of each alternative of baseline scenario was assessed by TÜV Rheinland Japan Ltd.. (TÜV Rheinland) through the analysis of the PDD provides links to public information and follow-up interviews. All these scenarios do not contradict the current legislation of Ukraine.

All scenarios, except Scenario 1 - Continuation of the existing situation, face prohibitive barriers. Therefore, alternative scenario which contains continuation of the existing situation is the most plausible future scenario and is the baseline scenario for the project.

b) **Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel**

availability, power sector expansion plans, and the economic situation in the project sector.
In this context, the TÜV Rheinland Japan Ltd. (TÜV Rheinland) assessed whether the key factors that affect a baseline were taken into account. The project participants established the baseline taking into account the following key factors:

- sectoral reform initiatives;
- local fuel availability;
- power sector expansion plans;
- economic situation in the project sector;
- Investment barriers.

c) **In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors.**
The project participants applied the selected approach with transparency. Necessary information on approaches, assumptions, parameters, data sources and key factors is available in the PDD.

d) **Taking into account of uncertainties and using conservativeness assumptions.**
Project participants used default values to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.

e) **In such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure.**
According to the proposed approach emission reductions will be earned only within the project activity, so no emission reductions can be earned due to any changes outside the project activity or due to force majeure.

f) **By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate.**
The PDD draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03 as appropriate.

As the result of this analysis TÜV Rheinland Japan Ltd. (TÜV Rheinland) can confirm that the baseline for this project is established in accordance with criteria stated in the Appendix B of the JI guidelines and justified in accordance with paragraphs 23 - 29 of the "Guidance on criteria for baseline setting and monitoring", version 03.

Identified problem areas for baseline and additionality proofs, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.4 Additionality

In accordance with paragraphs 27 - 31 of the DVM the assessment of this area focuses on whether a project provides "a reduction in emissions by sources, or an enhancement of net removals by sinks, that is additional to any that would otherwise occur" in accordance with Article 6 of the Kyoto Protocol.

The paragraph 28 of the DVM defines three approaches used to demonstrate additionality – items (a), (b), (c) for JI specific approach.

Project participants used the "Tool for the demonstration and assessment of additionality" version 05.2 (hereinafter "Tool") for demonstration additionality (approach indicated in item (c) of paragraph 28 of the DVM). The "Guidance on criteria for baseline setting and monitoring" (paragraph 44 (a) of the Annex 1, version 03 defines the application of the most recent version of the "Tool" approved by the CDM Executive Board for demonstrating that the project provides reductions in emissions by sources that are additional to any that would otherwise occur. At the time of the PDD development, the version 05.2 was the most recent version of the "Tool".

Assessment of additionality was presented in section B.2. of the PDD.

The following steps are taken as per "Tool for the demonstration and assessment of additionality" version 05.2:
Step 1. Identification of alternatives to the project activity consistent with current laws and regulations;
Step 2. Investment Analysis;
Step 3. Barrier analysis (not applicable, it is optional);
Step 4. Common practice analysis.

The sufficient additionality proofs were provided to the AIE in the PDD and supporting documents. Additionality of the project was demonstrated appropriately as a result of the analysis using the "Tool".

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland Japan Ltd. (TÜV Rheinland) to assess that all explanations, descriptions and analyses in the demonstration of additionality were made in accordance with the selected version of the "Tool". The proposed JI activity provides the reductions in emissions by sources that are additional to any that would otherwise occur.

Identified problem areas for additionality of the project, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.5 Project boundary

In accordance with paragraphs 32 - 33 of the DVM the assessment of this area focuses on correct and complete delineation of the project boundary, inclusion and exclusion of any sources of greenhouse gases (GHGs) related to the baseline or the project.

It was assessed through the desk review of submitted documentation and follow-up interviews that project participants used the JI specific approach towards baseline setting in this project and establishing the project boundary.

The details on the project boundary were provided in section B.3. of the PDD. The desk review of submitted documentation enabled TÜV Rheinland Japan Ltd. (TÜV Rheinland) to assess that the project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:
• under the control of the project participants;
• reasonably attributable to the project; and
• significant.

Sources of GHG emissions in the baseline scenario, which is within the project are CO_2 emissions from electricity production in power plants that use fossil fuels, which are replaced by the project activity.

Sources of GHG emissions in the project scenario not indicated because electricity comes from renewable energy sources such as hydroelectric.

All gases and sources included in the project boundary were explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using figures 5 – 6 and the details were provided by table 16 in section B.3. of the PDD.

Identified problem areas for project boundary, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report (refer to CAR 14).

4.6 Crediting period

In accordance with paragraph 34 of the DVM the assessment of this area focuses on correct and complete provision of information on the projects starting date, expected operational lifetime and the length of the crediting period.

It was assessed through the desk review of submitted documentation and follow-up interviews that the project participants had correctly stated in the PDD:

- the starting date of the project that is 17/03/2004. The starting date of the project is after the beginning of 2000.
- the expected operational lifetime of the project in years and months that is 20 years or 240 months.
- the length of the crediting period (01/10/2008 - 31/12/2012) in years and months is 5 years or 60 months.

Project participants indicated 3 parts of crediting period in years and months in the PDD for this project that are:

Before the 1st part of crediting period 01/01/2005 - 31/12/2007
Length of the part of crediting period before the first commitment period of the Kyoto Protocol is 3 years or 36 months.

1st part of crediting period 01/10/2008 - 31/12/2012
Length of the part of crediting period within the first commitment period of the Kyoto Protocol is 4 years and 3 months or 51 months.

2nd part of crediting period 01/01/2013 - 31/12/2024
Length of the part of crediting period after the first commitment period of the Kyoto Protocol is 12 years or 144 months.

The desk review of submitted documentation and follow-up interviews enabled TÜV Rheinland Japan Ltd. (TÜV Rheinland) to assess that all information on the projects starting date, expected operational lifetime and the length of the crediting period is correct and complete.

Identified problem areas for crediting period, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.7 Monitoring plan

In accordance with paragraphs 35 - 39 of the DVM the assessment of this area focuses on assessing the completeness and correctness of the established monitoring plan and whether it meets the necessary requirements.

The paragraph 35 of the DVM defines two following approaches selected for establishment of the monitoring plan:
(a) JI specific approach;
(b) Approved CDM methodology approach.

The project participants of the project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" selected the JI specific approach with using elements of the approved methodology for establishment of the monitoring plan (ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" – version 12.3.0).

The monitoring plan was established in accordance with criteria stated in Appendix B to decision 9/CMP.1 (JI guidelines). JI specific approach is defined in paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", version 03.

The information indicated below, that refers to the components of monitoring plan, was assessed by TÜV Rheinland Japan Ltd. (TÜV Rheinland) through the desk review of the submitted documentation and follow-up interviews.

I. The chosen monitoring plan includes all procedures described in Methodology ACM0002 necessary for accurate and conservative calculation of emission reductions, describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance.
The monitoring plan will involve inparticular:
- Collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions from GHG sources occurring within the
project boundaries during the crediting period;
- Collection and archiving of all relevant data necessary for determining of the baseline level of anthropogenic emissions from GHG sources occurring
within the project boundaries during the crediting period;
- Identification of all potential sources as well as collection and archiving of data on increased anthropogenic emissions from GHG sources outside the
project boundaries that are significant and can be reasonably attributed to the project during the crediting period;
- Quality assurance and control procedures of the monitoring process;
- Procedures for the periodic calculation of the reductions of anthropogenic emissions by sources according to the proposed JI project and leakage effects if any.

II. The established monitoring plan specifies the indicators, constants and variables that are reliable and provide consistent and accurate values; are valid and clearly connected with the effect to be measured, and that provide a transparent picture of the emission reductions to be monitored. The default values which were used in the monitoring plan were selected by carefully balancing accuracy and reasonableness. These values originate from recognized sources, are supported by

statistical analyses providing reasonable confidence levels and are presented in a transparent manner in the PDD.

III. The monitoring plan provided detailed information on the collection and archiving of all relevant data necessary for determining of baseline emissions. According to the selected CDM methodology for the production of electricity from renewable energy sources by the proposed JI project there are any project emissions PE_y = 0 and leakage occurs.

IV. For those values that are to be provided by the project participants it is clearly indicated, how the values are to be selected and justified by explanation of what types of sources are to be used and the vintage of data to be used. For all values the precise references from which these values are taken are clearly indicated in section D of the PDD and the conservativeness of the values is justified. The sources from which the data are obtained do not foresee the situations where the expected data are not available.

V. The International System Units (SI units) are used for values provided by the project participants.

VI. Any parameters, coefficients, variables that are used to calculate baseline emissions but are obtained through monitoring are noted. The desk review of the documentation showed that the consistency between the baseline and monitoring plan is ensured.

