DETERMINATION REPORT

"GAZTEKHSTROY" LLC

DETERMINATION OF THE HEATING MAINS LOSSES DECLINE IN SETTLEMENTS OF TUVA REPUBLIC, RUSSIAN FEDERATION

REPORT NO. RUSSIA-DET/0248/2012

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Determination Protocol on JI project

"Heating mains losses decline in settlements of Tuva Republic, Russian Federation"

Date of first issue: 20/04/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: "GazTekhStroy" LLC	Client ref.: Ms. Antonina .Zemtsova

Summary:

Bureau Veritas Certification has made the determination of the "Heating mains losses decline in settlements of Tuva Republic, Russian Federation" project of company "GazTekhStroy" LLC" located in Tuva Republic, 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 rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and 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 Corrective Actions and Clarification Requests, presented in Appendix A. Taking into account this output, the project proponent 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.: RUSSIA-det/0248/2012	Subject Group: JI	
Project title: Heating mains losses decline in settlements of Tuva Republic, Russian Federation		
Work carried out by: Leonid Yaskin – Lead verifier		
Work reviewed by: Daniil Ukhanov – Internal Technical Reviewer		
Work approved by: Leonid Yaskin – Country Operational Manager		
Date of this revision: 20/04/2012	Rev. No.: 01	Number of pages: 53

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CCGS	Climate Change Global Services
CL	Clarification Request
CO2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NG	Natural gas
NGO	Non Governmental Organization
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

"GazTekhStroy" LLC (hereafter called GazTekhStroy) has commissioned Bureau Veritas Certification to determine their JI project "Heating mains losses decline in settlements of Tuva Republic, Russian Federation" (hereafter called "the project") located in the Tuva Republic, Russian Federation.

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 determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions 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, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3 Determination team

The determination team consists of the following personnel:

Dr. Leonid Yaskin
Bureau Veritas Certification Climate Change Lead Verifier

This determination report was reviewed by:

Daniil Ukhanov
Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The completed determination protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) submitted by GazTekhStroy LLC and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, GazTekhStroy LLC revised the original PDD Version 01 dated 26/01/2012 and following a set of revisions resubmitted it as Version 03 dated 30/03/2012.

The first deliverable of the document review was the Determination Protocol Revision 01 dated 19/03/2012 which contained 15 CARs and 4 CLs.

The determination findings presented in this Determination Report Revision 01 and its Appendix A relate to the project as described in the PDD Version 01 (published) through version 03 (final).

2.2 Follow-up Interviews

On 13/04/2012 the AIE Lead Verifier L. Yaskin performed interviews with project participant GazTekhStroy to confirm selected information and to clarify some issues identified in the document review. The persons interviewed are indicated in References. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Project participant GazTekhStroy	➢ Project history and Implementation schedule ➢ Baseline scenario ➢ Project activity ➢ Input data for investment analysis ➢ QC & QA procedures of monitoring ➢ Letter of Tariffs Service ➢ Measured data on project and baseline parameters ➢ Theoretical description of baseline scenario ➢ Investment barrier and common practice ➢ Additionality ➢ Monitoring plan ➢ Emission reduction calculation
CONSULTANT	➢ N/A
Stakeholders	➢ N/A

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

If Bureau Veritas Certification, in assessing the PDD and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to JI project requirements, it should raise these issues and inform the project participants of these issues in the form of:

a) Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance

with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;

b) Clarification request (CL), requesting the project participants to provide additional information for Bureau Veritas Certification to assess compliance with the JI project requirement in question;

c) Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

Bureau Veritas Certification should make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the determination.

To guarantee the transparency of the determination process, the concerns raised are documented in more detail in the determination protocol in Appendix A.

3 PROJECT DESCRIPTION (quoted by PDD v.03)

Purposes of the Project:

The goal of the project is the decrease in fuel consumption for heat energy production for feed water (heat carrier) heating. That is the result of leaks (spills) decrease from the non compactnesses of warn-out heating mains by their reconstruction.

Implementation of this project is based on sustainable development, it means the decrease of impact on the environment. As a result of less quantity of carbon fuel used for the supply of the same number of customers with heat, is the reduction of GHGs and soot emissions. This helps to mitigate “greenhouse” effect and improves the envi5onment conditions of Kyzyl city and in the whole Tuva Republic.

Situation prior the project activity

Before the Project’s start on the heating mains occurred high consumption of heating carrier. Thus, municipal boiler houses burnt heightened amount of fuel for feed water heating. Old heating mains (tubes) were tremendously warn-out (80-90% wornt). They didn’t provide enough preservance to heat carrier during its transfer for the long distance as they were put into operation in 1970-80 years and were not repaired for a long time, considering that their estimated operational life is not more than 20-25 years.

