DETERMINATION REPORT
ECF PROJECT LTD.
Determination of the "Reconstruction of Pervomayskaia CHP-14 with Installation of Combined Cycle Units"

REPORT NO. RUSSIA – DET/0040/2010

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

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Report No: RUSSIA-DET/0040/2010 rev.02

Determination Report on JI project "Reconstruction of Pervomayskaia CHP-14 with Installation of Combined Cycle Units"

Date of first issue:	Organizational unit:
13/08/2010	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
ECF Project Ltd	Mr. Gleb Anikin

Summary:

Bureau Veritas Certification has made the determination of the project "Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units", on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The determination is carried out under Track 2 as per Glossary of JI terms, in line with paragraphs 30-45 of the JI guidelines.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline, monitoring plan and other relevant documents, and consists of the following three phases: i) desk review of the project design document and particularly the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) 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 Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A, Table 5. Taking into account this output, the project proponent has revised its project design document.

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

Report No.:	Subject Group:
RUSSIA/0040-2/2009	JI

Project title:
"Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units"

Work carried out by:
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Work verified by:
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Work approved by:
Flavio Gomes – Operational Manager

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Indexing terms:

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Abbreviations

AIE	Accredited Independent Entity
BL(S)	Baseline (Study)
BV	Bureau Veritas
CAR	Corrective Action Request
CCGT	Combine Cycle Gas Turbine
CHP	Cogeneration Heat and Power Plant
CHPP	Combined Heat and Power Plant
CL	Clarification Request
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
ECF	Energy Carbon Fund
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
I	Interview
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Governmental Organization
NPV	Net Present Value
PDD	Project Design Document
PP	Project Participant
TGC-1	Territorial Generating Company 1
UES	Unified Energy System
UNFCCC	United Nations Framework Convention for Climate Change
URES	Unified Regional Energy System

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1 Introduction

Energy Carbon Fund (ECF) Project Ltd. has commissioned Bureau Veritas Certification to determine its JI project "Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units" (hereafter called "the project") located in the south-west part of St. Petersburg in Kirovskiy district, Russian Federation. ECF Project Ltd. coordinates the project and the determination process on behalf of the JSC "Territorial Generating Company - 1" (TGC-1).

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.

1.1 Objective

The purpose of the determination is to provide an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, 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 JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document (PDD), the project's baseline study (BLS) and monitoring plan (MP) and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements for Joint Implementation (JI) projects, the guidelines for the implementation of Article 6 of the Kyoto Protocol (Decision 16/CP.7) as agreed in the Marrakech Accords, in particular the verification procedure under the JI Supervisory Committee, and associated interpretations. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual (IETA/PCF), employed a risk based approach in the determination process, focusing on the identification of significant risks for project implementation and generation of ERUs.

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

1.3 GHG Project Description (quoted by PDD Section A.2)

Purpose of the Project:

The purpose of the project is to increase the reliability and quality of the heat and electricity supply system of the residential and industrial sectors of Kirovskiy district and other districts of Saint-Petersburg using modern technology that decreases the environmental pollution including greenhouse gas emissions.

Project Company:

JSC "TGC-1" is the leading producer and supplier of electricity and heat power in the North-West region of Russia and the third largest territorial generating company in Russia in terms of installed capacity. It operates 55 electric generating stations in four regions of Russia – the City of St Petersburg, Republic of Karelia, Leningrad Region and Murmansk Region. The company's generation assets include thermal, hydroelectric, diesel and co-generation power plants and it has a heating network of 940 km.

The state registration of the company took place March 25, 2005. TGC-1 began operating on October 1, 2005.

Situation existing prior to the starting date of the project:

The Pervomayskaia Combined Heat and Power Plant -14 (CHP-14) began operations in 1957. The installed capacity of the existing CHP-14 is: electricity – 330 MW and heat – 1773 Gcal/hour (7423 GJ/h).

The Pervomayskaia CHP is a thermal power plant initially designed to run on powdered coal (from Kuznetskyi coal fields) as primary fuel. Currently CHP primarily uses natural gas that is supplied via high pressure gas pipeline.

Baseline Scenario:

The baseline scenario is based on the assumption of electricity supplied to the power grid, in which the project activity, in the absence of the project, carried out on existing equipment Pervomayskaya CHP-14 and thermal power plants belonging to this grid. Existing capacity of thermal power stations of the North-West region can provide additional generation of electricity, equivalent project formulation PSU. This means that the generation of electricity at power (thermal power stations) URES "North-West" should be reduced by an appropriate amount. A JI specific approach was used for the baseline setting.

Project Scenario:

The reconstruction project of the Pervomayskaia CHP proposes the installation of three combined cycle units CCGT-180 instead of conventional cycle units based on steam turbines. The old CHP units based on two turbines PT-30-90/10, two turbines PT-60-130/13 and one T-50-130-1 would be removed from service except two units with T-50-130-1 steam turbines which will be used as reserve. The installed capacity of CHP-14 will be 671.2 MW after the completion of the reconstruction. The

Pervomayskaia CHP will include 3 combined cycle power plants, each with 190.4 MW installed capacity and two additional steam turbines of 50 MW each. New heat capacity for hot water production after reconstruction will be 1271 Gcal/h (5321 GJ/h).

Under project implementation the up-to-date equipment with higher energy efficiency indexes as compared with average values within the energy system will be put into operation. Fuel saving in the energy system will be reached at the expense of increase in power output from new unit and replacing of ineffective equipment by the respective value Pervomayskaia CHP-14.

The essence of the investment project "Reconstruction of Pervomayskaia CHP-14" lies in the expansion of installed capacity of the existing power plant and as a consequence the increase in power output supplied to the North-west Consolidated Energy System. Additional energy, generated by Pervomayskaia CHP-14 replaces the electricity, generated at burning fuel plants connected with energy system, where the project is implemented.

History of the Project:
In 2006, the Energy Carbon Fund estimated whether it is possible to implement the project "Reconstruction of Pervomayskaia CHP -14 with installation of combined cycle units" as a joint implementation project.

On June 20, 2006 the decision of execution of JI Agreement by and between TGK-1 and Fortum was approved by Board of Director of TGK-1 (the minutes No.2). This minutes has been submitted to verifiers.

On February 20, 2008 Fortum, the TGC-1 and ECF Project Ltd. (subsidiary of Energy Carbon Fund) had signed an agreement according to which Fortum would purchase approximately 5 million tones of emission reduction units (ERU) from TGC-1.

ECF Project Ltd. is a project participant.

Project implementation became possible due to Joint Implementation (JI) mechanism under the Kyoto Protocol. The revenue from sales of the emission reduction units (ERU) increases the investment attractiveness of this project.

1.4 Determination team

The determination team consists of the following personnel:

Leonid Yaskin

Bureau Veritas Certification - Team Leader, Lead verifier

George Klenov
Bureau Veritas Certification - Team member, Lead verifier

Ivan Sokolov
Bureau Veritas Certification – Internal Technical Reviewer

2. METHODOLOGY

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) on-site assessment at the meeting with PDD developer (October 29th and November 5th 2009) and on-line collaboration with ECF Project Ltd. representatives;
iii) resolution of outstanding issues (ref. to Appendix A Table 5 with CAR's and CL's) and the issuance of the final determination report and opinion.

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF).

The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating 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 independent entity will document how a particular requirement has been validated and the result of the determination.

The original determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for "Baseline and Monitoring Methodologies" is omitted because the project participants established their own baseline and monitoring approach that is in accordance with appendix B of the JI Guidelines and the questions regarding the used methodology are present in Table 2.

Determination Protocol Table 1: **Mandatory Requirements**			
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)** or a **Clarification Request (CL)** of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is validated. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	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.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements of baseline and monitoring methodologies should be met. 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.

Determination Protocol Table 4: Legal requirements				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The national legal requirements the project must meet.	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.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report corrective action and clarifications **requests**	Ref. **to checklist** question in tables **1/2/3/4**	**Summary of project** owner response	**Determination** conclusion
If the conclusions from the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 1-4 where the Corrective Action Request or Clarification 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 1-4 under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

ECF Project Ltd. provided Bureau Veritas Certification the Project Design Document (PDD) Version 01 dated 29/04/2009 excluding supporting documentation, calculation of GHG emission and investment analysis.

The completeness check made by Bureau Veritas Certification revealed some deviations of the PDD from the JISC format. Therefore, ECF Project Ltd. was requested to remake the PDD in conformity to JI PPD Form. Bureau Veritas Certification received the remade PDD Version 01.4 dated 16/10/2009. This version of PDD was made publicly available for public comments on UNFCCC site from 20 October 2009 till 18 November 2009.

The Project Design Document (PDD) submitted by ECF Project Ltd. and additional background documents related to the project design, baseline, and monitoring plan, i.e. Kyoto Protocol, Host Country Laws and regulations, JI Guidelines, JISC Guidance on Criteria for Baseline Setting and Monitoring and Guidelines for Users of the Joint Implementation Project Design Document Form, Combined tool to identify the baseline scenario and demonstrate additionality, Tool to calculate the emission factor for an electricity system and others were reviewed.

The deliverable of the document review was the Draft Determination Report (DDR) version 1.2 with CAR's and CL's which was submitted to ECF Project Ltd. on 27 October 2009.

PDD developer issued iteratively some batches of responses to Bureau Veritas Certification requests which were eventually embedded in the amended PDD Version 3 dated 20/05/2010.

The deliverable of the document review on this stage was the Brief DDR (only one Table 5 with ECF Project Ltd. responses and their evaluation by verifiers: some CAR's and CL's have required additional clarifications) which was submitted to ECF Project Ltd. on 22/05/2010.

