DETERMINATION REPORT

CLIMATE CHANGE GLOBAL SERVICES (CCGS LLC)

DETERMINATION OF THE

"Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation"

BUREAU VERITAS CERTIFICATION

REPORT NO. RUSSIA/0055-2/2009, V.2

BUREAU VERITAS CERTIFICATION

Report No: RUSSIA/0055-2/2009 v.2

Determination Report on JI project

"WOOD WASTE TO ENERGY IN SEVEROONEZHSK, THE ARKHANGELSK REGION, RUSSIAN FEDERATION"

Date of first issue: 12/02/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: CCGS LLC	Client ref.: Mr. Ilya Goryashin

Summary:

Bureau Veritas Certification has made the determination of the project "Wood waste to energy in Severoonezhsk, the Arkhangelsk region, Russian Federation", 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 1 as per Glossary of JI terms, in line with paragraph 23 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 approach and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: RUSSIA/0055-2/2010	Subject Group: JI
Project title: Wood waste to energy in Severoonezhsk, the Arhangelsk region, Russian Federation	
Work carried out by: George Klenov – Team Leader, Lead verifier Grigory Berdin – Team member, verifier	
Work verified by: Leonid Yaskin - Internal technical reviewer	

Date of this revision: 15/02/2010	Rev. No.: 02	Number of pages: 72

Indexing terms:

Climate Change, Kyoto Protocol, JI, Emission Reductions, Verification,

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Abbreviations

AIE	Accredited Independent Entity
BL(S)	Baseline (Study)
BV	Bureau Veritas
CAR	Corrective Action Request
CCGS	Climate Change Global Services (LLC)
CL	Clarification Request
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
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
SSC Project	Small-scale Project
UNFCCC	United Nations Framework Convention for Climate Change

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1 Introduction

Climate Change Global Services, LLC has commissioned Bureau Veritas Certification to determine its JI project "Wood waste to energy in Severoonezhsk, the Arkhangelsk region, Russian Federation" (hereafter called "the project"). Climate Change Global Services, LLC (CCGS) coordinates the project and the determination process on behalf of the project participants OJSC "Mezhregionenergogas" and CJSC "Teplo-Invest" in the Severoonezhsk settlement, the Plesetsk District, the Arkhangelsk Region.

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 small-scale (SSC) 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 LLC. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 GHG Project Description

The project is implemented in the settlement of Severoonezhsk, the Plesetsk District, the Arkhangelsk Region.

The project is aimed the construction of a biofuel boiler house with the installed capacity of 20 Gcal/h (23.26 MW). The boiler house is designed for district heating of housing and public utilities sector and industrial facilities of the settlement.The main fuel of the boiler house is wood waste (chips, sawdust and long sawmill residues). Wood waste is supplied from the local sawmills. The heat supplied from the boiler house is delivered to end-users via the existing district heating network that is connected to the boiler house by a new section of heat pipeline, around 513 m long.

Prior to the project the settlement had been supplied with heat by a boiler house located in the territory of OJSC "Severoonezhsk Bauxite Mine" (OJSC "SBM") quite some distance away (around 6.8 km) from Severoonezhsk heat consumers. The main fuel of the boiler house was residual fuel oil. Wood waste from the local sawmills was stockpiled at the dumps because there were no utilisation capacities available.

Construction and installation works under the project started in December 2006 (the actual starting date of the project) and were completed in January 2009. On the 1st of August 2008 the boiler house was put into operation after completion of the major portion of construction and installation works. The required investments into the project amount to around EUR 12.8 million.

The project is associated with a number of technological and operational barriers that have to be overcome. The economic parameters of the project without the joint implementation mechanism are unacceptably low. The decision to implement the project was taken by the company's management in view of the possibility to cover some of the costs and to offset project risks by selling GHG emission reductions in the international market. This issue was discussed with the Environmental Investment Center as early as 2006 and in 2009 – with CCGS LLC, the company that was chosen from among others as a partner for developing all necessary documentation and selling GHG emission reductions in the international market.

In the absence of the project the usual practice of heat supply of the settlement would be continued and the local sawmills would go on with their practice of wood waste management.