Project

The Project presumes to apply state-of-the-art materials for heating mains reconstruction in Tuva Republic by virtue of the substitution of the old-fashioned and warn-out isolation of heating maines by new

state-of-the-art isolation and by means of the avoidance of heat carrier leaks through non compactnesses of the old tubes by their substitution. This results to reduction in heat losses through isolation during heat energy transfer and also leads to heat losses due to heat carrier leaks. Thus, boiler houses loading of Tuva Republic decreases and, therefore, leads to reduction in fuel consumption for heat energy generation. The project leads to considerable economy in fossil fuel consumption (coal) that otherwise would be burnt for generation of the equal amount of heat for the supply of heat energy customers in the absence of the Project.

The project activity is performed by GazTekhStroy LLC which makes all the works regarding reconstruction of heating mains in accordance with assignment of Ministry of industry and energy of Tuva Republic in accordance with mechanisms of Kyoto Protocol based on its own investments.

Project plans the sealing of roads, the sealing of heating mains' canals, dismantling of old heat isolation (mineral wadding), dismantling of old leaking heating mains', dismantling of canals, mantling of canals, mantling of new heating mains with the use of urethane foam (UF) isolation, covering of canals with germetization of joints and renewal of roads with territories rehabilitation.

For the long years of its activity GazTekhStroy LLC is guided by sustainable development principals and its responsibilities in ecological, industrial and social aspects.

Therefore the Project supposes aims:
-reduction of heating system of Tuva Republic loading due to reduction of fuel consumption for heat energy generation for feed water heating;
-supply of customers with the heat carrier of necessary quality by consumption of minimal quantity of energy sources (stable quality of hot water);
-improvement of heaviest ecological conditions by means of reduction of GHGs emissions due to reduction of carbon fossil fuel (coal) consumption for heat generation.

The quantity of customers connected to every hating main is stable and did not change in comparison with situation prior to the massive reconstruction.

GazTekhStroy LLC due to the project implementation solves not only local and regional problems of heating, but also improves environment of Kyzyl and Tuva Republic.

Main facts that help to implement the Project:.
-possibility of its implementation in accordance with Kyoto Protocol mechanisms for mitigation of expenses on heating mains reconstruction. It is impossible to perform any important repair-prevention report, by the revenues from the existing tariffs on heat energy due to their negligible values and high prices of operational expenses. So the company took into account the chance to receive investments from emission reductions trade and decided to implement the Project.
-increase of reliability and quality of heat carrier on the municipal objects. This will considerably reduce pollutants emissions in the region and will improve quality of people life in Kyzyl and Tuva Republic.

Implementation of the Project faced series of economy obstacles. However, GazTekhStroy LLC plans to receive investments from emission reduction units (ERUs) trade, that will be obtained and this will help to overcome the obstacles in the process of implementation and approval of the Project as JI activity.

Baseline scenario
Under the baseline practice of heat production with the use of higher amount of fossil fuel (coal) for heating greater amount of feed water due to considerable leaks of the heat carrier and heat through the bad isolation on heating mains.

In favor of baseline says the facts as follow:
Absence of sufficient stimulus for Project's implementation: making of insufficient planned repairs in the frames of tariffs and the absence of responsibility to reconstruct with the sum that exceeds the tariffs income, doesn't pose the company that supplies the heat energy, to invest money in measures for fossil fuel combustion economy that leads to GHGs emission reductions.
Absence of investment attractiveness for such projects due to the absence of municipals support. In the presence of low values for heat transfer tariffs investing in municipal sector is unprofitable.

History of the project (incl. JI component)
The situation before the start of the project activity was complicated: old heating mains were worn out tremendously (80-90%). The money for their reconstruction were absent. The local authority has money only for emergency and routine repairs. Hence it was decided to attract private company GazTekhStroy LLC for making massive reconstruction of heating mains under JI mechanisms and delegation of emission reductions rights to it. The decision was made at the meeting at the Deputy Prime Minister of the Republic of Tuva in Kyzyl/Protocol Tuva Republic Government meeting #14 from 17.12.2007.

Followed by Order of the First Deputy Minister of Industry and Energy of the Republic of Tuva № 27 of 16.05.2008 on the approval of a plan of additional measures works for the replacement of heating system for the period 2008-2011 on the territory of the Republic of Tuva.