ECF Project Ltd. has submitted the PDD, version 5, dated 29/07/2010 which was issued by the PDD developer as a response to the Brief DDR and then after some clarifications the completed PDD, version 6, dated 10/08/2010. The amendments done in the PDD version 6 have been taken into account in this Determination Report.

The determination findings presented in this DDR versions relate to the project as described in the original PDD version 01.4 dated 16.10.2009 and final version 6 dated 10/08/2010.

2.2 Follow-up Interviews

Bureau Veritas Certification verifiers Leonid Yaskin and George Klenov conducted the Meeting with PDD developer on 29th October 2009 and site-visit on 5th November 2009. On-line interviews with project stakeholders were conducted to confirm selected information and to resolve issues identified in the document review. Representatives of ECF Project Ltd. and TGC-1 were interviewed (see References in Section 6). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
ECF Project Ltd. and TGC-1	➢ JSC "TGC-1" production programme ➢ Project management organisation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Monitoring equipments ➢ Quality control and quality assurance procedures ➢ Construction schedule ➢ Training programme for the staff ➢ Public hearings ➢ Permits for air emissions at the construction and exploitation phases
ECF Project Ltd.	➢ Technical project documentation ➢ History of the project ➢ Evidence and records on construction and its operation ➢ Baseline and Project scenarios ➢ Monitoring plan ➢ Investment analysis ➢ Additionality justification ➢ Common practice analysis ➢ Estimation of the GHG emissions ➢ Estimation of the leakage ➢ Conformity of PDD to JI requirements

2.3 Resolution of Clarification and Corrective Action Requests

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 followed on by the project participants for Bureau Veritas Certification positive conclusion on the project design.

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined the PDD;
ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where

iv) additional information is needed to fully clarify an issue.

A Draft Determination Report, version 1.2, summarising Bureau Veritas Certification's findings, was submitted to the project participants on 27/10/2009. The findings identified have been twenty six Corrective Action Requests, and four Clarification Requests. Based on the findings of the Draft Determination Report, CCGS made necessary amendments and corrections to the PDD version 3 dated 20/05/2010 and, eventually, the version 6 dated 06/08/2010 was issued and submitted to Bureau Veritas Certification for review.

The amendments and corrections made by the project participants to the PDD and the additional information and clarifications provided by them satisfactorily addressed BV Certifications' items of concern and, as a result, the Determination Report version 1 was issued on 13/08/2010. On the 20/08/2010 the Determination Report Version 1 and PDD Version 6 were conveyed to Bureau Veritas Certification Internal Technical Reviewer (ITR) for review. As result of response on this Review the ECF Project Ltd. has issued PDD version 7 dated 23/08/2010 and final version 8 dated 06/09/2010 with some additional clarifications and the Determination Report version 02 was issued on 08/09/2010 by Bureau Veritas Certification.

To guarantee the transparency of the determination process, the CAR's and CL's raised are summarized in Appendix A, Table 5.

3 Determination Findings

In the following sections, the findings of the determination are presented for each determination subject as follows:

i) the findings from the desk review of the original project design document and the findings from interviews during the site visit are summarized. A more detailed record of these findings can be found in the Appendix A Determination Protocol.
ii) where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the determination protocol criteria or the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated in the in Appendix A Determination Protocol.
iii) where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in Appendix A, Table 5.
iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The project activity involves the reconstruction of the Pervomayskaia CHP-14 with installation of three sets of CCGT-180 that use combined cycle (CC) for power generation. Each CCGT-180 set is made up of the following equipment: two gas

turbine units of V64.3A type manufactured by Ansaldo Energia together with WY18Z generator; two horizontal waste heat boilers to generate steam at two pressures E-99.5/13.5-7.61/0.59-542/210 manufactured by Podolskyi Machinery Construction Plant OJSC and one T-50/64-7.4/0.12 condensing steam turbine with bleed manufactured by "Kaluzhskyi Turbine Plant" OJSC, with TZFP-63-2MUZ generator manufactured by Elektrosila OJSC, installed on the single footing with turbine. Also reconstruction of plant foresees installation seven new hot-water boilers of KV-GM -175-150 type.

CCGT-180 energy blocks work in heat-extraction mode. The remaining heat load is covered by seven hot-water boilers of KV-GM -175-150 type that are installed in the assembled auxiliary building.

The reconstruction of CHP will be done in four stages. First stage has been completed on April 2010. The schedule for the different stages and corresponding changes of equipment composition at each stage are presented in the PDD.

The project activity plant supplies electricity to the electricity grid and heat to consumers through a heat distribution centre.

Under project implementation the up-to-date equipment with higher energy efficiency indexes as compared with average values within the energy system will be put into operation. Fuel saving in the energy system will be reached at the expense of increase in power output from new unit and replacing of ineffective equipment by the respective value Pervomayskaia CHP-14.

The essence of the investment project lies in the expansion of installed capacity of the existing power plant and as a consequence the increase in power output supplied to the North-west Consolidated Energy System. Additional energy, generated by Pervomayskaia CHP-14 replaces the electricity, generated at burning fuel plants connected with energy system, where the project is implemented.

The project uses the state-of-art technology. Using combined-cycle (CC) technology for electricity production is not widespread in the Russian Federation. The majority of big power plants are based on single-cycle operation. So the plant reconstruction by installing CC unit will have significantly better performance in comparison to the traditional steam-turbine technology.

Greenhouse gas emissions will be reduced due to displacement of electricity from the grid produced by fossil fuel power plants that use traditional steam-turbine technology by electricity generated by Pervomayskaia CHP that will produce electricity through combined cycle units with lower carbon intensity in comparison with electricity from the grid.

The outcomes of project activity will be the following effects:

- mitigation of adverse environmental impacts; and

- average reduction of GHG emissions by 328 834 tCO2e/year over the period 2010-2012. Total estimated emission reductions will equal 986 501 tCO2e over 2 year crediting period starting in 2010.

The project design is sound. The geographical and spatial boundary is clearly defined.

Implementation of the project met and faces a number of serious technological, operational and financial barriers. The decision to go forward with the project was taken by the company management in view of the existing opportunity to cover some of its costs and to offset project risks by selling GHG emission reductions. The project is clearly environment-oriented.

The identified areas of concern as to Project Design, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 02, CAR 03, CAR 04, CAR 05, CAR 06, CAR 07, CAR 08, CL 01, CL 02, CL 03). One area of concern as to Project Duration was identified by CAR 21.

The project has no approvals by the Parties involved, therefore CAR 01 remains pending.

3.2 Baseline and Additionality

A JI specific approach regarding baseline setting and additionality demonstration and assessment has been developed in accordance with JISC Guidance on criteria for baseline setting and monitoring (version 02). In accordance with paragraph 24 of this Guidance, the baseline is identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.

Baseline emissions are those emissions that are associated with the production of heat and electricity that are identical to the output of the project CHP plant. Baseline emissions are determined by emissions from existing CHP equipment for generating heat and power to their limit. Then additional emissions are from fuel use in boiler for excess heat requirement in project scenario and/or emissions in the grid for excess power demand. The calculation of baseline emissions is therefore based on different emission factors for different quantities of electricity and heat generated.

Four alternative scenarios were considered for the project activity: 1 - The proposed project not developed as a JI project; 2 - The electricity to be generated by project is provided by the other existing plants of URES "North-West"; 3 - The electricity to be generated by project is provided by the other new energy units of URES "North-West"; 4 - The electricity to be generated by project is provided by the other existing plants and the other new energy units of URES "North-West".

After the assessment and screening of the Alternatives, only Alternative 4 was left as reasonable and feasible. As a result, Alternative 4 was selected as the plausible scenario representing the baseline.

Technological data and parameters that define the baseline were determined during the site visit and follow-up on-line collaboration. The baseline is the technically feasible scenario and it does not violate Russian legal requirements.

To establish the emissions associated with the baseline scenario a baseline emission factor has been calculated in accordance with article 21 of the Guidance and using the CDM Tool "Tool to calculate the emission factor for an electricity system" version 02 with some deviations. The using of this CDM Tool for baseline emission factor calculation is described in the Annex 2 and the baseline emission calculation is described in the Section D.1.1.4.

To prove the project additionality, the routine provisions of the CDM "Tool for demonstration and assessment of additionality" (version 05.2) were implicitly followed.

Upon the proof of the additionality, the following series of steps is stipulated by the tool:

1. Identification of alternatives to the project activity consistent with current laws and regulations;
2. Investment analysis (including the sensitivity analysis);
3. Barrier analysis;
4. Common practice analysis.

The above mentioned four Alternatives of JI project were identified. These scenarios are not in contradiction with the mandatory legislation and regulations. Each alternative was reviewed.

To assess the project's additionality the steps one, two and four were implemented accordingly. Step 3 – barrier analysis is omitted, according to the tool it is not mandatory if the step 2 is implemented.

In Section B.2, it is demonstrated that the project without JI registration is not a plausible baseline scenario since it does not meet the benchmark for profitability.

Common practice analysis demonstrates that at the time of decision-making combined cycle power plants were not widespread throughout Russian Federation. The installed capacity of combined cycle power plants in Russia less than 2% of the total installed capacity of thermal power stations. Until now, these were pilot projects with the main purpose to try new technologies. One of the recently implemented projects – Severo-Zapadnaia CHPP with gas and steam turbines manufactured in the Russian Federation – was implemented as a testing facility. The previously implemented projects were with foreign turbines. All projects with combined cycle completed up to now had significant support from Russian monopolist RAO UES. After privatization, the company does not have such possibilities as RAO UES.

The analysis has demonstrated that the proposed project activity is not attractive without the revenue from the sale of emission reduction units (ERUs). Accordingly, the Alternatives 4 was taken as the baseline.