As a result of the project:

- considerable quantity of wood waste from the local sawmills will be utilised;
- less wood waste will be disposed to the dumps;
- residual fuel oil consumption in the old boiler house owned by OJSC "SBM" will reduce;
- heat losses will be eliminated in the heat pipeline section from the old boiler house to the point where the new pipeline from the new boiler house connects with the district heating system;
- quality and reliability of heat supply of Severoonezhsk will improve;

- local employment rate will increase;
- negative environmental impact will be mitigated; and
- greenhouse gas (GHG) emissions will be cut down by an average of 26 thousand tonnes of CO_2e/year.

It should be noted that the project is clearly environment-oriented. Implementation of the project 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.

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:

George Klenov
Bureau Veritas Certification - Lead Verifier

Grigory Berdin
Bureau Veritas Certification – Team member, Verifier

Leonid Yaskin
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) interviews with management and specialists of OJSC "Mezhregionenergogas" and CJSC "Teplo-Invest" as the project representatives (February 10th and 11th 2010) and CCGS LLC as the PDD developer;
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

CCGS has submitted to Bureau Veritas Certification on 21/12/2009 the Project Design Document (PDD) version 1.0 dated 28/08/2009. The PDD and additional background documents related to the project design, baseline, and monitoring plan, i.e. Kyoto Protocol, Host Country Laws, JI guidelines, Guidelines for Users of the Joint Implementation Project Design Document Form for Small-scale Projects and the Form for Submission of Bundled Joint Implementation Small-scale Projects, Provisions for Joint Implementation Small-scale Projects, JISC Guidance on Criteria for Baseline Setting and Monitoring and others were reviewed.

The first deliverable of the document review was the Draft Determination Report (DDR) version 1 with CAR's and CL's which was submitted to CCGS on 18 January 2010.

On 28/01/2010, CCGS submitted the amended version of PDD, version 1.1 together with summaries of responses to the verifiers' requests. Having reviewed this feedback, Bureau Veritas Certification issued DDR version 2 dated 04/02/2010 with clarifications as to why some of CCGS responses can not be accepted.

0n 10/02/2010 CCGS has submitted their final responses and the completed version 1.2 of PDD dated 09/02/2010 which was accepted by Bureau Veritas Certification.

The determination findings presented in this DDR versions relate to the project as described in the original PDD version 1.0 dated 28/08/2009. The amendments done in the PDD version 1.1 dated 28/01/2010 and version 1.2 dated 09/02/2010 have been taken into account in this Determination Report.

2.2 Follow-up Interviews

Bureau Veritas Certification Lead verifier George Klenov conducted interviews with project participants (OJSC "Mezhregionenergogas" and CJSC "Teplo-Invest" project representatives) on 10-11 February 2010. Series of interviews with PDD developer were conducted as well to confirm selected information and to resolve the issues of concern identified in the document review. Representatives of OJSC "Mezhregionenergogas" and CJSC "Teplo-Invest" and CCGS LLC, which were interviewed, are listed in References, Section 6. The main topics of the interviews held are summarized in Table 6.

Table 6 Interview topics

Interviewed organization	Interview topics
OJSC "Mezhregionenergogas", CJSC "Teplo-Invest"	➢ Technical project documentation ➢ Project management organisation ➢ Operational lifetime of the project ➢ Distinctions of the project activity from similar activities ➢ Operational and management structure ➢ Environmental Impact Assessment Documentation ➢ Stakeholders' comments ➢ Training programmes for boiler house operators ➢ Project monitoring responsibilities ➢ Monitoring equipments ➢ Quality control and quality assurance procedures
CCGS LLC	➢ History of the project ➢ Implementation schedule ➢ Starting date of the project (the date on which the implementation or construction or real action of the project has begun) ➢ Technical design document ➢ Investment barrier. IRR of the project as per the feasibility study and technical design ➢ Pending issues ➢ Evidence and records on the boiler house construction and its operation ➢ Baseline and Project scenarios ➢ Monitoring plan ➢ Barrier (technological and financial) analysis ➢ Additionality justification ➢ Common practice analysis ➢ Estimation of the emissions reductions ➢ 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 DDR, version 1, summarising Bureau Veritas Certification's findings, was submitted to the project participants on 18/01/2010. The findings identified have been twenty one 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 1.1 and, eventually, the version 1.2 dated 09/02/2010 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 01 was issued on 15/02/2010. On the same day the Determination Report version 01 and PDD version 1.2 were conveyed to Bureau Veritas Certification Internal Technical Reviewer (ITR) for review.