VII. The project activity will include monitoring of GHG emissions in the baseline and project scenarios. Variables to be monitored in the baseline and project scenarios include the parameters listed in section D of the PDD.

VIII. The monitoring plan draws on the list of standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring", version 03, as appropriate.

IX. The established monitoring plan described the methods employed for data monitoring (including its frequency) and recording. This information is provided in the tabular format in section D.2. of the PDD. The monitoring plan also elaborates all algorithms and formulae used for the calculation of baseline emissions and project emissions. The underlying rationale for the algorithms and formulae is sounded and explained as necessary. The project participants used consistent variables, equation formats, subscripts etc.; numbered all equations throughout the PDD; defined and indicated all variables and constants with units.

X. The conservativeness of the algorithms and procedures is justified and methods to quantitatively account for uncertainty in key parameters are

included, to the extent possible. References for all parameters are provided as necessary. It is clearly stated in the PDD which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed. The desk review of the documentation showed that the consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline is ensured.

XI. The national and international monitoring standards are not applied to monitor certain aspects of the project.

XII. A clear management structure will be identified to establish the division of responsibilities for gathering monitoring data. PJSC "Zakarpattyaoblenergo" is responsible for performance of monitoring, data collection, registration, visualization, storage and reporting of data that were monitored, and periodic inspection of measuring instruments.

XIII. National monitoring standard Automated commercial electricity metering (ACEM) using as the main source of data for "Amount of electricity production supplied by the project HPPs to the grid in year *y*".

XIV. The monitoring plan, on the whole, reflects good monitoring practices: the structure of data collection is clearly defined; all data concerning the greenhouse gas emissions within the project boundaries is monitored and used in calculations appropriately; all meters are properly calibrated and accurately show the importance of measuring parameters.

XV. This monitoring plan is also used in the other projects. The monitoring plan generally reflects good practice of monitoring: data acquisition structure is clearly defined, all data on greenhouse gas emissions within the project are determined and calculated properly.

Table 7. Data and parameters that monitoring during crediting period.

Параметр	**Одиниці вимірювання**	**Найменування**
$EG_{PJ,y}$	MWh/year	Net electricity transmitted to the grid by the project plant in year y
$EF_{grid,produced,y}$	$kgCO_2$-e/kWh, tCO_2-e/MWh	Specific CO_2 emission factor for IPS of Ukraine for the projects activite which are aimed at producing electricity

Identified problem areas for monitoring plan, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination.

4.8 Leakage

In accordance with paragraphs 40 - 41 of the DVM this area focuses on checking of the assessment of the potential leakage in the project.

The project "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" used the JI specific approach for baseline setting.

Project participants of the project Power generation at HPPs of PJSC "Zakarpattyaoblenergo" according to paragraph 11 of Guidance choose the approved CDM methodology approach using selected elements of approved CDM methodology for establishing of monitoring plan (ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0).

According to the chosen CDM methodology no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as flooded areas for creating a water reservoir of power plant and upstream emissions from fossil fuel use (e.g. extraction, processing and transport). These emissions sources are neglected.

Identified problem areas for leakage, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.9 Estimation of emission reductions

In accordance with paragraphs 42 - 47 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided methods and results of emission reduction estimates in the JI project.

The paragraph 42 of the DVM defines two following approaches to estimate the emission reductions or enhancement of net removals generated by the project selected the JI specific approach:
(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario; or
(b) Direct assessment of emission reductions.

As per JI specific approach project participants chose the following approach to estimate the emission reductions generated by the project: assessment of emissions in the baseline scenario and in the project scenario. According to this approach emission reductions were calculated as follows:

$$ER_y = BE_y - PE_y \quad (1)$$

Where:

ER_y – GHG emission reductions in year *y* [tCO_2e];
BE_y – Sum of GHG emissions in baseline scenario in year *y* [tCO_2e];
PE_y – Sum of GHG emissions in project scenario in year *y* [tCO_2e].

Ex ante estimates of emissions for the baseline scenario (within the project boundary) and emission reductions are provided in section E of the PDD. These estimates in the PDD are given on a periodic basis, from the beginning until the end of the crediting period, in tonnes of CO_2 equivalent, using appropriate emission factor. The formula used for calculating these estimates are consistent throughout the PDD.

The baseline emissions of the project are calculated under the formula:

$$BE_y = EG_{PJ,y} \cdot EF_{grid,y} \quad (2)$$

Where:

BE_y – Baseline emissions in period *y* [tCO_2];
$EG_{PJ,y}$ - Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the JI project activity in period y [MWh];
$EF_{grid,y}$ - CO_2 emission factor for the Ukrainian energy grid for electricity generation projects [$kgCO_2/kWh$, tCO_2/MWh].

All algorithms and formulae for calculating emissions in the baseline scenario of the project are described under sections B.1 and D.1. of the PDD. The details of the calculation are provided in the GHG emission reductions calculation spreadsheet in Excel format.

The project emissions:

$$PE_y = 0 \quad (3)$$

According to applied CDM Methodology Leakages are not considered.

It was assessed by the desk review of submitted documentation, especially GHG emission reductions calculation spreadsheet in Excel format that key factors influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account. Data sources used for calculating the estimates referred above are clearly identified, reliable and transparent. Emission factors used for calculating the estimates referred to above, were selected by carefully balancing accuracy and reasonableness, and the choice is appropriately justified. The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner. The estimates of emission reductions are consistent throughout the PDD version 2.0 dated 13/09/2012. The annual average of estimated emission reductions over the crediting period is calculated by

dividing the total estimated emission reductions over the crediting period by the total months of the crediting period, and multiplying by twelve.

According to the PDD and GHG emission reductions calculation spreadsheet in Excel format the emissions for the project scenario, emissions for the baseline scenario and emission reductions are provided in tables 9 and 10 below.

Table 8 – Estimated emission reductions generated by the project before the 1st part of crediting period

Period:	**01/01/2005 – 31/12/2007**
Emissions for the project scenario:	0 tCO_2e
Emissions for the baseline scenario:	300 497 tCO_2e
Leakages	0 tCO_2e
Emission reductions:	300 497 tCO_2e
Annual average of estimated emission reductions:	100 166 tCO_2e

Table 9 – Estimated emission reductions generated by the project over the 1st part of crediting period

Period:	**01/10/2008 – 31/12/2012**
Emissions for the project scenario:	0 tCO_2e
Emissions for the baseline scenario:	714 647 tCO_2e
Leakages	0 tCO_2e
Emission reductions:	714 647 tCO_2e
Annual average of estimated emission reductions:	142 929 tCO_2e

Table 10 - Estimated emission reductions generated by the project after the 1st part of crediting period

Period:	**01/01/2013 – 31/12/2024**
Emissions for the project scenario:	0 tCO_2e
Emissions for the baseline scenario:	1 680 336 tCO_2e
Leakages	0 tCO_2e
Emission reductions:	1 680 336 tCO_2e
Annual average of estimated emission reductions:	140 028 tCO_2e

Identified problem areas for calculation of GHG emission reductions, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.10 Environmental impacts

In accordance with paragraph 48 of the DVM the assessment of this area focuses on checking the completeness and correctness of the provided

information on the assessment of the environmental impacts of the JI project.

The host Party for the project is Ukraine. The conclusions and all references to supporting documentation of environmental impacts are provided in section F of the PDD. Impact Assessment (EIA) wasn't develope for the project activity since the project activity is not covered by any requirements for EIA for hydropower plants. Transboundary impacts of the project activity doesn't occur.

Identified problem areas for environmental impacts, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.11 Stakeholder consultation

In accordance with paragraph 49 of the DVM the assessment of this area focuses on checking if stakeholder consultation was undertaken in accordance with procedures as required by the host Party.

The host Party for the project is Ukraine. The local population was informed through the media about the projects. Since the project has a positive effect to improve the environment and social status, received only positive feedback on the project. The project complies with the applicable standards and requirements in Ukraine.

Identified problem areas for environmental impacts, project participants' responses and conclusions of TÜV Rheinland Japan Ltd. (TÜV Rheinland) are described in Annex A to the Determination report.

4.12 Other areas

In accordance with paragraphs 50 - 73 of the DVM the assessment of the areas such as additional elements for assessment in determination regarding small-scale projects, determination regarding land use, land-use change and forestry projects, determination regarding programmes of activities is not applicable to this JI project.

5 SUMMARY OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

According to paragraph 32 of the JI Guidelines, the AIE shall make the project design document publicly available through the secretariat, subject to confidentiality provisions set out in paragraph 40 of the JI Guidelines, and receive comments from Parties, stakeholders and UNFCCC accredited observers on the project design document and any supporting information for 30 days from the date the project design document is made publicly available.