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 09, CAR 10, CAR 11, CAR 12, CAR 13, CAR 14, CAR 15, CAR 16, CAR 17, CAR 18, CAR 19, CAR 20).

3.3 Monitoring Plan

A JI specific approach regarding monitoring has been developed in accordance with the JISC Guidance on criteria for baseline setting and monitoring (Version 02).

Option 1 – "Monitoring of the emissions in the project scenario and the baseline scenario" was chosen. All categories of data to be collected in order to monitor GHG emission reductions from the project are described in required details in the PDD Section B.1.

The project activity only affects the emissions related to the natural gas combustion. To establish the baseline emissions and to monitor the project emissions, only these emissions will be monitored.

All emission sources have been included in the monitoring plan. The monitoring approach explicitly and clearly distinguishes:

a) 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; and

b) data and parameters that are monitored throughout the crediting period.

All categories of data to be collected in order to monitor GHG emission reductions from the project are described in required details.

Leakages in project are associated with increased fuel use at the plant. At the same time leakage will decrease because of reduced fuel use in other power plants in the grid. In accordance with methodology AM0029 where total net leakage effects are negative, project participant assumes leakages are equal zero.

An operational and management structure that the project participant will implement in order to monitor emission reduction is clearly described in the PDD. The meeting with PDD developer, on-line interviews and surveillance audit of the Company Management System confirmed the availability and operationability of this structure.

The identified area of concern as to Monitoring Plan, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 22, CAR 23, CAR 24).

3.4 Calculation of GHG Emissions

Formulae used for calculation of GHG emissions are presented in PDD Section B, Section D and Section E. Input data for calculations and the calculations per se are presented in the comprehensive excel spreadsheet, which was made available to the verifier. The final calculations are observed as accurate. The results are summarized in Section E.

Implementation of the project will lead to reduction of GHG emissions from.

The calculated value of project emission reduction over the crediting period 2010 – 2012 is 986 501 tCO2e. Annual average emission reduction is 328 834 tCO2e/year.

No areas of concern as to Calculation of GHG Emissions are identified.

3.5 Environmental Impacts

The main pollutants for CCGT burned natural gas are considered: nitrogen oxides and carbon oxide. The other negative effects are: the noise pollution, the water protection and the hazardous waste. All of them were considered in the Project Design "Reconstruction of the Pervomayskaya CHP-14", Volume 00PRM650S001: "Environment Protection", OJSC "EMK-Engineering Company ", 2008

The project is approved by Expert Conclusion of FGU "Glavgosexpertiza" (Expert Conclusion No.028-10/СПЭ-0716/02 dated 02/02/2010).

The State Ecological examination of the project did not identify any non-compliance issues with regards to the Russian Federation legislation and normative documents relating to the environmental protection. The project complies with all environmental laws, and emissions are well within legal limits.

The project does not have transboundary impact.

In general, the project implementation will lead to mitigation of negative environmental impacts.

The identified area of concern as to Environmental Impacts, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 25).

3.6 Comments by Local Stakeholders

The project does not have any significant environmental impacts and has all required by host Party permits.

Project information was published on the JSC "TGC-1" website: http://www.tgc-1.ru/about/invProgramma/all/ and public hearings have been conducted from 29 October 29 till 4 December 2007 (http://www.tgc-1.ru/responsibility/socOtchet/). JSC "TGC-1" has publications about the project in mass media. The short list of publications is presented in the PDD. These publications have not given rise to any negative public comments. All comments from the town's community were positive.

Identified area of concern as to Comments by Local Stakeholders, their responses and BV Certification's conclusions are described in Appendix A Table 5 (refer CAR 26).

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

PDD Version 01.4 dated 16/10/2009 was made publicly available for comments on UNFCCC JI website from 20 October 2009 till 18 November 2009.

No comments from third parties have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by Climate Change Global Services (CCGS) to perform a determination of the JI project "Reconstruction of Pervomayskaia CHP-14 with Installation of Combined Cycle Units". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

The determination is based on the information made available to us and on the engagement conditions detailed in this report. The determination has been performed using a risk-based approach as described above. The only purpose of the report is its use for the formal approval of the project under JI mechanism. Hence, Bureau Veritas Certification cannot be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the issuance of the determination report and opinion.

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests and Clarification Requests have provided Bureau Veritas Certification with the sufficient evidences to determine the fulfilment of the above stated criteria and to demonstrate that the project is additional.

An analysis of the investment and common practice analysis demonstrate 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 it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Russian Federation). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, version 8 dated 06/09/2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

Bureau Veritas Certification thus recommends this project for the formal approval by the Russian Federation as the JI project in accordance with the RF Government Decree # 843 dated 28/10/2009 and the Order of the RF Ministry for Economic Development # 485 dated 23/11/2009.

Leonid Yaskin – Team leader, Lead verifier

George Klenov – Team member, Lead verifier

Bureau Veritas Certification Holding SAS

BUREAU VERITAS CERTIFICATION Reviewed Init Date: 31/08/2010

6 REFERENCES

Reviewed document or Type of Information referred to in Appendix A

1	PDD "Reconstruction of Pervomayskaia CHP -14 with installation of combined cycle units", version 01.4 dated 16/10/2009, version 3 dated 20/05/2010, version 6 dated 06/08/2010, version 7 dated 23/08/2010 and version 8 dated 06/09/2010.
2	Guidelines for Users of the Joint Implementation Project Design Document Form/Version 03, JISC.
3	JI Guidelines. Annex to decision 9/CMP.1.
4	JISC Guidance on criteria for baseline setting and monitoring. Version 02.
5	AM0029, version 3 ("Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas").
6	AM0061, version 2.1 ("Methodology for rehabilitation and/or energy efficiency improvement in existing power plants").
7	AM0062, version 01 ("Energy efficiency improvements of a power plant through retrofitting turbines").
8	ACM0007, version 03 ("Baseline methodology for conversion from single cycle to combined cycle power generation").
9	"Tool to calculate the emission factor for an electricity system" (version 01.1) Methodological tool, CDM - Executive Board.
10	"Combined tool to identify the baseline scenario and demonstrate additionality", version 02.2.
11	AM0048, version 02 ("New cogeneration facilities supplying electricity and/or steam to multiple customers and displacing grid/off-grid steam and electricity generation with more carbon-intensive fuels").
12	General scheme for allocation of power objects up to 2020, approved by the RF government order # 215-p dated 22/02/2008.
13	2006 IPCC Guidelines for National Greenhouse Inventories, v.2, Energy.
14	RF Urban Development Code N 190-ФЗ (Federal Law).
15	"Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".

Reviewed Document or Type of Information obtained at the site visit

1.	Business Plan.
2.	Project design.
3.	Protocol of JI consideration.
4.	Environmental expertise approval and other environmental documentation and permissions (e.g. Forms of the statistical reporting 6-TP, 2-TP-air for 2005 -

	2008, etc.).
5.	Contracts on purchase of the equipment and performance of civil and erection works on building PGU.
6.	The training and examination plan.
7.	Duty instructions and protocols of attestation.
8.	The industrial inspection program and The order on appointment of industrial inspection responsible.
9.	Technical passports of Unit #4 and measurement devices.
10.	Organizational structure of the enterprise.
11.	Act on the boiler No.7 commissioning.
12.	The report of acceptance of the investment decision.
13.	Reports of public hearings on project realisation.
14.	The plan of liquidation of emergencies.
15.	The permission to emissions of polluting substances.

Persons interviewed:

1	R.V.Kozlov, JSC "TGC-1", Deputy of Head Strategy Planning Department.
2	A.A.Shilyaev, JSC "TGC-1", Lead specialist of Strategy Planning Department.
3	A.A.Kondrashov, JSC "TGC-1", Principal specialist, Department of Project Realization.
4	A.N.Sorokin, ECF Project Ltd., JI project's expert, PDD-writer.

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**CAR 01**. The project has no approvals of the Parties involved. Verifiers' Note: JISC Glossary of JI terms/Version 01 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	Table 2 Section A.5.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.	
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)	Pending a response to CAR 17, CAR 18, and CAR 19.	Table 2, Section B.2
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 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A
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	The Russian national focal point is the Ministry of Economic Development. The Russian national guidelines and procedures are established by the "Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	Russia has ratified the Kyoto Protocol by Federal Law N 128-ФЗ dd. 04/11/04
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 Russian Federation's assigned amount has been calculated and recorded In the 4th National Communication dated 12/10/06.
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	Russian Federation has established the GHG Registry by the RF Government Decree N 215-p

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			dated 20/02/06.
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	Energy Carbon Fund Project Ltd. has submitted the PDD to Bureau Veritas Certification, which contains all information needed for 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	PDD Version 01.4 dated 16/10/2009 was made publicly available for comments on UNFCCC JI website from 20 October 2009 till 18 November 2009.
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)	Pending a response to CAR 25.	Table 2, Section F
12. The baseline for a JI project shall be the scenario that	Marrakech	Pending a response to	Table 2, Section A.2

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Accords, JI Modalities, Appendix B	CAR 17, CAR 18, CAR 19.	
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	Pending a response to CAR 19.	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	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 01.	The Russian project participant will be authorised by the Host Party through the issuance of the approval for the project. Conclusion is pending a follow-up on CAR 01. Refer to Verifiers' Note in 1 above.	Table 2, Section A

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					
A.1.1. Is the title of the project presented?	1,2	DR	The title of the project is: "Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units". The Sectoral Scope is (1) Energy industries (renewable/non-renewable sources).		OK
A.1.2. Is the current version number of the document presented?	1,2	DR	The PDD Version 01.4 was published on UNFCCC JI site and is reviewed as a part of determination.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 01.4 is dated 16/10/2009.		OK