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 on-line interviews 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

It is demonstrated in PDD that the project falls under the criteria for small-scale (SSC) Projects [3]. The project is eligible as an individual SSC project.

The Sectoral Scopes are identified in the PDD as: (1) Energy industries (renewable/non-renewable sources) and (13) Waste handling and disposal. The project activity is referred in PDD to the following two types*:

Type I – Renewable energy projects. Category C – Thermal energy production with or without electricity;

Type III – Other project activities. Category E – Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment.

The project activity meets the small-scale activity criteria, because:

1. As of today the installed thermal capacity of the new biofuel boiler house is 23.26 MW and will not exceed 29.08 MW in future, which is less than the limit of 45 MW set for small-scale projects;
2. GHG emission reductions generated by the project are estimated at an average of 26 thousand tonnes of CO_2e per year, which is within the limit of 60 thousand tonnes of CO_2e per year set for small-scale projects.

The project provides reduction of GHG emissions by reducing of:

- residual fuel oil consumption in the old boiler house owned by OJSC "SBM" as a result of construction of a new biofuel boiler house and reduction of heat losses in the heat pipeline; and
- wood waste disposal to the dumps.

The project uses the state-of-art technology. The boiler house has four hot water boilers of Global/G/M-500 model manufactured by an Italian company "Uniconfort" with the thermal capacity of 5 Gcal/h (5.8 MW) each. The boiler house also has spare area for installation of an additional boiler with the same capacity.

Global/G/M-500 boilers are fitted with a furnace with a reciprocating grate for wood waste firing. The main fuel of the boiler house is wood waste with moisture content between 30% and 50%. Biofuel is delivered to the boiler house from the local sawmills by the fuel supplier's motor transport.

In Russian boiler units biomass, as a general rule, is fired using fossil fuel for flame stabilization and the combustion efficiency is low, especially when high-moisture biomass is fired. In foreign boilers (manufactured in Europe and USA) flame

* In accordance with the project types and categories adopted by the CDM Executive Board, see http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html.

stabilization is not used at all even if the moisture content of biomass is high and the efficiency is up to 90%. Also reliability of domestic biomass boilers often is much lower than foreign ones.

The outcomes of project activity will be the following effects:

- mitigation of adverse environmental impacts; and
- average reduction of GHG emissions by 26 055 tCO2e/year over the period 2008-2012. Total estimated emission reductions will equal 130 277 tCO2e over 5 year crediting period starting in 2008.

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

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 16, CL 01, CL 04).

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

3.2 Baseline and Additionality

The PDD developer has chosen JI specific approach for baseline setting in accordance with paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring. The baseline has been established in accordance with appendix B of the JI guidelines*.

The baseline scenario has been identified based on the analysis of several alternatives which allow to ensure the required heat supply to end-users of the settlement, and alternative ways of handling wood waste that is fired under the project. Key factors and relevant national and/or sectoral policies that affect a baseline have been taken into account.

The Alternatives were identified separately for the two components of the JI project activity: heat supply of the settlement (HS1 – Continuation of the current situation; HS2 – Construction of a gas-fired boiler house; HS3 - Construction of a coal-fired boiler house, and HS4 – The project activity without the JI mechanism) and use of wood waste (WW1 - Continuation of the current situation; WW2 – Use of wood waste for fuel pellet production, and WW3 - The project activity without the JI mechanism).

All Alternatives are in compliance with all mandatory applicable legal and regulatory requirements of the Russian Federation.

The baseline scenario assumes continuation of the existing practice of heat supply of the settlement from the old residual fuel oil boiler house owned by OJSC "SBM". The unused wood waste generated at the local sawmills will be stockpiled at the dumps.

* The annex to decision 9/CMP.1 (referred to as JI guidelines) includes an appendix B that lists criteria for baseline setting and monitoring.

The baseline scenario is "business as usual" within the existing regulatory framework that does not prohibit OJSC "SBM" from supplying heat to the settlement, firing residual fuel oil in the existing boilers nor imposes any constraints on stockpiling of wood waste at the dumps by the local sawmills.