TÜV Rheinland Japan Ltd. (TÜV Rheinland) published the project design document (version 1.0 dated 18/06/2012) on the website TÜV Rheinland Ukraine (http://www.tuv.com.ua) on 09/08/2012 and invited comments within 10/09/2012 by Parties, stakeholders and non-governmental organizations.

There were no comments from Parties, stakeholders and UNFCCC accredited observers received.

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ANNEX A: JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**FAR 01**	Table 2, section A.5. **FAR 01.** The project has no written project approvals by Parties involved. "Glossary of joint implementation terms", version 03 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			paragraph 38 of the JI guidelines, at the latest. To obtain a written project approval (Letter of Approval) a final Determination Report should be submitted to the State Environmental Investment Agency of Ukraine. Written project approval by a Party involved in the JI project, other than the host Party will be obtained before the first verification.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	**OK**	Please refer to Table 2, section B.
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (b)	**OK**	Article 5 requires: “Each Party included in Annex I shall have in place, no later than one year prior to the start of the first commitment period, a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases”. According to the Article 7: “Annex I Parties to submit annual greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol”.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			Switzerland has submitted its Initial Report on December, 10th, 2006. 10 грудня 2006 р.: http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php
4. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Kyoto Protocol Article 6.1 (d)	**OK**	Please refer to Table 2, section B.2.
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	**OK**	Ukraine has designated its Focal Point. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine: State Environmental Investment Agency of Ukraine 35 Urytskogo St, Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Ukrainian national guidelines and procedures for the approval of JI projects are available on the site www.neia.gov.ua. On February 22, 2006 the Cabinet of Ministers of Ukraine adopted the Regulation № 206, which established assessment and implementation procedures of JI projects within the Kyoto Protocol.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	**OK**	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at February 4th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	**OK**	The arranged extent for Ukraine is 100% of its emissions by 1990. In the Initial Report (Ukraine's Initial Report Under Article 7, Paragraph 4, Of The Kyoto Protocol) submitted by Ukraine to the UNFCCC Secretariat, on the 26 May 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO_2e http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_report.pdf Currently Ukraine has submitted to the UNFCCC its fifth national communication on climate change under the Kyoto Protocol.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	**OK**	The designed system of the national registry has been described in the Initial Report: http://unfccc.int/files/national_reports/initial_reports_under_the_kyoto_protocol/application/pdf/ukraine_aa_rep

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
			ort.pdf
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	**OK**	Project participant submitted PDD that contains all information needed for the determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	**OK**	TÜV Rheinland Japan Ltd. (TÜV Rheinland) published the project design document on the http://www.tuv.com.ua website from 09/08/2012. till 10/09/2012. There were no comments from Parties, stakeholders and UNFCCC accredited observers received.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	**OK**	Please refer to Table 2, section F.
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, section B.
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	**OK**	Please refer to Table 2, section B.
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to	Marrakech Accords, JI Modalities,	**OK**	Please refer to Table 2, section B.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/Comment
force majeure.	Appendix B		
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	**OK**	Please refer to Table 2, section D.
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	"Glossary of Joint Implementation Terms", Version 03.	1. Conclusion is pending a follow-up on **FAR 01**.	Please refer to Table 2, section A. Project participant from Ukraine will authorized by Host party by obtaining project approval.