06.2008 – Start of reconstruction works.
01.06.2011 - End of reconstruction works according to the Project

Emission reductions
As a result of the Project:
- reconstruction of heating mains for the arrangement of state-of-the-art energy efficient sections in average on 53% from the total length;
- reduction of coal consumption by 1983 thousand tonnes for 2008 – 2012 or 396 thousand tonnes per annum;
- reduction of heat carrier (feed water) leaks in average by 18%;
- reduction of heat losses on feed water heating by 68%;
- reduction of soot emissions by 74%;
- reduction of CO2 emissions due to coal combustion by 1 116 910 thousand tons per year, or 4,839,942 for the period 2008-2012.

4 DETERMINATION CONCLUSIONS

In the following sections, the conclusions of the determination are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Determination Protocol in Appendix A.

The Corrective Action Requests (CAR) and Clarification Requests (CL) are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 15 CARs and 4 CLs.

The number between brackets at the end of each section corresponds to the DVM paragraph.

Outstanding issues related to Project Description (Section 3) PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 01,CAR 02).

The issued requests concern:
- Provision of the exact name of the scope (CAR 01);
- Provision of summary of the project including its JI component. (CAR 02).

4.1 Project approvals by Parties involved (19-20)

The project has no approvals by the Host Party, therefore CAR 03 remains pending.

A Party involved other than the Host Party is not determined.

4.2 Authorization of project participants by Parties involved (21)

The participation of GazTekhStroy listed as project participant in the PDD is not authorized by the Host Party because the project approval by the Host Party was not received. A Party involved other than the Host Party is not determined.

The authorization is deemed to be carried out through the issuance of the project approval.

4.3 Baseline setting (22-26)

It is explicitly indicated in the PDD Section B.1 that a JI specific approach is applied according to paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring, Version 3 (hereafter referred Guidance).

JI specific approach

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

/a/ By listing and describing future baseline scenarios available for the project participant and selecting the most likely scenario. Two alternative scenarios (AS) were identified as follows:

AS1: The proposed project itself without JI component.

AS2: Business as usual.

Based on alternatives analysis with taking into account the key factors in (b) below a conclusion is made in Section B.1 that AS2 represents the baseline..

/b/ By taking into account key factors that affect a baseline, such as (i) energy sector legislation; (ii) heat demand in the Tuva Republic; (iii) availability of capital including investment barriers; (iv) local availability of technologies/techniques; (v) coal price and availability for the project.

/c/ Basically in a transparent manner with regard to the choice of approaches, assumptions (traced by a finder), methodologies, parameters, data sources and key factors.

/d/ Accounting the uncertainties and the used assumptions, including conservative ones (addressed by CAR 13).

/e/ In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.

/f/ Basically by drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring (addressed by CAR 05).

Outstanding issues related to Baseline setting (22-26), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 04-CAR 05, CL 02).

The issues requests concern:

- Incorrect definition and dimension given for 1/1000 (Gcal/tonne) (CAR 04);
- Bringing heat consumption and days number in conformity with the list of standard variables (CAR 05).
- Confirmation in the PDD that same level of service as in the project scenario would be offered in the baseline scenario (CAR 06).
- Provision of documented evidence for each parameter used to establish the baseline (CL 02).

4.4 Additionality (27-31)

JI specific approach

The approach described in paragraph 2 (a) of Annex 1 to the "Guidance on criteria for baseline setting and monitoring" Version 03 was selected to demonstrate that the reductions of greenhouse gas emissions from sources achieved due to the project implementation are additional to those that might have otherwise occurred in the absence of the project.

Additionality proofs are provided through four stages: Stage 1 Identification of alternatives, Stage 2 Investment analysis, Stage 4 Common practice analysis, and Stage 5 Provision of additionality proofs.

At State 1, the two alternative scenarios identified in Section B.1 are listed. They are in line with the Russian legislation.

At Stage 2, a simple cost analysis is reasonably applied. By the comparison of investments by the two scenarios it is concluded that Alternative scenario 2 is unprofitable for the project participant as compared with the Alternative scenario 1. The AIE confirms this conclusion provided that the investment costs are correct (addressed by CAR 07).

At Stage 3, the common practice analysis puts forward an argument that private investments in repair of municipal district heating network are not the common practice (addressed by CAR 08). The AIE observes that there were evidently no similar activities implemented in the Tuva Republic of the same scale and under the same technology.

At Stage 5, logic additionality proofs are provided in line with those in Section A.4.3.

Outstanding issues related to Additionality (27-31), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 07, CAR 08).