A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1.2	DR	The project is implemented on the site of JSC "TGC-1" Pervomayskaia Cogeneration Heat and Power Plant (CHP) -14 in the south-west part of Saint-Petersburg in Kirovskiy district. The purpose of the project is to increase the reliability and quality of the heat and electricity supply system of the residential and industrial sectors of Kirovskiy district and other districts of Saint-Petersburg using modern Combined Cycle Gas Turbine (CCGT) technology that decreases the environmental pollution including greenhouse gas emissions. The project of the Pervomayskaia CHP envisages the installation of three combined cycle units PGU-180. The reconstruction will be done in two stages. The first and second combined cycle units will be constructed during the first stage. The third unit will be completed after the construction of the new high pressure gas pipeline during the second stage. The old CHP units equipped with two turbines PT-30-90/10, two turbines PT-60-130/13 and one T-50-130-1 would be removed from service. Two units with T-50-130-1 steam turbines will be left as reserve.	CL 01	OK

			After the completion of the reconstruction, the installed capacity of CHP-14 will be 671.2 MW. The old steam turbine power plant had the capacity 330 MW. The Pervomayskaia CHP will include 3 combined cycle power units with 190.4 MW installed capacity each and two additional steam turbines of 50 MW each. New heat capacity for hot water production after reconstruction will be 1271 Gcal/h (5321 GJ/h). **CL 01.** Please clarify the assertion in PDD, p. 2 that the implementation of the Pervomayskaia CHP reconstruction project will ensure the adequacy of the heat capacity and the increase of heat loads for the period up to 2015. As follows from PDD, after reconstruction, the heat capacity will reduce.		

A.2.2.Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	**CAR 02.** The explanation of how the proposed project reduces greenhouse gas emissions reads: "The GHG emission will be reduced due to the displacement of electricity from the grid produced by fossil fuel power plants by the electricity generated by Pervomayskaia CHP that will produce electricity with lower carbon intensity in comparison with electricity from the grid" (PDD, p.2). This explanation is incomplete since it does not address the displacement of the old power plant capacity. Confer the definition of the baseline scenario in PDD Section B.2. **CAR 03.** This Section does not summarize the history of the project as required by [2]. **CAR 04.** The definition of the baseline scenario as a "continuation of the current situation" (PDD, p.2) in incomplete since it does not take into account the electric grid. Confer the complete definition of the baseline scenario in PDD Section B.2.	CAR 02 CAR 03 CAR 04	OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Federation. Legal entities for A1 are JSC "TGC-1" and Energy Carbon Fund. Party B is Finland. Legal entity is Fortum		OK

			Power and Heat Oy.		
A.3.2. The data of the project participants is presented in tabular format?	1,2	DR	The data of the project participants is presented in the tabular format .		OK
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	The contact information is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Russian Federation is indicated as a host Party in PDD Section A.4.1.1.		OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the Host Party in the PDD Section A.4.1.1.		OK
A.4.1.2. Region/State/Province etc.	1,2	DR	The Leningrad Region.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	St. Petersburg.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	1,2	DR	PDD Section A.4.1 defines in detail the physical location, including information allowing the unique identification of the project. The Pervomayskaia CHP is located in the south-west part of St. Petersburg in Kirovskiy district. The CHP-14 location has geographical coordinates of 59°52'21" north latitude and 30°14'47" east longitude.		OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1, 2	DR	The project design engineering represents current good practices of using high	CAR 05	

			efficiency CCGT technology for electricity production. **CL 02.** It follows from the data in Table 1 on p. 5 that with temperature changes from +15°C to –26°C power capacity increases by 16,2% whereas fuel (natural gas) consumption increases only by 13,7% at the constant efficiency. Please clarify the difference in the trends. The implementation schedule for the different stages is presented in Table 2 and corresponding changes of equipment composition at each stage is shown in the Table 3 of Section A.4.2 PDD. **CAR 05.** The implementation schedule assumes the reconstruction of CHP in four stages what contradicts to the statement on p.2 that the construction will be done in two stages. Expected time of stage 1 completion is January 2010 what does not coincide with the starting date of the crediting period 01/04/2010. Refer to PDD Section A.4.2 Table 2 and Section C.3.	CL 02	
A.4.2.2. 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?	1, 2	DR	The project technology is the-state-of-art. Each PGU-180 unit has the following equipment: - two gas turbine units of V64.3A type manufactured by Ansaldo Energia, together with WY18Z generator.		OK

			- two horizontal waste heat boilers (Heat Recovery Steam Generator) to generate steam at two pressures E-99.5/13.5-7.61/0.59-542/210 manufactured by Podolskyi Machinery Construction Plant OJSC; - one T-50/64-7.4/0.12 condensing steam turbine with extraction manufactured by "Kaluzhskyi Turbine Plant" OJSC, with TZFP-63-2MUZ generator manufactured by Elektrosila OJSC; Reconstruction of the plant also foresees the installation of seven new hot water boilers of KV-GM -175-150 type. The CCGT technology is not widespread in the Russian Federation. The majority of big power plants are based on les efficient single steam cycle operation. Thus, the plant reconstruction by installing CCGR will have significantly better performance in comparison with traditional steam turbine technology.		
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 2	DR	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4. Does the project extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR I	**CL 03.** Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	CL 03	

A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR I	The conclusion is pending a response to CL 03.	Pending	
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					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2	DR I	It is stated in PDD Section A.4.3 that greenhouse gas emissions will be reduced due to displacement of electricity from the grid produced by fossil fuel power plants that use traditional steam-turbine technology by electricity generated by Pervomayskaia CHP that will produce electricity through combined cycle units with lower carbon intensity in comparison with electricity from the grid The conclusion is pending a response to CAR 02.	Pending	
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	The estimated total emission reductions equal 1,104,794 tCO_2e over the crediting period starting on 01/04/2010. The conclusion is pending a response to CAR 10, CAR 12 and CAR 13, which may result in recalculation of emission reductions.	Pending	
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The estimated annual emission reduction over the crediting period equals 368,265 tCO_2e.	Pending	

			The conclusion is pending a response to CAR 10, CAR 12 and CAR 13, which may result in recalculation of emission reduction.		
A.4.3.4. Is the data from questions A.4.3.2 and A.4.3.3 above presented in tabular format?	1,2	DR	The data is presented in the required tabular format [2]. Refer to the Table in PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					
A.5.1.1. Are written project approvals by the Parties involved attached?	1,2	DR	The project approval by the Host Party will be provided after the determination of the PDD. Refer to Verifiers' Note in Table 1 item 1. Conclusion is pending a response to CAR 01.	Pending	
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2, 3,4, 5-8, 9, 10, 11	DR	A JI specific approach regarding baseline setting and monitoring has been developed in accordance with Appendix B of the JI guidelines [3] and with JISC Guidance on criteria for baseline setting and monitoring [4] (further Guidance). The approach reasonably adopts selected elements of approved CDM methodologies AM0029 [5], AM0061 [6], AM0062 [7], ACM0007 [8] and CDM methodological tools [9], [10]. Section B.1 provides a detailed theoretical description of this approach in a complete and transparent manner. The assumptions,	CAR 06 CAR 07 CAR 08 CAR 09 CAR 10 CL 04	OK

			formulae, parameters, data sources and key factors are included in the description. **CAR 06**. The equations used for description of the baseline are not numbered as required in [4], Appendix A, para 1(a) (iii). The same pertains to the description of the monitoring plan in PDD Section D.1. **CAR 07**. The term a "new methodology" used in PDD is not envisaged by the Guidance. This term should be replaced by "JI specific approach" [4]. **CAR 08.** The applicability of the Tool [9] to the energy system that includes not only power plants for generation of electric energy (are envisaged in the Tool) but also cogeneration heat and power plants (CHP) is not justified. CHP cannot be used as replacement power capacity as long as they produce electricity in the prescribed heat supply mode; only the uncharacteristic for CHP condensing regime is appropriate for capacity replacement. Implications of this for the baseline are not analysed. Operating margin (OM) and Build margin (BM) emission factors are calculated by a method which split the amount of fuel consumed by CHP in two parts: the one used for electricity generation and another one for heat production. PDD Section B and Annex 2 do not address this specificity. Build margin emission factor for		

			2007 is not included in the calculations. Conservatism of the ex-ante value of the calculated emission factor is not analysed. **CL 04**. Please clarify if CDM methodology AM0048 "New cogeneration facilities supplying electricity and/or steam to multiple customers and displacing grid/off-grid steam and electricity generation with more carbon-intensive fuels", Version 02 [11] is applicable to the project. Section B.1 provides the key information and data used to establish the baseline (variables, parameters, data sources etc.) in the required tabular form [2]. **CAR 09.** Please correct the flaws in the information given in the tabular form in Section B.1: - the annual values of fuel consumption, electricity generation and heat generation in the year *yh* (pp 21-22) are mixed; - the year is not indicated for data unit t.c.e.; only one value for two parameters *FC* is indicated; - years are not indicated for parameter $FC_{f,y}$; - some rows of the prescribed tabular form with titles "Time of determination /monitoring", "Justification of the choice of data or description of measurement methods and procedures (to be) applied", "QA/QC		

			procedures (to be) applied" are not filled in without sufficient grounds; - the dimension of NCV values and source of data are not indicated; - fictitious sources of data for CO_2 emission factors for different fuels, for instance, measurements by the project participants. **CAR 10.** Annex 2 (baseline information) does not contain a summary of the key elements in tabular form as required by [2]. The observed flaws in information given in Annex 2: - the values and dimensions of key parameters for 2005-2007 in Table 4 of Annex 2 are mixed. The year 2008 is not included in the "last three years" (quoted by Section B.1) though this information is available at the plant; - the emission factor for GTU "Luch" in the Table 3 of Annex 2 is underrated (at efficiency of 40% it is about 0,5 tCO_2/MWh); - Severo-Zapadnaya CCGT is not included in calculation of build margin emission factor in Table 3.		
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2, 4, 10, 11	DR I	For the selection of the most plausible baseline scenario, the latest version of the "Combined tool to identify the baseline scenario and demonstrate additionality". Version 02.2 [10] is used. Description and application of this tool is presented in section B.2 where the baseline is identified through	CAR 11	OK