Table 2 - Requirements Checklist

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
A. General description of the project					
A.1. Title of the project					
1.1. Does the provided title of the JI project represent project activity?			Name of the project: "Power generation at HPPs of PJSC "Zakarpattyaoblenergo" clearly refers to an activity.	**OK**	**OK**
1.2. Is(are) the sectoral scope(s) to which the project pertains presented?			The sectoral scope: (1) Energy industries (renewable/non-renewable sources).	**OK**	**OK**
1.3. Are the version number and date of the document presented?			Initial version of the PDD: PDD version 1.0 from 18/07/2012 Final version of the PDD: PDD version 2.0 from 13th of September 2012	**OK**	**OK**
A.2. Description of the project					
2.1. Is the purpose of the project indicated (with the concise, summarizing explanation of the situation existing prior to the starting date of the project, baseline scenario and project scenario)?			The purpose of the project: reconstruction of small-scale hydropower plants (HPP) to replace electricity from gas and coal thermal generating stations on renewable energy which is produced by small-scale hydropower plants.	**CAR 01** **CL 01** **CL 02**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			Brief explanation of the situation that existed prior to project implementation, baseline and project scenario are described in a consistent and transparent manner in section A.2. of the PDD. **CAR 01.** Please provide a rough estimate of the financial component for the realization of the all complex of works on the reconstruction of HPP. **CL 01.** Please clarify whether conducted expert assessment of stations state and work of equipment before the starting the project realization. **CL 02.** Please provide to the AIE documentary evidence of the plan of actions on comprehensive reconstruction of power station.		
2.2. Is the history of the Project including its JI component summarized?			In Section A.2. of the PDD a brief description of the history of the project is provided, including its JI component. **CAR 02.** Provide objective evidence of consideration of extra income from the ERUs sale as launching of the project implementation.	**CAR 02**	**OK**
2.1.1. Is it clarified how the proposed project			In Section A.2. of the PDD explained that	**CL 03**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
activity reduces emissions GHG that would occur in the baseline scenario?			the project activity will reduce GHG emissions due to displacement of electricity generated by power plants in Ukraine on electricity generated by reconstructed small HPPs of PJSC "Zakarpattyaoblenergo." **CL 03.** Please clarify whether the project will not lead to an increase of the amount of existing reservoirs, and what is their capacity? **CL 04.** Please explain whether replacement of the main power equipment in 2012 (as shown in Table 4) provided in the plan of the project lead to review of the monitoring plan.	**CL 04**	
A.3. Project participants					
3.1. Are project participants and Party(ies) involved in the project listed?			Project participants and Parties involved are ibndicated in Section A.3. of the PDD: - PJSC "Zakarpattyaoblenergo" (Ukraine) - Carbon Management Company GmbH) (Switzerland)	**OK**	**OK**
3.2. Is contact information provided in Annex 1 of the PDD that is indicated in section A.3?			Contact information on project participants and responsible persons listed in Annex 1	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			of the PDD.		
3.3. Is it indicated, if the Party involved is a host Party?			Ukraine is indicated as a host party of the project.	OK	OK
3.4. Is it indicated, if it is the case, if the Party involved wishes to be considered as a project participant?			The Party involved doesn`t wish to be considered as a project participant.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project					
4.1.1. Host Party(ies)			Ukraine	OK	OK
4.1.2. Region/State/Province etc.			Zakarpattya Region	OK	OK
4.1.3. City/Town/Community etc.			Zakarpattya Region	OK	OK
4.1.4. Detail of the physical location, including information allowing the unique identification of the project (maximum one page)					
4.1.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s) (this section should not exceed one page)?			Section A.4.1.4. of the PDD contains information of the physical location of the project activity. This section does not exceed one page.	OK	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
4.2.1. Are the technology (ies) to be employed, or measures, operations or actions to be implemented by the project described?			The technology to be used and actions to be implemented under the project are described in section A.4.2. of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
4.2.1.1. Does the project design engineering reflect current good practices?			Project design engineering includes measures necessary for stable operation and the safety of the station (warning of dangerous situations). **CAR 03.** Please clearly state if the reconstruction includes measures requiring capital investments and not regular maintenance and preventive measures. **CL 05.** Please indicate in section A.4.2 of the PDD if technical project proposal and the measures envisaged in the project reflects current practice.	**CAR 03** **CL 05**	**OK**
4.2.1.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?			The project envisages rehabilitation of existing hydropower plants with major refurbishment or installation of new and urgent measures for normal work station. **CL 06.** Please provide a clear definition of whether the project uses (will use) modern technology or technology that will lead to much better productivity than a technology commonly used in Ukraine.	**CL 06**	**OK**
4.2.1.3. Is the project technology likely to be substituted by other or more efficient			PJSC "Zakarpattyaoblenergo" plans the fulfillment of repair work from current to	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
technologies within the project period?			capital on HPPs that they operate. This term is based on existing experience, both own international practice of small HPPs. Without this service small hydropower plants gradually wear out, their lifespan is running outand they are not suitable for use. Such technical maintenance contributes to the effective long-term operation of these power plants. Please refer to **CL 06**.		
4.2.2. Are all relevant technical data and the implementation schedule indicated?			The relevant technical data and project implementation schedule are specified in section A.4.2. of the PDD.	**OK**	**OK**
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
4.3.1. Is it indicated how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed project?			Anthropogenic GHG emissions reductions will be achieved due to the fact that that electricity, which was transferred to the grid from reconstructed HPPs as a result of the project implementation, which would, otherwise, be produced by work of power plants, connected to the grid that run on fossil fuels. More information on how to be achieved anthropogenic emissions of greenhouse	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			gases from sources by the proposed project is specified in section A.4.3. PDD.		
4.3.2. Is it stated why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances?			Section A.4.3. of the PDD contains information about why the emission reductions would not occurr in the absence of the proposed project. However, not all national initiatives were reviewed and not all benefits from the "green tariff" were mentioned in the PDD.	**OK**	**OK**
4.3.3. Are the estimates of anticipated total reductions provided in tonnes of CO_2 equivalent as determined in section E of the PDD. (This section should not exceed one page).			Estimated total reductions in tonnes of CO_2 equivalent are described in section A.4.3.1. as defined in section E of the PDD.	**OK**	**OK**
A.4.3.1. Estimated amount of emission reductions over the crediting period					
4.3.1.1. Is it provided the length of the crediting period and estimates of total as well as annual emission reductions using the appropriate tabular format?			General and estimated annual emission reductions over the chosen crediting period of the project in tonnes of CO_2 equivalent described in section A.4.3.1. PDD. Information is provided in tabular form in accordance with the "Guidelines for users of the JI PDD form", version 04.	**OK**	**OK**
4.3.1.2. Is the annual average of estimated emission reductions or enhancements of net			Annual average of estimated GHS emission reductions were identified correctly according to the rules and	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			formulas under the of the Determination and Verification Manual.		
A.5. Project approval by the Parties involved					
5.1. Are written project approvals by the Parties involved attached? Are they unconditional?			Written project approvals by the Parties involved have not obtained at this stage of the project. Information on the procedures for receiving written project approvals by Parties involved specified in section A.5. of the PDD. **Please refer to FAR 01.**	**OK**	**OK**
B. Baseline					
B.1 Description and justification of the baseline chosen					
1.1. Is it indicated in the PDD: - a detailed theoretical description of the baseline in a complete and transparent manner, as well as a justification of chosen baseline using the step-wise approach; - a justification of baseline setting; - references on regulations according to baseline setting.			Detailed theoretical description, justification of the chosen baseline is provided in section B.1. using a stepwise approach. This section also contains all references to all regulations and data sources used to establish the baseline. **CAR 04.** Provide accurate reference in section B and section D on approach for baseline setting and monitoring of	**CAR 04**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			Guidance on criteria for baseline setting and monitoring (version 03) (hereinafter - Guidance).		
1.2. Does the PDD explicitly indicate the approach used for identifying the baseline with references on regulations?			To identify the baseline, the approach was chosen using the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0. Description and justification of the baseline chosen is given in section B.1. **CAR 05.** Please correct version number of CDM methodology (from 12.2.0 to 12.3.0) used in the project**.** **CL 07.** Please explain using an old version of the methodology applied to this project because at the time of Project Design Document (PDD) presentation, version 12.3.0 CDM ASM0002 has been updated to version 13.0.0.	**CAR 05** **CL 07**	**OK**
1.3. Is it indicated in the PDD that baseline was established:					
1.3.1. by listing and describing plausible (alternative) future scenarios on the basis of			Baseline scenario is established using elements of approved monitoring	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
conservative assumptions and selecting the most plausible one?			methodology ACM0002. In Section B.1 of the PDD it is also described reasoning for the choice of baseline in accordance with the Guidances.		
1.3.2. taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector?			National policies and reforms in the field of renewable energy were taken into account when justifying the baseline. Analysis of obstacles and barriers of the implementation of these reforms is presented in section B.1.	**OK**	**OK**
1.3.3. in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?			Project participants for establishing the baseline emission level use elements of the approved CDM baseline scenario and monitoring methodology ACM0002. All assumptions, parameters, data sources and key factors refer to authoritative sources. But not all of these data sources used according to the proposed project activity. **CAR 06.** Please use the CO_2 emission factors for UPS of Ukraine for **electricity production** approved by designated focal point of Ukraine for 2008 - 2011, according to the Order of the State Environmental Investment Agency of Ukraine # 62, 63, 43, 75 "On approval of specific carbon dioxide emissions factors	**CAR 06**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			for 2008 - 2011". For the period 2012 - 2024 – the latest available carbon emission factor.		
1.3.4. taking into account of uncertainties and using conservative assumptions?			During establishing the baseline, project participants used elements of the approved methodology ACM0002 and made a number of assumptions, taking into account the uncertainty and conservative assumptions, they are described in section B.1.	**OK**	**OK**
1.3.5. in such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure?			Baseline includes reducing greenhouse gas emissions only by substitution of electricity derived from burning fossil fuels (natural gas and coal, etc) on power plants for electricity from renewable sources of energy (energy of water). Reducing emissions outside the project can not be obtained as a result of force majeure, as Ukraine has an extensive system of energy production (with significant excess reserve capacity) and combined electric transport system that ensures stable operation and reliability of the grid.	**OK**	**OK**
1.3.6. by drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”?			The baseline scenario is not set using all standard variables contained in Appendix B to "Guidance on criteria for baseline setting and monitoring".	**CAR 07**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 07. Please correct all the variables according to the methodology used for baseline emissions calculation using elements of CDM methodology "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" or explain the use of these elements in altered form.		
1.4. If a multi-project emission factor is used, does the PDD provide appropriate justification?			Project participants do not use multi-project emission factors.	**OK**	**OK**