The proposed approach to additionality demonstration and assessment applies the investment and sensitivity analyses of the project investment activity. The calculations on the spreadsheet annexed to PDD show that the project is not economically attractive without ERU sale.

Summarizing the alternatives analysis and taking into account the results of the investment, sensitivity and barrier (technological and operational) analyses, the continuation of the current situation was chosen as most plausible baseline scenario.

Common practice analysis showed that at the starting date of the project not a single project that involved switching of settlement's heat supply to local biofuel had been implemented in the Arkhangelsk Region. Now there are just a few JI projects realized therein. Therefore this project is not common practice.

Based on the above, GHG emission reductions generated by this project are additional to those that might have otherwise occurred.

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 08, CAR 09, CAR 10, CAR 11, CAR 12, CAR 13, CAR 14, CAR 15, CL 02, CL 03).

3.3 Monitoring Plan

The PDD developer has chosen JI specific approach for monitoring in accordance with requirements of paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring [6] without using any approved methodologies.

Collection of data required for estimation of GHG emission reductions is performed to high industry standard and the best practice of fuel and energy monitoring and environmental impact assessment.

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

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 17, CAR 18, CAR 19).

3.4 Calculation of GHG Emissions

The formulas used for calculation of baseline and project emissions are presented in PDD Section D. The initial data for calculations and the calculated values are presented in Section D.2 and Section E. The verifiers checked the calculations

completed in the PDD version 1.0 and amended PDD version 1.2 and found them accurate.

Implementation of the project will lead to reduction of GHG emissions from combustion of fossil fuel at the old boiler house and anaerobic decomposition of wood waste at the dumps.

The principal GHG released during combustion of fossil fuel is CO_2. Emissions of CH_4 and N_2O from combustion of fossil fuel are negligibly small as compared with CO_2 emissions and were neglected in development of this project.

CO_2 emissions from combustion of biomass are considered to be climatically neutral. The emissions of GHG under the project are assumed equal to zero.

The calculated value of project emission reduction over the crediting period 2008 – 2012 is 130 277 tCO2e. Annual average emission reduction is 26 055 tCO2e/year.

Identified area of concern as to Calculation of GHG Emissions, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 20, CAR 21).

3.5 Environmental Impacts

There are no significant adverse environmental impacts resulting from implementation of activities within the frameworks of this project.

The project envisages switching the heat supply system of the settlement to a more ecofriendly fuel. The project implementation leads to reduction of residual fuel oil combustion in the boiler house owned by OJSC "SBM", and hence to reduction of pollutants and GHG emissions into the atmosphere.

CO_2 emissions from combustion of biomass are considered to be climatically neutral. The emissions of GHG under the project are assumed negligible.

The project has the following permits and positive expert opinions:

- Positive opinion of the state expertise No.29-1-4-0356-07 issued on 4.04.2008;
- Permit issued by Rostekhnadzor for operation of the energy generating unit No.01-07-T/024 dated 09.02.2009.

In general, the project implementation will lead to mitigation of negative environmental impacts. Thereby the project has met the key requirements of Russian environmental legislation.

No areas of concern as to Environmental Impacts are identified.

3.6 Comments by Local Stakeholders

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

Comments on behalf of local and federal authorities were received in the form of positive opinions regarding the project activity from the state expert examinations and permits for the project implementation.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

Similar to the Verification procedure under the Article 6 Supervisory Committee, Bureau Veritas Certification published the PDD Version 1.0 on BVC site *www.bureau-veritas.ru* on 23.12.2009 and invited comments within 21.01.2010 by Parties, stakeholders and non-governmental organizations.

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 "Wood waste to energy in Severoonezhsk, the Arkhangelsk region, the Russian Federation". The determination was performed on the basis of UNFCCC criteria for SSC 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 was carried out under Track 1 as per Glossary of JI terms, in line with paragraph 23 of the JI guidelines.

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 on-line interviews with project stakeholders and PDD developer; iii) the issuance of the determination report, and iv) opinion.

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests and Clarification Request 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 barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that 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 1.2 dated 09/02/2010 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 N 843 dated 28/10/2009.