			listing and screening of plausible future scenarios. The used JI specific approach is applicable to the project activities that implement rehabilitation measures in an existing fossil fuel fired cogeneration plant for the purpose of enhancing its energy efficiency. A list of reasonable applicability conditions is presented. In particular: - the project activity plant should supply electricity to the electric grid and heat to consumers through a heat distribution center; - the installed power and/or heat generation capacity may increase as a result of the project activity; - the project is limited to the case where natural gas is the main fuel used both before and after project implementation. **CAR 11**. As follows from tabular forms in Section B.1, the project plant will consume more natural gas than the old plant. Please assure that the additional amount of natural gas is available from the national gas transportation system.		
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2,4	DR	This is a JI specific approach. Its application is described in a complete and transparent manner.		OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity	1,2	DR	The basic assumptions of the JI specific	CAR 12	OK

presented (See Annex 2)?			approach are presented in PDD Section B.1. Baseline emissions are defined as those emissions that are associated with the production of heat and electricity that are identical to the output of the project CHP plant. The calculation of baseline emissions depends on quantities of electricity and heat generated by the project as compared with those produced by the old plant. Calculation tracks were described for different cases. The following main factors influencing upon GHG emissions in the baseline and the project scenarios were considered: - emissions from existing CHP facilities for generating heat and power to their limits; - additional emissions from fuel use in boiler for excess heat requirement in project scenario and/or additional emissions in the grid for excess power demand; - ex-ante CO_2 emission factors of the United Energy System (UES) of Russia. **CAR 12**. Please justify the rationale under the condition to use maximum 3-year historical data on fuel consumption, electricity and heat generation for the condition "inequality is false" (pertains to the project conditions). The calculation of emissions at minimum values results in lower emission reductions (conservative establishment of the	CAR 13	

			baseline). **CAR 13.** It is not justified why the whole United Energy System (UES) of Russia will replace the electricity generation of the project CCGT in the absence of the project. The United Regional Energy System (ORES) "North-West" is deficit and receives electric energy from RES "Centre", which in turn receives electric energy in some months from ORES "South". So, the electric energy from ORES "Mid-Volga", "Ural" and "Siberia" does not appear to take part in the replacement of the project capacity in the baseline scenario. Refer to http://www.so-ups.ru/view_doc.aspx?doc_id=0x199133EF43DE872F.		
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are referenced through the text of PDD with some exception. **CAR 14.** References are not given for: - technical documentation of the project and documentation on the analysis of the environmental impacts of the project; - the supporting documents that confirm the project's data; - the versions of the used CDM methodologies.	CAR 14	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					
B.2.1. Is the proposed project activity additional?	1.2, 4,10	DR	For identification of the baseline and assessment of additionality the "Combined tool to identify the baseline scenario and demonstrate additionality", version 02.2 is used [10]. The analyses of alternatives, barriers (regulatory mechanism for price establishing and investments), and common practice are carried out. The following Alternatives to JI project were identified: A1 - The proposed project activity not undertaken as a JI project activity; A2 - The continuation of power and heat generation in the existing cogeneration plant at the project site, with the same technology and configuration, without retrofitting till its remaining operational lifetime (condensed); A3 - The continuation of power and heat generation in the existing CHP plant and the installation of new cogeneration units with technology similar to the existing one (condensed). All Alternatives are in compliance with all mandatory applicable legal and regulatory requirements of the Russian Federation. The analysis of barrier of regulatory mechanism for price establishing shows that	CAR 15 CAR 16 CAR 17 CAR 18	OK

			the current regulatory structure leads to unpredictable economics for investment in power sector, and does not promote building up power capacities in the Russian Federation. Moreover, at present TGC-1 is limited in recourses to invest into renovation of existing capacities. **CAR 15.** Please substantiate the assertion "It is shown that the company does not have enough resources" (PDD page 28). **CAR 16**. Please substantiate the assertion "Tariffs are not able to fully compensate investment in power generation" (PDD, p.27). Alternative A2 does not require investments and changes in operation of Pervomayskaia CHP-14 and remains the only viable scenario not a subject to barriers. In accordance with the "Combined Tool" [10], a conclusion is made in PDD: "Since only one alternative scenario A.2 is not prevented by any barrier, and this alternative is not the proposed project activity undertaken without being registered as a JI project activity, then this alternative scenario is identified as the baseline scenario". **CAR 17.** It is not explained, using qualitative or quantitative arguments, how the registration of the JI project activity will alleviate the barriers that prevent the		

			proposed project activity from occurring in the absence of the JI mechanism. This is required by [10]. Provided the explanation of barriers alleviation is made, the investment analysis step is not needed [10] and one can to proceed to the analysis of common practice. Common practice analysis showed that the thermal power stations using simple cycle for electricity generation dominate in power generation in Russia. Presently, only a few plants of Russia use CCGT technology for heat and power generation. The verifiers observe that in spring 2006, when the investment project on Pervomayskaia PGU was considered by the TGC-1 Management Board there were in Russia only 3 large present-day CCGT (Severo-Zapadnaya PGU-450, Tyumenskaya PGU-220, and Kaliningradskaya PGU-450). Their capacity was within 1% of the total installed capacity of all thermal power plants of Russia. They all were pilot projects with the main purpose to test the new CCGT technology. Severo-Zapadnaya PGU-450 is located in the project geographical area (Leningrad oblast). **CAR 18.** Please assess if Severo-Zapadnaya PGU-450 is a similar activity. If yes, please assess whether there are essential distinctions between the proposed project		

			activity and Severo-Zapadnaya PGU-450. If this is the case, please point out and explain the essential distinctions between the proposed project activity and the similar activity and explain why the similar activity has occurred [10]. Based on the results from analyses of barriers and common practice, a conclusion is made in PDD that the proposed project activity is additional. The verifiers would observe this conclusion as correct provided CAR 17 and CAR 18 are duly responded.		
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario is described in sufficient detail in PDD Sections B.1.		OK
B.2.3. Is the project scenario described?	1,2	DR	The project scenario is described in sufficient detail in PDD Sections A.4.2, A.4.3 and B.1. The project scenario envisages the reconstruction of the Pervomayskaia CHP. It consists of the installation of three units of PGU-180 that use CCGT technology.		OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1,2	DR	Baseline emissions are those emissions that are associated with the production of heat and electricity in amounts identical to the heat and power output of the project plant. Partly, baseline emissions would come from the existing CHP equipment for generating heat and power to their limits. The additional baseline emissions would be from fuel combustion in boiler stations for excess heat	Pending	OK

			requirement in project scenario and/or from the electric grid covering the extra power demand. The analysis presented in PDD Section A.4.3.1 showed that the emissions in the baseline scenario would likely exceed the emissions in the project scenario due to the use CCGT technology with lower carbon intensity in comparison with electricity from the grid. Conclusion is pending a response to CAR 02.		
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2,4	DR	Refer to PDD Sections B.2. Conclusion is pending a response to CAR 17, CAR 18, and CAR 19.		OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2, 11	DR	**CAR 19.** Establishment of the baseline is carried out without taking into account the "General Scheme of Allocation of Energy Objects up to 2020" [11], which refers to construction of Pervomayskaia CHP in 2006-2010 (General Scheme Annex 6 Table 1).	CAR 19	OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2, 4	DR	The project's spatial (geographical) boundaries are defined. Refer to PDD Section B.3 Figures 6 and 7. The baseline boundary is in line with the provisions of paragraph 11 of Guidance on criteria for baseline setting and monitoring [4]. .		OK

B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is presented as 28/4/2009. **CAR 20**. Please use the right format for the date of baseline setting.	CAR 20	OK
B.4.2. Is the contact information provided?	1,2	DR	1. MGM International Ltd Tel: +38 044 2792435 e-mail: JIprojects@mgminter.com 2. Energy Carbon Fund (see Annex 1).		OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that MGM International Ltd is not the project participant listed in Annex 1 of PDD.		OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	1, 2	DR	07/09/2009 (beginning of main building construction) is indicated as the project's starting date in PDD Section C1.		OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,2	DR	It is defined as 30 years. **CAR 21.** Please define the expected operational lifetime of the project in years and months.	CAR 21	OK
C.3. Length of the crediting period					

C.3.1. Is the length of the crediting period specified in years and months?	1,2	DR	2 years, 9 months. The starting date of the crediting period is 01/04/2010. Please refer to CAR 05.		OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2, 4	DR	**CAR 22.** It is not explicitly indicated which of the approaches regarding monitoring, defined in the JISC's guidance on criteria for baseline setting and monitoring, is chosen [4]. The monitoring plan includes the measurement, maintenance, recording and calibration tasks that should be performed to fulfill the requirements of the developed monitoring approach and guarantee traceability in emission reduction calculations.	CAR 22	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2, 4	DR	Option 1 is chosen for this project. Description of the monitoring plan in Section D and Annex 2 explicitly and clearly distinguishes: a) 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. They are specified in the tabular form in Section B.1 and summarised in Section D. b) Data and parameters that are monitored		OK

			throughout the crediting period. Data and parameters that are not monitored throughout the crediting period and are determined only once, but are not already available at the stage of determination regarding the PDD are not used in the monitoring plan. Refer to D.1.1 of Table 2.		
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR	Section D.1.1.1 is left blank on purpose with reference that the data to be collected are presented in the tables of Section B.1. The data to be collected are as follows: - amount of natural gas or other fuel combusted in the project plant (measured); - the net caloric value NCV of the fuels combusted (estimated); - emission factors for fuels combusted (IPCC value).		OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	Refer to PDD Section B.1. These are the formulae presented in PDD Section D.1.1.2. The formulae were checked and found correct.		OK
D.1.5. 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.	1,2	DR	Section D.1.1.3 is left blank on purpose with reference that the data to be collected are presented in the tables of Section B.1. The data to be collected are as follows: - the electric energy generated by the power plant (measured); - the heat energy generated by the power plant (measured);		OK