1.5. Are the title, reference number and version of the approved CDM methodology clearly indicated in the context of the project?			The title, reference number and version of the approved CDM methodology are indicated in the PDD.	**OK**	**OK**
1.6. Is the applied version of the CDM methodology the most recent one and/or is this version still applicable?			Methodology specified in the PDD - ACM0002 version 12.3.0, but the period of use of the given methodology version at the beginning of baseline setting was expired. **Please refer to CL 07.**	**OK**	**OK**
1.7. Is it described how the chosen approach is applied in the context of the project?			Description of the approach chosen in the context of the project are given in section B.1. The project participants for establishing the baseline use elements of the approved CDM baseline scenario and monitoring methodology ACM0002.	**OK**	**OK**
1.8. Are the key information and data used to establish the baseline (variables, parameters, data			In the PDD key information and data used to establish the baseline (variables,	**CAR 08** **CAR 09**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
sources etc.) indicated in tabular form?			parameters, data sources) are given in the tabular form. But some data sources have a common status. **CAR 08.** Please number and add table titles specified in section B.1. PDD. **CAR 09.** Please provide more specific source of data used (to be used).		
1.9. Are all regulations and sources clearly referenced?			In the PDD clearly referenced all regulations and data sources. However, not all of the references lead to the specified document. **CAR 10.** Reference 14 does not lead to relevant document which is specified in the reference. Please provide the correct reference.	**CAR 10**	**OK**
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
2.1. Is the demonstration of project additionality indicated and described in the PDD using the step-wise approach?			The following step-wise approach demonstrates that this project provides a reduction of emissions from their sources that are additional to those emission reductions that would otherwise be created: This information is provided in section B.2.of the PDD. This description corresponds to the "Guidelines for users of	**CL 08**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			the JI PDD form", version 04. **CL 08.** The most recent version of the "Tool for the demonstration and assessment of additionality" is version 06.0.0. Please justify using a previous version of the tool used for this project.		
2.2. Does the PDD provide a justification of the applicability of the approach with a clear and transparent description with relevant reference on regulations?			The PDD states that for demonstrating additionality under the applied methodology ACM0002, "Tool for the demonstration and assessment of additionality", version 05.2 approved by the CDM Executive Board is used. The applicability of the methodology ACM0002 described in section B.1. **Please refer to CL 08.**	**OK**	**OK**
2.3. Is it described how the chosen approach is applied in the context of the project?			In section B.2 of the PDD provides detailed information on the approach use in the context of the project.	**OK**	**OK**
2.4. Are additionality proofs provided?					
2.4.1. If the application of the most recent version of the “Tool for the demonstration and assessment of additionality” is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?			Explanation, description and analysis performed in accordance with the "Tool for demonstration and assessment of additionality" (Version 05.2).	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.4.2. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?			The analysis, which indicates that the emissions in the baseline scenario would likely exceed the emissions in the project scenario is given in section B.2. However, given supporting documentation is not enough to confirm that the baseline emissions occur in the absence of the project. **CAR 11.** Provide evidence that in the absence of the project the station is most likely to be deactivated and preserved (closed) or continued production of electricity on an average level.	**CAR 11**	**OK**
2.4.3. Is it demonstrated that the project activity itself is not a likely baseline scenario?			Baseline scenario - is closing of HPP because of an emergency situation of hydrological facilities and equipment for the production of energy. The measures envisaged in the project scenario is a set of works for the maintenance and safe operation of hydroelectric power plants in the trouble proof condition.	**OK**	**OK**
2.5. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?			Consistency with mandatory laws and regulations is described in Sub-step 1b in section B.2. of the PDD.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			Summary of national policy is provided. Documents relating to the energy sector and renewable energy were analyzed and demonstrate plans and trends in the industry.		
B.3. Description of how the definition of the project boundary is applied to the project					
3.1. Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: - under the control of the project participants; - reasonably attributable to the project; - significant?			The project boundaries are clearly defined in the PDD encompasses all anthropogenic emissions by sources of greenhouse gas emissions related to the project and are under the control of the project.	**OK**	**OK**
3.2. Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 3.1. above?			Project boundaries are defined on estimates of each case separately according to the criteria specified in paragraph 3.1.	**OK**	**OK**
3.3. Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?			The PDD describes and grounded properly defining of the project boundaries and included gases and sources using the corresponding figures in section B.3.	**OK**	**OK**
3.4. Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately			To determine the baseline an approach using the approved CDM methodology was chosen.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
justified?			Approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" was chosen to establish the baseline of the proposed project activity. All included gases and sources are clearly defined and exclusion of any sources related to the baseline or projects are reasonably substantiated.		
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
4.1 . Is the date of the baseline setting presented (in DD/MM/YYYY)?			Date of the baseline setting: 17/07/2012.	**OK**	**OK**
4.2 . Is the contact information of persons setting the baseline provided?			Baseline was established by the PDD designer, Carbon Management Company GmbH. Data is provided in Annex 1 of the PDD version 2.0.	**OK**	**OK**
4.3 . Is the person/entity also a project participant listed in Annex 1 of PDD?			Carbon Management Company GmbH is the project participant. Data is provided in Annex 1 of the PDD version 2.0.	**OK**	**OK**
C. Duration of the project/crediting period					
C.1. Starting date of the project					
1.1. Is the project's starting date clearly defined?			Starting date of the project: 17/03/2004	**CAR 12**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 12. Please provide supporting documents to prove starting date of the project, on which implementation or construction or real action of the project begins.		
1.2. Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?			Yes. It is confirmed by the minutes of the general meeting of shareholders of PJSC "Zakarpattyaoblenergo" for developing and implementing the reconstruction of HPP (Protocol # 4).	**OK**	**OK**
1.3. Is the starting date after the beginning of 2000?			Yes. The starting date of the project is after the beginning of 2000.	**OK**	**OK**
C.2. Expected operational lifetime of the project					
2.1. Is the project's operational lifetime clearly defined in years and months?			Length of the project`s operational lifetime is indicated in years and months (20 years or 240 months). **CAR 13.** Please indicate the duration of periods (beginning - end of the period) for all life stages of the project (before the crediting, the crediting, after crediting periods).	**CAR 13**	**OK**
C.3. Length of the crediting period					
3.1. Is the length of the crediting period specified in years and months?			Length of the crediting period is specified in years and months in section C.3. of the PDD. Starting date of the crediting period - the date of the first emission reductions	**CAR 14**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			generated by the project - should be documented (eg, act of completion, act of putting equipment into service, etc.). **CAR 14.** Please provide supporting documents of the crediting period starting date mentioned in the PDD.		
3.2. Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?			In the PDD it is indicated the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not exceed the operational lifetime of the project. **CL 09.** Please provide evidence that the equipment after the project implementation will operate within the specified period.	**CL 09**	**OK**
3.3. If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?			The crediting period 2013 - 2024 extends beyond 2012. The PDD states that the extension of credit period would be subject to the approval of the host Party. Calculations of emission reductions provided separately for 2012 and after 2012 on all relevant sections of the PDD.	**OK**	**OK**
D. Monitoring Plan					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
D.1. Description of monitoring plan chosen					
1.1. Is it indicated in PDD a detailed theoretical description in a complete and transparent manner, as well as a justification of chosen monitoring plan using the step-wise approach?			Detailed theoretical description, in a complete and transparent manner and justification of monitoring plan chosen with using a step-wise approach was provided by the project participants in Section D.1. of the PDD.	**OK**	**OK**
1.2. Does the PDD explicitly indicate the chosen approach used for monitoring with references on regulations?			In Section D.1.of the PDD is indicated that for the monitoring approach using elements of the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0 was chosen. **CAR 15.** Please provide a valid reference number on the paragraph of Appendix 1 of Guidance on criteria for baseline setting and monitoring (version 03).	**CAR 15**	**OK**
1.3. Is the applied methodology considered being the most appropriate one?			Using of the applied CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", is the most appropriate for the given project. This procedure is also used for other	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			similar projects. Section B.1. of the PDD describes the applicability of the selected approved CDM methodology to the project.		
1.4. If national or international monitoring standart has to be applied to monitor certain aspects of the project, is this standart identified and is the reference as to where a detailed description of the standart can be found provided?			Automated commercial electricity metering (ACEM), which is the national standard of monitoring and applied to certain aspects of monitoring. References and descriptions are provided in Section D.1.	**OK**	**OK**
1.5. Are the description of the assumptions, formulas, parameters, data sources and key factors indicated?			Description of all assumptions, formulas, parameters, data sources and key factors are stated in the PDD in accordance with the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0.	**OK**	**OK**
1.5.1. Is it stated how uncertainties are taken into account and conservativeness is safeguarded?			In Section D.1. of the PDD stated that for monitoring the approach using the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0 was chosen.	**OK**	**OK**
1.6. Is it described how the chosen approach is applied in the context of the project?			Section D.1. PDD describes the application of the approach in the context	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			of the project.		
1.7. Does the monitoring plan explicitly and clearly distinguish: 1) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; 2) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination regarding the PDD; 3) data and parameters that are monitored throughout the crediting period?			Section D.1. of the PDD explicitly and clearly stated: 1) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; 2) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination regarding the PDD; 3) data and parameters that are monitored throughout the crediting period. **CAR 16.** According to the chosen CDM methodology "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0, data source for the parameter $EG_{PJ,y}$, "Net electricity generation that is produced and fed into the grid by the project power station in	**CAR 16** **CL 10**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			year" is the electricity meters. Please correct the data source for the relevant parameters in the relevant sections. **CL 10.** Does HPP use for power station work electricity from the electric grid of Ukraine. And does station require other energy resource for its work?		
1.8. Are alternative tables used instead of using the tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2. in line with the approach regarding monitoring chosen for all data/parameters?			Alternative tables for all data/parameters are not used instead of tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2.	**OK**	**OK**
1.8.1. Are all the required data / parameters according to the used methodology indicated?			In the project a specific approach with using elements of the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0 was chosen. Section D.1. PDD lists all the required data /parameters according to the methodology used.	**OK**	**OK**
1.9.Checklist for parameters Data Checklist / Parameter Title Is the title in line with ethodology? Are data unit correctly expressed? Is the appropriate description of parameter			Alternative tables for all data/parameters are not used instead of tables provided in sections D.1.1.1., D.1.1.3., D.1.2.1., D.1.3.1. and D.2.	**OK**	**OK**