George Klenov – Team leader, Lead verifier

Grigory Berdin – Team member, verifier

6 REFERENCES

Reviewed document or Type of Information referred to in Appendix A

1	PDD "Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation", version 1.0, dated 28 August 2009.
2	Guidelines for Users of the Joint Implementation SSC Project Design Document Form and F-JI-SSC-Bundle/Version 04, JISC.
3	Provisions for Joint Implementation Small-Scale Projects, Version 03, JISC.
4	Detailed Design "Biofuel Hot Water Boiler House with the Thermal Capacity of 18 MW", Severodvinsk, 2007.
5	Decision 9/CMP.1. Guidelines for the implementation of Article 6 of the Kyoto Protocol. FCCC/KP/CMP/2005/8/Add.2. March 30, 2006.
6	JISC Guidance on criteria for baseline setting and monitoring. Version 02.
7	Operational Guidelines for Project Design Documents of Joint Implementation Projects. Vol.1. General Guidelines./ Version 2.3. Ministry of Economic Affair of the Netherlands. May, 2004
8	2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 2, Chapter 4. Page 4.60.
9	Methane and Nitrogen Oxide Emissions from Biomass Waste Stockpiles, World Bank - PCFplus Research, August 2002.
10	"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".

Additional Document or Type of Information provided to the verifier

References in Appendix A are underlined

1	Project "Biofuel Boiler House with installed thermal capacity of 18 Mwt, JSC "НПФ РОСС МТК", Severodvinsk, 2007, 210-01К.ОПЗ, "General Explanatory Note" and "Environmental Protection".
2	Annex to Contract No.15/2008 dated 07.07.2008 "The calculation of insulation losses in the supply and return heat pipelines from the point where the sensors of the heat metering unit are located and to the border dividing ownership and operational responsibilities".
3	Investment Contract No.2/06 dated 13/12/06 (CJSC "Teplo-Invest" and OJSC "Mosoblenergogas").
4	Protocol of Intention between local non-profit organization "Environmental Investment Center" and CJSC "Teplo-invest" regarding implementation of project aimed, dated

	01/11/2006.
5	Guidelines for calculation and justification of standard process losses for heat delivery in the Russian Ministry of Energy. Approved by the order of the Ministry of Energy of the Russia Federation dated December 30, 2008 No.325.
6	The methodology for determination of fuel, electricity and water demand for production and delivery of heat and heat carriers in the public heating systems. MDK 4-05.2004. Moscow, 2004.
7	E.F.Buznikov, Industrial and Heat Supply Boiler Houses. – M.: Energoatomizdat, 1984
8	Reference Book on Wood Drying/Edited by E.S.Bogdanov. – 4th Edition, revised and supplemented. – M.: Forest Industry, 1990.
9	Methane and Nitrogen Oxide Emissions from Biomass Waste Stockpiles, PCFplus Research, World Bank, August 2002.
10	"The Record of Measurement of the Scoop of XCMG ZL 50 G Front Loader", Act dated 26 May 2009.
11	Interim permit issued by Rostekhnadzor for operation of the energy generating unit No.01-07-T/012 dated 15.07.2008.
12	State expertise No.29-1-4-0356-07 issued on 4.04.2008.
13	Permit issued by Rostekhnadzor for operation of the energy generating unit No.01-07-T/024 dated 09.02.2009.

All these documents have been available for auditors.

Persons interviewed:

1	Andrey E. Dyadjura, OJSC "Mezhregionenergogas", Project Leader; CJSC "Teplo-Invest", Representative.
2	Michail V. Gudkov, OJSC "Mezhregionenergogas", Head of Subsidiary in Severoonezhsk.
3	Alexander V. Samorodov, CCGS, Director.
4	Ilya Goryashin, CCGS, specialist, PDD-writer.

7 DISCLAIMER

This report contains the results of the determination of whether the project under consideration meets the relevant requirements of Article 6 of the Kyoto Protocol and the JI guidelines. The used determination procedure does not fall under the verification procedure under the JISC, as defined in the JI guidelines, paragraphs 30–45. Instead, paragraph 23 of the JI guidelines apples to the determination based on which Bureau Veritas Certification Holding SAS issues, under the contractual arrangements with CCGS, an expert opinion on the project as per the RF Government Decree No. 843, dated 28 October 2009, "Procedure for approval and verification of status of projects carried out in accordance with Article 6 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change".