			- build margin grid emission factor (calculated ex-ante); - efficiency of the boiler station (fixed ex ante); - emission factors for fuels combusted (IPCC value). - historic annual maximum or minimum values of fuel consumption, electricity and heat generation for the old plant (refer to CAR 12).		
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2	DR	These are the formulae presented in PDD Section D.1.1.4. The formulae were checked and found needing the justification as requested in CAR 12.		OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	This Option 2 is not used in the project.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	Leakages in the project are associated with fugitive emissions of methane from production, transportation and distribution of fuel. For the project conditions these		OK

			leakages can be conservatively neglected.		
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	The formulae are presented in PDD Section B.1 with reference to AM0029.		OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	Refer to the formulae in PDD Section B.1: $ER_y = BE_y - PE_y - LE_y$		OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR	It is stated in the PDD Section D.1.5 that the information about environmental volume of air, waste water and other pollutants at CHP-14 is recorded and kept in Form 2-TP (Air).		OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	**CAR 23.** Please provide reference to the relevant host Party regulations. If not applicable, please state so.	CAR 23	OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to D.1.14, Table 2.		
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2	DR	Quality control and quality assurance procedures are not complete. Refer to the tabular forms in PDD Section B.1 Conclusion is pending a request on CAR 09 with regard to QC & QA.	Pending	OK

D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.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	1,2	DR	The operational and management structure that the project participants(s) will implement in order to monitor emission reduction generated by the project is briefly described in PDD Section D.3. Data Team (operations) and JI Team (management) will be set up; responsibilities of employees will be established. The project owner will organize the training of personnel to monitoring procedures.		OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	1. Energy Carbon Fund (see Annex 1) 2. "MGM International Ltd" Tel: +38 044 2792435 e-mail: JIprojects@mgminter.com **CAR 24.** Please update the telephone number.	CAR 24	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that "MGM International Ltd" is not the project participant listed in Annex 1 of PDD.		OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate	1,2	DR	Refer to PDD Section B.1, paragraph "project		OK

	anthropogenic emissions by source of GHGs due to the project?			emissions".		
E.1.2.	Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?	1,2	DR	The estimated values of the project emissions are presented in PDD Section E.1 Table 6. Table 5 is skipped. An excel spreadsheet was made available to the verifiers. The calculations were checked	Pending	OK
E.1.3.	Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	Conservative assumptions were not made.		OK
E.2. Estimated leakage						
E.2.1.	Are described the formulae used to estimate leakage due to the project activity where required?	1,2	DR	Refer to PDD Section B.1, paragraph "leakage".		OK
E.2.2.	Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?	1,2	DR	Refer to PDD Section B.1. In accordance with methodology AM0029, if total net leakage effects are negative ($LEy < 0$), project participants should assume $LEy = 0$. For the present project, leakage should not be taken into account. Refer to PDD Section E.2 Table 7.		OK
E.2.3.	Have conservative assumptions been used to calculate leakage?	1,2	DR	The conservative assumption was made to set leakage equal zero.		OK
E.3. The sum of E.1 and E.2.						
E.3.1.	Does the sum of E.1. and E.2. represent the project activity emissions?	1,2	DR	The calculated values of the sum of E.1 and E.2 represent the project emissions. The sum		OK

			equals E.1 since the leakage emissions are assumed equal to zero. Refer to PDD Section E.3 Table 8.		
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR, I	Refer to PDD Section B.1, paragraph "baseline emissions".		OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified for the applicable project category?	1,2	DR, I	The estimated values of the baseline emissions are presented in PPP Section E.4 Table 9. The calculations on excel spreadsheet were checked and observed to be correct at the assumptions taken and input data used. The conclusion is pending a response to CAR 10, CAR 12 and CAR 13, which may result in recalculation of baseline emissions.	Pending	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1, 2	DR	Conservative assumptions were not made.		OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	The estimated values of GHG emission reductions (the difference between E4 and E3) are presented in PDD Section E.5, Table 10.		OK

E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	The presented Table E.6 provides the yearly and total values of project emissions, leakages, baseline emissions and emission reductions for the crediting period.		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					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR, I	Analysis of the environmental impacts of the project is described in PDD Section F1. **CAR 25.** Please submit the list of the documentation.	CAR 25	OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2, 14	DR I	Under the RF Urban Development Code N 190-Ф3 [14], the capital construction cannot start without an authority's permission. The latter is granted if there is a positive conclusion of the State Expertise on the project documentation; the latter shall contain the results of EIA. PDD There is no confirmation in Section F.1 that a positive opinion of FGU "Glavgosexpertiza" was received. Besides, Permits for Air Emissions shall be issued by the authority Rostekhnadzor for both the construction and exploitation stages.	Pending	OK

			The fulfillment of the above requirement will be checked during the site visit.		
F.1.3. Are the requirements of the National Focal Point being met?	1,2, 15	DR I	The requirements of the National Focal Point to present the EIA should be met before the submission of the project to the Coordination Centre of National Focal Point [15].		OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR I	To start operation the project shall receive Permit for Air Emission. This issue will be checked during the site visit.	Pending	OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR I	Project technical documentation will be studied as regards the transboundary effects during the site visit.	Pending	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Refer to PDD Section F.1 and Table Section F.1.1.		OK
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR	**CAR 26.** Please provide in PDD information about the public discussion on the project "Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units" held in 2007.	CAR 26	OK
G.1.2. The nature of comments is provided?	1,2	DR	Conclusion is pending a response to CAR 26.	Pending	OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR	Refer to G.1.2.	Pending	OK

Table 4 Legal requirements

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1 Legal requirements						
1.1.	Is the project activity environmentally licensed by the competent authority?	1	DR, I	Please refer to F.1.2, F.1.4. This issue will be checked during the site visit.	Pending	OK
1.2.	Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR, I	Please refer to 1.1 above.	Pending	OK
1.3.	Is the project in line with relevant legislation and plans in the host country?	1	DR, I	Yes, the project is in line with relevant legislation and plans in the host country.		OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 01. The project has no approval of the host Party.	1 Table 1	N/A	Conclusion is pending. The approval should be obtained following the determination of the project.
CAR 02. The explanation of how the proposed project reduces greenhouse gas emissions reads: "The GHG emission will be reduced due to the displacement of electricity from the grid produced by fossil fuel power plants by the electricity generated by Pervomayskaia CHP that will produce electricity with lower carbon intensity in comparison with electricity from the grid" (PDD, p.2). This explanation is incomplete since does not address the displacement of the old power plant capacity. Confer the definition of the baseline scenario in PDD Section B.2.	A.2.2	Response 3 dated 20.05.10 Amendments were made to PDD. See p. 3. Response 4 dated 31.05.10 Amendments were made to PDD. See p. 3.	Conclusion on Response 3 Response is not accepted. It is stated on page 3: "Also, emissions of greenhouse gases will be reduced in connection with the displacement of the energy of old power PLANTS, which will be decommissioned". This statement is incorrect since not old power PLANTS will be replaced but only one old PLANT, namely CHP-14. Conclusion on Response 4 Now in the PDD it is stated: "The essence of the investment project

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			lies in the expansion of installed capacity of the existing power plant and as a consequence the increase in power output supplied to the North-west Consolidated Energy System. Additional energy, generated by Pervomayskaia CHP-14 replaces the electricity, generated at burning fuel plants connected with energy system, where the project is implemented". CAR is closed based on due amendments made to PDD.
CAR 03. This Section does not summarize the history of the project as required by [2].	A.2.2	Response 3 dated 29.04.10 Amendments were made to PDD. See p. 3 and Letter from the Director of Investment Policy and Market Development of Energy Carbon Fund Kolesnikov D.A. No. DK-557 dated 18.12.2006 (file: ПисьмоТГК1_18.12.06э.pdf) Response 4 dated 24.05.10 Reference is on page 4.	Conclusion on Response 3 Response is accepted. CAR will be closed when the Letter will be referenced in Section Brief history of the Project. Conclusion on Response 4 CAR is closed based on due reference made to PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 04. The definition of the baseline scenario as a "continuation of the current situation" (PDD, p.2) in incomplete since it does not take into account the electric grid. Confer the complete definition of the baseline scenario in PDD Section B.2.	A.2.2	Response 3 dated 20.05.10 Amendments were made to PDD. See p. 3. Response 4 dated 31.05.10 Amendments were made to PDD. See p. 3.	Conclusion on Response 3 Response is not accepted. Baseline remains not described. Conclusion on Response 4 The baseline scenario is based on the assumption of electricity supplied to the power grid, in which the project activity, in the absence of the project, carried out on existing equipment Pervomayskaya CHP-14 and thermal power plants belonging to this grid. Existing capacity of thermal power stations of the North-West region can provide additional generation of electricity, equivalent project formulation PSU. This means that the generation of electricity at power (thermal power stations) URES "North-West" should be reduced by an appropriate amount. CAR is closed based on proper