CHECKLIST QUESTION		Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
indicated?						
Is the time of monitoring clearly indicated?						
Is the source clearly referenced?						
Is the correct value provided?						
Has this value been verified?						
Is the choice of data correctly justified or is the measurement method correctly described?						
Are quality control and quality assurance procedures indicated?						

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario					
1.1.1. Is the option 1 used for monitoring of the emissions in the project scenario and the baseline scenario?			In this section, any information is not available. **CAR 17.** Please provide relevant information or statement that this section is left blank on purpose.	**CAR 17**	**OK**
D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived					
1.1.1.1. Are the data to be collected in order to monitor emissions from the project described?			According to the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0 project emissions euqal zero. **CAR 18.** Please, in Section D.1.1.1 exclude from the list of data "Project emissions" so as to be collected in order to monitor emissions from the project (since PE = 0).	**CAR 18**	**OK**
1.1.1.2. Is it indicated how the data will be archived?			Project emissions euqal zero.	**OK**	**OK**
1.1.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?			N/A. Project emissions euqal zero.	**OK**	**OK**
D.1.1.2. Description of formulae used to estimate project emissions (for each gas, source etc.;emissions in units of					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
CO_2 equivalent)					
1.1.2.1. Are the formulae clearly and consistently indicated throughout the PDD?			All formulae are clearly and consistently indicated throughout the PDD.	**OK**	**OK**
D.1.1.3. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived					
1.1.3.1. Are the data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary described?			The data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are indicated and described in Section D.1.1.3. of the PDD. **CAR 19.** Provide more information on measuring devices, participating in monitoring of GHG emissions.	**CAR 19**	**OK**
1.1.3.2. Is it indicated how data will be archived?			Yes. Section D.1.1.3. defined the way how data will be archived. Data will be archived in electronic and paper form.	**OK**	**OK**
D.1.1.4. Description of formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent)					
1.1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?			All formulas are clearly and consistently indicated throughout the PDD.	**OK**	**OK**
D.1.2. Option 2 - Direct monitoring of emission reductions from the project (values should be consistent with those in section E.)					
1.2.1. Is the option 2 used for monitoring of			The option 2 is not used for monitoring of the emissions in the project.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
the emissions in the project scenario and the baseline scenario?					
D.1.2.1. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived					
1.2.1.1. Are the data to be collected in order to monitor emissions from the project described?			N/A	**OK**	**OK**
1.2.1.2. Is it indicated how the data will be archived?			N/A	**OK**	**OK**
1.2.1.3. Is it indicated that data monitored are to be kept for two years after the last transfer of ERUs for the project?			N/A	**OK**	**OK**
D.1.2.2. Description of formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):					
1.2.2.1. Are the formulae clearly and consistently indicated throughout the PDD?			All formulas are clearly and consistently indicated throughout the PDD.	**OK**	**OK**
D.1.3. Treatment of leakage in the monitoring plan					
1.3.1. Are data and information that will be collected in order to monitor leakage effects of the project described, if applicable?			Section D.1.3. PDD states that there are no leakeges described in the methodology related to project activities.	**OK**	**OK**
1.3.2. Are formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent) described?			N/A	**OK**	**OK**
D.1.4. Description of formulae used to estimate emission reductions for the project (for each gas, source etc.;					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
emissions/emission reductions in units of CO_2 equivalent)					
1.4.1. Are the formulae clearly and consistently indicated throughout the PDD?			All formulas are clearly and consistently indicated throughout the PDD. In the Section D.1 a specific approach with using the elements of the approved CDM methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0 was chosen.	**OK**	**OK**
D.1.5. Where applicable, in accordance with procedures as required by the host Party, information on the collection and archiving of information on the environmental impacts of the project					
1.5.1. Is information on the collection and archiving of information on the environmental impacts of the project indicated?			The PDD states that there is no any impact on the environment as a result of project	**OK**	**OK**
1.5.2. Is reference to the relevant host Party regulation(s) provided?			The information contained in Section D.1.5. of the PDD is sufficient.	**OK**	**OK**
1.5.3. If not applicable is it stated so?			The information contained in Section D.1.5. of the PDD is sufficient.	**OK**	**OK**
D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored					
2.1. Are the quality assurance and control procedures for the monitoring process established? This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request?			In PDD quality control procedures and quality assurance to be used during the data monitoring, including, where appropriate, information on calibration and how to record data and / or the reliability and accuracy of the methods are stored	**CAR 20** **CAR 21**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			and provided on demand. However, some information provided in Section D.2. of the PDD has to be explained in more detail. **CAR 20.** Provide information on calibration of monitoring equipment and relevant references to the norms and standards. **CAR 21.** This section states that electric meters record number of exported and imported energy, but in the project it is not considered monitoring of the energy used at HPP. Provide an explanation and correct the discrepancy.		
2.2. Are data corresponded with those in section D.1?			The data listed in Section D.2. PDD are corresponded with those in section D.1.	**OK**	**OK**
D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan					
3.1 Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project?			In the PDD it is described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction	**OK**	**OK**
3.2. Are responsibilities and institutional			Information about responsibilities and institutional arrangements for data	**CAR 22**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
arrangements for data collection and archiving clearly provided?			collection and archiving are not clearly provided in Section D.3. of the PDD **CAR 22.** Describe more detailed organizational structure, procedures, duties and responsibilities of each member of the monitoring process. **CAR 23.** Please provide information on the procedures for data storage (electronic and paper).	**CAR 23**	
3.3. Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?			According to the management structure collecting monitoring data scheme, it reflects normal practice for this type of monitoring facilities.	**OK**	**OK**
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
4.1. Is the contact information of person(s)/entity(ies) establishing the monitoring plan provided?			Contact information is provided (details is in Annex 1).	**OK**	**OK**
4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?			Carbon Management Company GmbH is a project participant.	**OK**	**OK**
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project (for each gas, source			Project participants argued that the project activity does not lead to GHG leakeges, so	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
etc.; emissions in units of CO_2 equivalent)?			PE = 0. **Please refer to CL10.**		
1.1.1. Is there a description of calculation of GHG project emissions in accordance with the formula? (Supporting documentation)			N/A	**OK**	**OK**
1.1.2. Have conservative assumptions been used to calculate project GHG emissions?			According to the approach that was taken from selected ACM0002 CDM project emissions are not expected.	**OK**	**OK**
E.2. Estimated leakage					
2.1. Are described the formulae used to estimate leakage due to the project activity where required (for each gas, source etc.; emissions in units of CO_2 equivalent)?			Leakages relevant to the project activity are absent.	**OK**	**OK**
2.1.1. Is there a description of calculation of leakage in accordance with the formula? (supporting documentation)			N/A	**OK**	**OK**
2.2. Have conservative assumptions been used to calculate leakage?			N/A	**OK**	**OK**
2.3. If not applicable, is it stated in the PDD?			The corresponding statement is given, in accordance with the methodology AMC0002 leakeges are absent in this project. For more detailed information, please see Section D.1.3.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
E.3. Sum of E.1 and E.2.					
3.1. Does the sum of E.1. and E.2. represent the project activity emissions?			Project emissions and leakages of the project equal to zero.PE = 0, LE = 0.	**OK**	**OK**
E.4. Estimated baseline emissions					
4.1. Are the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline described (for each gas, source etc.; emissions in units of CO_2 equivalent)?			The formulas used to estimate the emissions in the baseline scenario of the project a rdescribed in section D.1.1.4. of the PDD.	**OK**	**OK**
4.1.1. Is there a description of calculation of GHG baseline emissions in accordance with the formula? (supporting documentation)			Description calculations of greenhouse gas emissions in the baseline scenario are presented in a spreadsheet in Excel file **20120521_ZOE_Hydro_calculations.xls** as supporting document adding to the PDD.	**OK**	**OK**
4.2. Have conservative assumptions been used to calculate baseline emissions?			The PDD indicates that for the calculation of greenhouse gas emissions in the baseline scenario used with application conservative assumptions and taking into account uncertainties.	**OK**	**OK**
E.5. Table providing values obtained when applying formulae above					
5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?			The difference between E.4. and E.3. represented the emission reductions due to the project is indicated in Section E.5. of the PDD.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
E.6. Table providing values obtained when applying formulae above					
6.1. Is the data provided under this section in consistency with data as presented by other chapters E of the PDD?			The data provided in Section E.6. of the PDD is in consistency to the data specified in other sections of the PDD.	**OK**	**OK**
6.2. Is there a table providing the total value of emission reductions?			The total value of emission reductions is given in Tables 11 and 12 in Section E.6. of the PDD.	**OK**	**OK**
F. Environmental impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
1.1. Has an analysis of the possible environmental impacts of the project been sufficiently described?			An analysis of the possible environmental impacts of the project was not conducted. **CL 11.** Was the analysis of environmental impacts from emergency situations that may occur in the absence of the project conducted?	**CL 11**	**OK**
1.2. Are transboundary environmental impacts considered in the analysis?			The project is implemented in Ukraine, transboundary impact on the territory of another state is not revealed.	**OK**	**OK**
1.3. Are all regulations and sources clearly referenced?			References are absent.	**OK**	**OK**
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of conclusions and all references to supporting documentation of an environmental impact assessment undertaken in					

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
accordance with the procedures as required by the host Party					
2.1. Is a viewpoint regarding significant environmental impacts of the project participants or the host Party indicated?			In terms of project participants project will have a positive impact on the environment compared to the existing state.	**OK**	**OK**
2.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA)?			**CL 12.** Please explain why EIA development for the project HPP reconstruction was not performed. Are there any requirements in Ukraine on environmental impact assessment (EIA) of the project activities?	**CL 12**	**OK**
2.3. Have conclusions and all references to the supporting documentation on the analysis of the environmental impacts been indicated?			Analysis of EIA was not conducted. **Please refer to CL 12**.	**OK**	**OK**
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
1.1. Have relevant stakeholders been consulted and how?			Information on stakeholders' comments on the project is given in Section G.1. PDD.	**OK**	**OK**
1.1.1. Have appropriate media been used to invite comments by local stakeholders?			In Section G.1. of the PDD it is indicated that the local population was informed through the mass media about the implemented projects.	**OK**	**OK**
1.2. Is there a list of stakeholders from whom comments on the project have been received?			In Section G.1. of the PDD it is not specified whether comments were received at all.	**CAR 24**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
			CAR 24. Specify whether there were reviews or comments from the public or stakeholders concerning the project.		
1.3. Is the nature of comments provided?			Nature of comments is not provided. Please refer to **CAR 24.**	**OK**	**OK**
1.4. Has due account been taken of any stakeholder comments received?			Any comments are not described. Please refer to **CAR 24.**	**OK**	**OK**
Annexes					
Annex 1. Contact information on project participants					
1.1. Is the information provided in consistency with the one given under section A.3?			Contact information on project participants provided in Annex 1 of the PDD is in consistency with the one given under section A.3. of the PDD.	**OK**	**OK**
1.2. Are the mandatory fields for each organisation listed in section A.3. of the PDD filled notably organisation, name of contact person, street, city, postal code, country, telephone number(s) and fax number or e-mail address?			The mandatory fields for each organisation are filled in Annex 1 of the PDD.	**OK**	**OK**
Annex 2. Baseline information					
2.1. Is a table containing the key elements of the baseline (including variables, parameters and data sources) provided?			Table, which contains the key elements of the baseline, is given in Annex 2 of the PDD.	**OK**	**OK**