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			correction made to PDD.
CAR 05. The implementation schedule assumes the reconstruction of CHP in four stages what contradicts to the statement on p.2 that the construction will be done in two stages. Expected time of stage 1 completion is January 2010 what does not coincide with the starting date of the crediting period 01/04/2010. Refer to PDD Section A.4.2 Table 2 and Section C.3.	A.4.2.1	Response 3 dated 20.05.10 Amendments were made to PDD. See p. 2, 11, 34.	Conclusion on Response 3 Response is accepted. CAR is closed based on due amendment made to PDD.
CAR 06. The equations used for description of the baseline are not numbered as required in [4], Appendix A, para 1(a) (iii). The same pertains to the description of the monitoring plan in PDD Section D.1.	B.1.1	Response 3 dated 20.05.10 Amendments were made to PDD. See p. 15-56.	Conclusion on Response 3 Response is accepted. CAR is closed based on due amendment made to PDD.
CAR 07. The term a "new methodology" used in PDD is not envisaged by the Guidance. This term should be replaced by "JI specific approach" [4].	B.1.1	Response 1 dated 05.03.10 Amendments were made to PDD. See p. 13	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to PDD.
CAR 08. The applicability of the Tool [9] to the energy system that includes not only power plants for generation of electric energy (are envisaged in the Tool) but also	B.1.1	Response 5 dated 07.06.10 Amendments were made to PDD. See p. 50-62. Response 6 dated 04.08.10	Conclusion on Responses 4, 5 The CAR is not closed. It is followed from the text (page

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
cogeneration heat and power plants (CHP) is not justified. CHP cannot be used as replacement power capacity as long as they produce electricity in the prescribed heat supply mode; only the uncharacteristic for CHP condensing regime is appropriate for capacity replacement. Implications of this for the baseline are not analysed. Operating margin (OM) and Build margin (BM) emission factors are calculated by a method which split the amount of fuel consumed by CHP in two parts: the one used for electricity generation and another one for heat production. PDD Section B and Annex 2 do not address this specificity. Build margin emission factor for 2007 is not included in the calculations. Conservatism of the ex-ante value of the calculated emission factor is not analysed.		Amendments were made to PDD. See p. 50, 55.	54) that "Rosstat RF" data includes off-grid power plants data and does not include data for "ODU North-West". Please explain the appearance of negative values of percents in the column "Diff." of the Table Anx.2.2. What is the origin the statement (see page 54): "The off-grid power electricity generation of URES "North-West" is only two and half percent of total electricity generation". Please rectify some errors in the PDD (e.g. on the page 50 last paragraph, and CHP are wrongly named "CUP" throughout Annex 2). Conclusion on Responses 6 The data in the Table Anx.2.2 has been checked and corrected by PDD developer. The off-grid power electricity

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			generation of URES "North-West" is 1.19 % of total electricity generation and only grid power plants are included in the following calculations. This CAR is closed based on the adequate correction made in the PDD (see pages 50, 54).
CAR 09. Please correct the flaws in the information given in the tabular form in Section B.1: - the annual values of fuel consumption, electricity generation and heat generation in the year *yh* (pp 21-22) are mixed; - the year is not indicated for data unit t.c.e.; only one value for two parameters *FC* is indicated; - years are not indicated for parameter $FC_{f,y}$; - some rows of the prescribed tabular form with titles "Time of determination /monitoring", "Justification of the choice of data or description of measurement methods and procedures (to be) applied", "QA/QC procedures (to be) applied" are not filled in without sufficient grounds;	B.1.1	Response 6 dated 09.08.10 Amendments were made to PDD. See p. 22-27	The CAR is not closed. There is no response. Conclusion on Responses 6 The values of all parameters are corrected and they are placed in the Tables of Excel-file (Annex 4 to PDD) also. This CAR is closed based on the adequate correction made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
- the dimension of NCV values and source of data are not indicated; - fictitious sources of data for CO_2 emission factors for different fuels, for instance, measurements by the project participants.			
CAR 10. Annex 2 (baseline information) does not contain a summary of the key elements in tabular form as required by [2]. The observed flaws in information given in Annex 2: - the values and dimensions of key parameters for 2005-2007 in Table 4 of Annex 2 are mixed. The year 2008 is not included in the "last three years" (quoted by Section B.1) though this information is available at the plant; - the emission factor for GTU "Luch" in the Table 3 of Annex 2 is underrated (at efficiency of 40% it is about 0,5 tCO_2/MWh); - Severo-Zapadnaya CCGT is not included in calculation of build margin emission factor in Table 3.	B.1.1	Response 5 dated 13.07.10 Amendments were made to PDD. See p. 51-63. Response 6 dated 04.08.10 Amendments were made to PDD. See p. 54, 55, 58, 61, 62. Amendments were made to the excel spreadsheet with calculations.	The CAR is not closed. 1. Annex 2 (baseline information) does not provide a summary of the key elements in tabular form as required by [2]. 2. Calculations of the Operation Margin emission factor are incorrect. Formulae in the raw 66 do not include data from rows 14 and 15 (refer to the excel spreadsheet with calculations). 3. Gusevskaya TEZ and State District Power Plant - 2 (GRES-2) are not included in Karelian Regional Dispatching Office (Karelskoe RDU) for calculations. Also please give adequate description for Step 4 in the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			Annex 2. It is stated that option B is chosen whereas option A is implemented in the excel spreadsheet. Conclusion on Responses 6 The Table Anx.2.11 with key information and data used for setting the baseline has been added to PDD Annex 2. Calculations of the Operation Margin emission factor were corrected (see Excel spreadsheets in the Annex 4). Option A was chosen for Step 4 in the Annex 2. This CAR is closed based on the adequate correction made in the PDD.
CAR 11. As follows from tabular forms in Section B.1, the project plant will consume more natural gas than the old plant. Please assure that the additional amount of natural gas is available from the national gas	B.1.2	Response 4 dated 21.05.10 OJSC "Fortum has an agreement with OJSC "Gazprom" No 06/1400-716 dated 26.02.2010 on that the additional amount of natural gas is available from the national gas transportation	Conclusion on Response 4 This information has been checked. The Agreement with OJSC "Gazprom" has been

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
transportation system.		system. (file: ТЭЦ-14 - ОАО Газпром о согласовании лимитов.pdf)	submitted to verifiers. The CAR is closed based on the appropriate explanation given by the PDD developer.
CAR 12. Please justify the rationale under the condition to use maximum 3-year historical data on fuel consumption, electricity and heat generation for the condition "inequality is false" (pertains to the project conditions). The calculation of emissions at minimum values results in lower emission reductions (conservative establishment of the baseline).	B.1.4	Response 5 dated 13.07.10 Amendments were made to PDD. See p. 51-63. Response 6 dated 10.08.10 Amendments were made to PDD. See p. 19, 20.	Conclusion on Response 5 The CAR is not closed. Please prove the validity of explanation on pages 51-63 to the question concerning formulae (6)-(8) (see PDD pages 18-19). Conclusion on Responses 6 In the new version of PDD (see PDD, version 6, page 20) PDD developer has taken into account the 5-year historical data in accordance with the approach of AM0061 "Methodology for rehabilitation and/or energy efficiency improvement in existing power plants" (version 2.1). This CAR is closed based on the correction made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 13. It is not justified why the whole United Energy System (UES) of Russia will replace the electricity generation of the project CCGT in the absence of the project. The United Regional Energy System (URES) "North-West" is deficit and receives electric energy from RES "Centre", which in turn receives electric energy in some months from ORES "South". So, the electric energy from ORES "Mid-Volga", "Ural" and "Siberia" does not appear to take part in the replacement of the project capacity in the baseline scenario. Refer to http://www.so-ups.ru/view_doc.aspx?doc_id=0x199133EF43DE872F	B.1.4	Response 5 dated 07.06.10 Amendments were made to PDD. See p. 50-62.	Conclusion on Response 5 It was shown in the PDD (see page 53, Table Anx.2.1) that in whole URES "North-West" is not deficit electric energy system. As a result it is selected as a project electricity system. CAR is closed based on due amendments made to PDD.
CAR 14. References are not given for: - technical documentation of the project and documentation on the analysis of the environmental impacts of the project; - the supporting documents that confirm the project's data; - the versions of the used CDM methodologies.	B.1.5	Response 6 dated 09.08.10 Amendments were made to PDD. See p. 13, 30, 44.	The CAR is not closed. There is no response. Conclusion on Responses 6 The relevant references were given through the text of PDD. This CAR is closed based on the pertinent amendment made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 15. Please substantiate the assertion "It is shown that the company does not have enough resources" (PDD page 16).	B.2.1	Response 1 dated 05.03.10 The assertion is confirmed by Record of proceedings of Board of Directors of JSC "TGK-1" dated November 14th, 2006 Response 4 dated 21.05.10 Expression removed from the PDD.	Conclusion on Response 1 Response is partially accepted. CAR is not closed. Please refer in PDD to Record of proceedings of Board of Directors of JSC "TGK-1" dated November 14th, 2006 and refer to the PDD page number in response. Conclusion on Response 4 This CAR is closed based on the adequate correction made in the PDD.
CAR 16. Please substantiate the assertion "Tariffs are not able to fully compensate investment in power generation" (PDD, p.27).	B.2.1	Response 5 dated 27.07.10 Expression removed from the PDD.	This CAR is closed based on the adequate correction made in the PDD.
CAR 17. It is not explained, using qualitative or quantitative arguments, how the registration of the JI project activity will alleviate the barriers that prevent the proposed project activity from occurring in the absence of the JI mechanism. This is required by [10].	B.2.1	Response 5 dated 27.07.10 Expression removed from the PDD.	This CAR is closed based on the adequate correction made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 18. Please assess if Severo-Zapadnaya PGU-450 is a similar activity. If yes, please assess whether there are essential distinctions between the proposed project activity and Severo-Zapadnaya PGU-450. If this is the case, please point out and explain the essential distinctions between the proposed project activity and the similar activity and explain why the similar activity has occurred [15].	B.2.1	Response 2 dated 09.03.10 RF Government Decree # 332 dated 28 May 2007 [15] only describes the procedure and not oblige the project as JI. The project to build 450 MW CCGT in Severo-Zapadnaya CHPP have implemented company OJSC INTER RAO UES, which is probably not experienced difficulties with financing. Response 5 dated 27.07.10 Amendments were made to PDD. See p. 32.	Conclusion on Response 2 Response is not accepted. Reference to Resolution #332 is irrelevant. You should prove that the project is not common practice activity having in mind Severo-Zapadnaya PGU-450. You should point out and explain essential distinctions between the proposed project activity and the similar activity and explain why the similar activity has occurred [15]. «скорее всего» – не доказательство. Conclusion on Response 5 The PP gave the following addition to the PDD (see page 31): "The installed capacity of combined cycle power plants in Russia less than 2% of the total installed capacity of thermal power stations. Until now, these

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			were pilot projects with the main purpose to try new technologies. One of the recently implemented projects–Severo-Zapadnaia CHPP with gas and steam turbines manufactured in the Russian Federation – was implemented as a testing facility. The previously implemented projects were with foreign turbines". The CAR is closed based on the appropriate justification given by the PDD developer.
CAR 19. Establishment of the baseline is carried out without taking into account the "General Scheme of Allocation of Energy Objects up to 2020" [11], which refers to construction of Pervomayskaia CHP in 2006-2010 (General Scheme Annex 6 Table 1).	B.2.6	Response 1 dated 05.03.10 In 2006, "UES of Russia" RJSC developed "The Master Plan for placing power plants up to 2020". This Master Plan is virtually a consolidated investment that was prepared based on the plans developed by those plants themselves and was later approved by the Government of the Russian Federation (the Government of the Russian Federation Executive Order No. 215-r of February 22,	Conclusion on Response 1 Response is accepted. CAR will be closed when the response is included in PDD and reference to the PDD page number is indicated in response. Conclusion on Response 3 Response is accepted.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		2008). JSC "TGC-1" (TGK stands for Territorial Generating Company) was founded in March 2005 as part of Russia's power industry reform. JSCs "Lenenergo", "Kolenergo" and "Karelenergogeneratsiya" acted as founders of TGC-1. On October 1, 2005 the company started its operating activity. On November 1, 2006 TGC-1 completed the merging of its assets and establishment of an integrated operating company, which is a legal successor in rights and obligations of the merged legal entities. In connection with closing down "UES of Russia" RJSC, the company inherited the investment plans of "UES of Russia" RJSC. However, it is not obliged to implement them. Even though the project is part of "The Master Plan for placing power plants up to 2020", JSC "TGK-1" has no obligations to the state to implement it. The Master Plan does not provide a list of companies, the facilities of which are its part. Therefore, in case the schedule to put new power facilities in operation is not followed to, the state cannot impose penalties on any of such companies. It is also confirmed by the fact that actual deadlines and volumes for putting	CAR is closed based on due amendment made to PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		new power plants in operation considerably differs from those in the Master Plan. Response 3 dated 29.03.10 Amendments were made to PDD. See p. 4.	
CAR 20. Please use the right format for the date of baseline setting.	B.4.1	Response 1 dated 05.03.10 Amendments were made to PDD. See p. 33 Response 3 dated 20.05.10 Amendments were made to PDD. See p. 33.	Conclusion on Response 1 Response is not accepted. 1. It is not permissible to change the names of organizations which are indicated in the published PDD (Energy Carbon Fund and MGM). 2. Contact Information should be indicated as it was in published PDD. The right phone of MGM should be indicated. Conclusion on Response 3 Response is accepted. The contact data was updated. CAR is closed based on due amendment made to PDD.
CAR 21. Please define the expected	C.2.1	Response 1 dated 05.03.10	Conclusion on Response 1

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
operational lifetime of the project in years and months.		Amendments were made to PDD. See p. 34	Response is accepted. Expected operational lifetime of the project is defined in years and months. CAR is closed based on due amendment made to PDD.
CAR 22. It is not explicitly indicated which of the approaches regarding monitoring, defined in the JISC's guidance on criteria for baseline setting and monitoring, is chosen [2].	D.1.1	Response 6 dated 09.08.10 Amendments were made to PDD. See p. 36.	The CAR is not closed. There is no response. Conclusion on Responses 6 It is stated now in the PDD Section D.1 that "In this project a JI specific approach regarding monitoring is used. As elaborated in Section B.3, the project activity only affects the emissions related to the natural gas combustion. To establish the baseline emissions and to monitor the project emissions, only these emissions will be monitored". This CAR is closed based on the duly correction made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 23. Please provide reference to the relevant host Party regulations. If not applicable, please state so.	D.1.14	Response 6 dated 09.08.10 Amendments were made to PDD. See p. 36.	The CAR is not closed. There is no response. Conclusion on Responses 6 The CAR is closed. Section D.1.5 (see PDD page 39) discloses the matter).
CAR 24. Please update the telephone number.	D.4.1	Response 2 dated 09.03.10 Amendments were made to PDD. See p. 41 Response 3 dated 20.05.10 Amendments were made to PDD. See p. 41.	Conclusion on Response 2 Response is not accepted. 1. It is not permissible to change the names of organizations which are indicated in the published PDD (Energy Carbon Fund and MGM). 2. Contact Information should be indicated as it was in published PDD. The right phone of MGM should be indicated. Conclusion on Response 3 Response is accepted. CAR is closed based on due amendment made to PDD. The

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			contact data was updated.
CAR 25. Please submit the list of the documentation.	F.1.1	Response 5 dated 27.07.10 Amendments were made to PDD. See p. 45.	Conclusion on Response 5 OJSC "TGC-1" submitted a Design Document for this project to the Federal State Institution "The Main Agency of the State expertise" and received the approval (Expert Conclusion). This Document has been submitted to verifiers. CAR is closed based on due amendment made to PDD.
CAR 26. Please provide in PDD information about the public discussion on the project "Reconstruction of Pervomayskaia CHP-14 with installation of combined cycle units" held in 2007.	G.1.1.	Response 2 dated 10.03.10 Amendments were made to PDD. See p. 45 Response 3 dated 19.05.10 Amendments were made to PDD. See p. 45	Conclusion on Response 2 Response is not accepted. No relevant information is found on page 45. Conclusion on Response 3 Response is accepted. CAR is closed based on due amendment made to PDD.
CL 01. Please clarify the assertion in PDD, p.	A.2.1	Response 5 dated 29.07.10	This CAR is closed based on the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
2 that the implementation of the Pervomayskaia CHP reconstruction project will ensure the adequacy of the heat capacity and the increase of heat loads for the period up to 2015. As follows from PDD, after reconstruction, the heat capacity will reduce.		Expression removed from the PDD.	adequate correction made in the PDD.
CL 02. It follows from the data in Table 1 on p. 5 that with temperature changes from +15°C to –26°C power capacity increases by 16,2% whereas fuel (natural gas) consumption increases only by 13,7% at the constant efficiency. Please clarify the difference in the trends.	A.4.2.1	Response 5 dated 29.07.10 Expression removed from the PDD.	This CAR is closed based on the adequate correction made in the PDD.
CL 03. Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	A.4.2.4	Response 2 dated 09.03.10 There is a supplementary agreement № 9 / 22 594 from 08/06/09g. to the Contract number 3498 for works to build two combined-cycle power units with capacity of 180 MW each on a turnkey basis, providing training, containing a training program (File: Training of Personnel.pdf) Response 3 dated 19.05.10 Amendments were made to PDD. See p. 12	Conclusion on Response 2 Response is accepted. CAR will be closed when the response is included in PDD and reference to the PDD page number is indicated in response. Conclusion on Response 3 Response is accepted. CAR is closed based on due

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			amendment made to PDD.
CL 04. Please clarify if CDM methodology AM0048 "New cogeneration facilities supplying electricity and/or steam to multiple customers and displacing grid/off-grid steam and electricity generation with more carbon-intensive fuels", Version 02 [11] is applicable to the project.	B.1.1	Response 6 dated 04.08.10 According to paragraph 9 of the "Guidance on criteria for the baseline setting and monitoring", version 02 (hereinafter referred to as "Guidance"), the project participants may select either: (a) An approach for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (JI specific approach); or (b) A methodology for baseline setting and monitoring approved by Executive Board of clean development mechanism (CDM). During the preparation of PDD there was approved by Executive Board of CDM Methodology AM0048 "New cogeneration facilities supplying electricity and/or steam to multiple customers and displacing grid/off-grid steam and electricity generation with more carbon-intensive fuels". The Methodology AM0048 is applicable to new natural gas combined cycle power plants and could be used	The CAR is not closed. There is no response. Conclusion on Responses 6 CAR is closed based on the adequate addition made in the PDD (see page 14).

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		for development of the PDD. However the Guidance is not binding any restriction whether we must use Option (a) or (b). Take advantage of this right we use the Option (a) – JI specific approach. Amendments were made to PDD. See p. 13.	

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He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 60 JI projects.

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He has over 30 years of experience in Low Frequency Electromagnetic Fields of ocean, atmosphere and ships R&D, engineering, and management, environmental science. He worked in Krylov's Research Centre, Saint-Petersburg. At the same time he worked for 15 years as professor of physics at the Marine Technical University. He has published two books, more then one hundred papers in the different scientific journals. Now he is a Lead auditor of Bureau Veritas Certification for Quality Management Systems, Environmental Management System, Occupational Health and Safety Management System. He performed over 400 audits since 1998. Also he is a Lead Tutor of the IRCA registered ISO 9001 QMS Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation in September 2008, Istanbul and March 2009, Moscow, and was/is involved in the determination of 12 JI projects.

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