CHECKLIST QUESTION	Ref.*	MoV**	COMMENTS	Draft Concl.	Final Concl.
2.2. If additional background information on baseline data is provided: is this information in consistency with data presented by other sections of the PDD?			Additional background information on baseline data is absent	**OK**	**OK**
Annex 3. Monitoring plan					
3.1. Is the detail description of all key elements of monitoring plan provided?			All the necessary information is presented in section D of the PDD.	**OK**	**OK**
3.2. Is the provided information on monitoring plan in consistency with data presented in section D of the PDD?			All the necessary information is presented in section D of the PDD.	**OK**	**OK**

Ref.* - gives reference to Category 1 and Category 2 documents (see section 3.1. of the Determination Report) where the answer to the checklist question or item is found.
MoV** - Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I).

Table 3 - Resolution of Corrective Actions and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2	Summary of project owner response	Determination team conclusion
FAR 01. The project has no written project approvals by Parties involved.	Table 1, checklist question 1	Project approvals from Parties involved will be obtained after a positive determination opinion, under the legislation of the Parties.	Support of Ukraine (host party) was obtained from the National Agency in the form of a letter of support from 12/09/2012 № 2550/23/7. Approval by the Parties involved will be obtained after a positive determination opinion, under the law of the Parties. **Question temporarily closed and awaiting decision before the first verification of the project.**
CAR 01. Please provide a rough estimate of the financial component for the realization of the all complex of works on the reconstruction of HPP.	Table 2, checklist question A.2.1.	According to the presented company data, the total cost of reconstruction is 72 047 thousand uah.	Information was added to PDD version 2.0 from 13/09/2012. **Issue is closed.**

CAR 02. Provide objective evidence of consideration of extra income from the ERUs sale as launching of the project implementation.	Table 2, checklist question A.2.2.	Extra income from the ERUs sale was considered during making a decision on the project realization. This fact indicates the document Protocol #4. Meeting of the EC "Zakarpattyaoblenergo" Administration the dated March 17, 2004 that was provided to AIE on demand.	The document is provided, the data provided in the PDD 2.0 from 13.09.2012 available and undeniable. **Issue is closed.**
CAR 03. Please clearly state if the reconstruction includes measures requiring capital investments and not regular maintenance and preventive measures.	Table 2, checklist question A.4.2.1.1	The reconstruction includes measures requiring capital investments and not regular maintenance and preventive measures as far as period of equipment and technological facilities depreciation (tear) have been spent. It is also showed by the total cost of the project (see response to CAR 01).	PDD was updated according as requested. **Issue is closed.**
CAR 04. Provide accurate reference in section B and section D on approach for baseline setting and monitoring of Guidance on criteria for baseline setting and monitoring (version 03) (hereinafter - Guidance).	Table 2, checklist question B.1.1.	Information was provided in the updated PDD, version 2.0.	PDD was updated according as requested. **Issue is closed.**
CAR 05. Please correct version number of CDM methodology (from 12.2.0 to 12.3.0) used in the project**.**	Table 2, checklist question B.1.2.	Version number of CDM methodology was corrected in the updated PDD, version 2.0. In this project, the project participants use a previous version of the specified methodology, according to "Guidance on criteria for baseline setting and monitoring" (version 03), paragraph B (10), page 3. Thus, it was used CDM methodology ACM0002, version 12.3.0.	Corrections were made in new version of PDD 2.0 from 13/09/2012. **Issue is closed.**

CAR 06. Please use the CO_2 emission factors for UPS of Ukraine for **electricity production** approved by designated focal point of Ukraine for 2008 - 2011, according to the Order of the State Environmental Investment Agency of Ukraine # 62, 63, 43, 75 "On approval of specific carbon dioxide emissions factors for 2008 - 2011". For the period 2012 - 2024 – the latest available carbon emission factor.	Table 2, checklist question B.1.3.3.	A text fragment with incorrect CO_2 emission factors for Ukraine UPS has been corrected in the PDD version 2.0.	Correction is made, the updated information is accurate in the new version 2.0 of the PDD 09/13/2012. **Issue is closed.**
CAR 07. Please correct all the variables according to the methodology used for baseline emissions calculation using elements of CDM methodology "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" or explain the use of these elements in altered form.	Table 2, checklist question B.1.3.6.	Variable for specific carbon dioxide emissions coefficient in the production of electricity by thermal power plants that are connected to the Unified Energy System of Ukraine in the given PDD as $EF_{grid,produced,y}$ that doesn`t correspond to the CDM (variable in the methodology $EF_{grid,CM,y}$). The reason for this is not using a CDM tool "Tool to calculate the emission factor for an electricity system" as stated in the provided PDD. Thus, it was used a unique designation for a variable coefficient of carbon dioxide in the production of electricity by thermal power plants connected to the Unified Energy System of Ukraine in order to avoid misunderstandings.	Obtained explanation is accepted, changes to the raised question is not needed. **Issue is closed.**
CAR 08. Please number and add table titles specified in section B.1. PDD.	Table 2, checklist question B.1.8.	Tables in the section B.1. were numbered and titled.	Formulas are numbered in the new version of the PDD. **Issue is closed.**

CAR 09. Please provide more specific source of data used (to be used).	Table 2, checklist question B.1.8.	More specific source of data used was indicated in PDD, version 2.0.	Information updated and satisfies the request of AIE. **Issue is closed.**
CAR 10. Reference 14 does not lead to relevant document which is specified in the reference. Please provide the correct reference.	Table 2, checklist question B.1.9.	Reference 14 was corrected in PDD, version 2.0.	Corrections are made in the new version of the PDD. Links are provided correctly. **Issue is closed.**
CAR 11. Provide evidence that in the absence of the project the station is most likely to be deactivated and preserved (closed) or continued production of electricity on an average level.	Table 2, checklist question B.2.4.2	Proof of this is the official protocol of PJSC "Zakarpattyaoblenergo" about starting of stations reconstruction, in which expressed the intention of the inevitability of HPP closure in case of non-compliance of the reconstruction measures. A copy of the document is presented to the AIE.	The relevant statement is presented in the provided document. **Issue is closed.**
CAR 12. Please provide supporting documents to prove starting date of the project, on which implementation or construction or real action of the project begins.	Table 2, checklist question C.1.1	Starting date of the project is locked-in the minutes of meeting of PJSC "Zakarpattyaoblenergo" management about the beginning of HPP reconstruction. A copy of the document is presented to the AIE.	The document is received, the date of commencement of the project confirmed. **Issue is closed.**
CAR 13. Please indicate the duration of periods (beginning - end of the period) for all life stages of the project (before the crediting, the crediting, after crediting periods).	Table 2, checklist question C.2.1	Duration of the indicated periods is provided in Tables 5-7 of the PDD. For avoidance of misunderstanding it was also added section C.3 of the PDD, version 2.0.	Information are added to the new version of the PDD. **Issue is closed.**
CAR 14. Please provide supporting documents to prove starting date of the crediting period indicated in PDD.	Table 2, checklist question C.3.1	Appropriate document is presented to the AIE.	Document is received, crediting period start date confirmed. **Issue is closed.**

CAR 15. Please provide a valid reference number on the paragraph of Appendix 1 of Guidance on criteria for baseline setting and monitoring (version 03).	Table 2, checklist question D.1.2	Section D.1. was corrected. Please, see updated PDD, version 2.0.	Link is corrected. **Issue is closed.**
CAR 16. According to the chosen CDM methodology "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.3.0, data source for the parameter $EG_{PJ,y}$, "Net electricity generation that is produced and fed into the grid by the project power station in year" is the electricity meters. Please correct the data source for the relevant parameters in the relevant sections.	Table 2, checklist question D.1.7	As indicated in PDD, project participants decided to apply under the JI specific approach (Paragraph 9a Guidelines) elements of the monitoring methodology contained in ACM0002, version 12.3.0. However, as noted in section B.1 PDD, CDM items were used in the context of the calculation of emission reduction units. The data source for the specified parameter data are official statistical reports 6-TP, which in turn are based on indicators of measurement systems. More information on the measurement systems used to monitor specified parameters will be represented in the monitoring reports for the corresponding period. For the avoidance of misunderstanding, the necessary changes were made in the PDD version 2.0.	Necessary changes were made in the updated version 2.0 of the PDD 13/09/2012. **Issue is closed.**
CAR 17. Please provide relevant information or statement that this section is left blank on purpose.	Table 2, checklist question D.1.1.1	The corresponding statement is included in the PDD, version 2.0.	Information are added in the updated version 2.0 of the PDD 13.09.2012. **Issue is closed.**

CAR 18. Please, in Section D.1.1.1 exclude from the list of data "Project emissions" so as to be collected in order to monitor emissions from the project (since PE = 0).	Table 2, checklist question D.1.1.1.1	Corresponding changes were included in PDD, version 2.0.	Corrections concerning project emissions are made in the new version 2.0 of the PDD 09/13/2012. **Issue is closed.**
CAR 19. Provide more information on measuring devices, participating in monitoring of GHG emissions.	Table 2, checklist question D.1.1.3.1	Details of measuring complex used for monitoring ERUs by the project will be provided as part of monitoring reports for the appropriate periods	**Issue is closed.**
CAR 20. Provide information on calibration of monitoring equipment and relevant references to the norms and standards.	Table 2, checklist question D.2.1	Information on calibration of monitoring equipment and relevant references to the norms and standards were indicated in Section D.2. of the PDD, version 2.0.	Information are checked and true. **Issue is closed.**
CAR 21. This section states that electric meters record number of exported and imported energy, but in the project it is not considered monitoring of the energy used at HPP. Provide an explanation and correct the discrepancy.	Table 2, checklist question D.2.1	The mentioned sentence contains an error, because this project is not used imported electricity. The PDD, version 2.0 was changed accordingly.	Corrected information are provided in the new version 2.0 of the PDD 13/09/2012. **Issue is closed.**
CAR 22. Describe more detailed organizational structure, procedures, duties and responsibilities of each member of the monitoring process.	Table 2, checklist question D.3.2	The PDD provides a schematic representation of the organizational structure and the structure of the distribution of responsibility for the monitoring of emission reductions from the project. More detailed structure and procedures, duties and responsibilities of each member of the monitoring process will be presented in the monitoring reports for the appropriate periods.	**Issue is closed.**

CAR 23. Please provide information on the procedures for data storage (electronic and paper).	Table 2, checklist question D.3.2	All documentation relating to the project will be stored in electronic and paper form in accordance with the internal procedures of the enterprise. Herewith this retention period was properly adjusted so that all data collected as part of monitoring stored for at least 2 years after the end of the last crediting period and 2 years after the last transfer of ERUs. Appropriate changes have been made in the PDD, version 2.0.	Information corrected as requested. **Issue is closed.**
CAR 24. Specify whether there were reviews or comments from the public or stakeholders concerning the project.	Table 2, checklist question E.1.2	No negative comments were received from the public or stakeholders concerning the project. Section G.1 was accordingly completed in the PDD, version 2.0.	Information on responses to project activities added to the new version 2.0 of the PDD 13/09/2012. **Issue is closed.**
CL 01. Please clarify whether conducted expert assessment of stations state and work of equipment before the starting the project realization.	Table 2, checklist question A.2.1	Thus, expert assessment was conducted. List of required measures were formed as a result of this assessment.	**Issue is closed.**
CL 02. Please provide to the AIE documentary evidence of the plan of actions on comprehensive reconstruction of power station.	Table 2, checklist question A.2.1	The plan of actions on comprehensive reconstruction of power station was given to the AIE.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**

CL 03. Please clarify whether the project will not lead to an increase of the amount of existing reservoirs, and what is their capacity?	Table 2, checklist question A.2.1.1	The project will not lead to an increase in the volume of water reservoirs, as no measures were introduced that could lead to such a result. Thus, the reservoir of TR HPP has length 91 km and a basin area of water intake is 750 km^2 and is a valley type. Square mirror with NRL (normal retaining level) - 1.51 km^2. - The volume of reservoir: • original– 23.4 millions m^3; • available – 17.4 millions m^3; • useful – 14.2 millions m^3 - length – 4.8 km; - width: average – 312 m, the biggest– 720 m. - depth from 1.5 m in the upper part to 33.3 m near the dam - average depth – 12.48 m - normal retaining level (NRL) – 515.0 m - Retaining accelerated level (RAL) – 517.2 m. - The level of dead volume (DVL) – 498.0 m. Existing power changes during the year, depending on water pressure, which is due to its number in the reservoir, due to meteorological conditions. <u>At the beginning of 2011:</u> - The water level in the reservoir - 512.76 m; - Existing capacity - 25.9 MW; <u>At the beginning of 2012:</u> - The water level in the reservoir - 515.0 m; - Existing capacity - 26.2 MW;	The answer satisfies Clarification Request from the AIE. **Issue is closed.**

CL 04. Please explain whether replacement of the main power equipment in 2012 (as shown in Table 4) provided in the plan of the project lead to review of the monitoring plan.	Table 2, checklist question A.2.1.1	A similar scenario is not expected. However in case of unforeseen circumstances, the project design document and the monitoring plan, if necessary, may be reviewed in accordance with the applicable procedures of JI.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 05. Please indicate in section A.4.2 of the PDD if technical project proposal and the measures envisaged in the project reflects current practice.	Table 2, checklist question A.4.2.1.1	Technical project proposal and the measures envisaged in the project reflect current practice. Section A.4.2. was corrected accordingly in the PDD, version 2.0.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 06. Please provide a clear definition of whether the project uses (will use) modern technology or technology that will lead to much better productivity than a technology commonly used in Ukraine.	Table 2, checklist question A.4.2.1.2	Rehabilitation or equipment replacement that is obsolete is envisaged by the project so that the total installed capacity of the station will remain at the same level as before the project. Specifications of power equipment also remain unchanged. Similar information was added to the section A.4.2 of PDD, version 2.0.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 07. Please explain using an old version of the methodology applied to this project because at the time of Project Design Document (PDD) presentation, version 12.3.0 CDM ASM0002 has been updated to version 13.0.0.	Table 2, checklist question B.1.2	In this project, the project participants use a previous version of the specified methodology, according to “Guidance on criteria for baseline setting and monitoring” (version 03), paragraph B (10), page 3.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**

CL 08. The most recent version of the "Tool for the demonstration and assessment of additionality" is version 06.0.0. Please justify using a previous version of the tool used for this project.	Table 2, checklist question B.2.1	At the time of beginning of the project determinationt, the latest version of the "Tool for the demonstration and assessment of additionality" is version 06.0.0. In this project, the project participants are using a previous version of the tool according to "Guidance on criteria for baseline setting and monitoring" (version 03), paragraph B (10), page 3.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 09. Please provide evidence that the equipment after the project implementation will operate within the specified period.	Table 2, checklist question C.3.2	All power equipment is designed for trouble-free operation for many years (20 years - the estimated period of operation for power equipment) in case of appropriate use and preventive maintenance. Confirmation that the equipment after the project implementation will operate within the specified period may act as the fact that the previous equipment was located in operation for more than 50 years.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 10. Does HPP use for power station work electricity from the electric grid of Ukraine. And does station require other energy resource for its work?	Table 2, checklist question D.1.7	No, electric power from the grid is not used. This is evidenced records in the forms of statistical reporting 6-TP, which were presented AIE on demand. Similar information was also included in Section B.3 of PDD, version 2.0. The station also doesn`t require other resource of energy in significant amounts (fuel and lubricants necessary for lubricating mechanical parts units are not included because their number is not significant in terms of CO_2 emissions) to ensure its trouble-free operation.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**

CL 11. Was the analysis of environmental impacts from emergency situations that may occur in the absence of the project conducted?	Table 2, checklist question F.1.1	A similar analysis was not conducted because it is impossible to calculate even approximately. Similar situations are multifactorial, but surely it can be argued that all major accident (emergency liberation of water energy), which took place on hydropower stations led to catastrophic consequences.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**
CL 12. Please explain why EIA development for the project HPP reconstruction was not performed. Are there any requirements in Ukraine on environmental impact assessment (EIA) of the project activities?	Table 2, checklist question F.2.2	EIA for the reconstruction project HPP was not performed because the measures implemented at the project were conducted as repair works. Only complex character, the number of measures and their costs indicates that the project involves a comprehensive reconstruction of HPP.	The answer satisfies Clarification Request from the AIE. **Issue is closed.**