The issued requests concern:
- Documented evidence of investments in alternative scenarios 1 and 2 (CAR 07).
- Evidence that the private company GasTekhStroy LLC invested own funds in the project activity (CAR 08).

4.5 Project boundary (32-33)

JI specific approach

The project boundary defined in the PDD encompasses main anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant.

Project boundary is defined on the basis of case-by-case assessment of emission sources. The identified sources of the accountable CO2 emissions are:
- Coal combustion for heating of a higher volume of feed water (baseline);
- Coal combustion for heating of lesser volume of feed water (project activity).

Outstanding issue related to Project Boundary (32-33), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 09).

The issued CAR 09 concerns the inclusion of customer in the project boundary on Fig. B.3.1.

4.6 Crediting period (34)

The starting date is determined to be 17.12.2007, when a discussion of intentions to implement the Project on massive reconstruction of heating mains as JI project took place (PDD refers to protocol of Tuva Republic Government meeting #14).

Expected operational lifetime of the project is 25 years or 300 months: from 01/09/2008 till 01/09/2033.
The crediting period is defined as from 01/01/2008 to 31/12/2012 with the starting date being the date of the first emission reductions generated by the project.

Outstanding issue related to Crediting period (34), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 10).

The issued CAR 10 concerns the selection of the right starting date of the project.

4.7 Monitoring plan (35-39)

JI specific approach

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was selected.

The monitoring plan describes:
(i) data to be monitored (refer to D.1.2.1):
- Heat carrier (water) consumption by object i in year y;
- Temperature difference twixt outlet and input water of object i in year y

(ii) the period in which these parameters will be monitored - constantly;
(iii) all decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan.

The monitoring plan generally specifies indicators, constants and variables used that are basically reliable, valid and provide transparent picture of the emission reductions to be monitored.

The only constant used as the default value is the coal emission factor taken from the recognized source. The precise reference to IPCC for the coal emission factor is provided in Section B.1

Project participants provide data on heat consumption by object i under the baseline and specific fuel consumption on the object i.

There is a basic consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan. The monitoring plan basically draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring".

Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes:
(i) Refer to 36 (b).
(ii) This has to be specific fuel consumption on object i under the project activity (addressed by CAR 13).
iii) Refer to 36 (a).

The methods employed for data monitoring are described appropriately in the monitoring plan, including type of measuring equipment, recording frequency, proportion of data to be monitored, and how will the data be archived.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions.

QC/QA procedures are outlined in PDD Section D.2. These are routine district heating network operator procedures.

The monitoring plan clearly describes the operational and management structure regarding the monitoring activities. The responsibility for the JI project implementation rests with the GazTekhStroy. On the whole, the monitoring report reflects good monitoring practices applied in the Russian district heating sector.

The monitoring plan indicates that the data monitored and required for verification will be kept for 5 years after the last transfer of ERUs for the project.

Outstanding issues related to Monitoring plan (35-39), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 11-CAR 14, CL 03, CL 04).

The issued requests concern:
- The transparencies as to how heat consumption by object i under the baseline and specific fuel consumption on the object i under the baseline and in the project activity are obtained and justified (CAR 11).
- The emergency procedures to be followed if the instrumental meter complex fails (CAR 12).
- Correction of Formula (D.1) and provision of consistency with excel calculations; justification that that the specific fuel consumption on the object i under the project activity is constant and equals that for the baseline (2005-2007); justification that the weather temperature conditions under the project activity equal to those under the baseline; conservativeness of the assumptions made (CAR 13).

- Tabular form with a complete compilation of the data that need to be collected (CAR 14).
- Clarification if the Federal Laws #261 (on energy efficiency) and # 190 (on district heating) fall under 36 (g) (CL 03).
- The commitments of Boiler Houses and the Ministry of Industry and Energy (CL 04).

4.8 Leakage (40-41)

JI specific approach

Leakage related to coal production, transportation etc. is conservatively neglected.

4.9 Estimation of emission reductions or enhancements of net removals (42-47)

JI specific approach

The PDD indicates assessment of emissions in the baseline and project scenario as the approach chosen to estimate the emission reductions of the project.

The PDD provides the ex-ante estimates of:
(a) emissions for the project scenario: 1 756 568 tCO2e;
(b) leakage: 0;
(c) emissions for the baseline scenario: 6 787 042 tCO2e;
(d) emission reduction: 4 839 942 tCO2e.
Estimates in 42 are given for 2008-2012.

The formulae used for calculating the estimates are referred in the PDD, Sections D.1.1.2, D.1.1.4, and D.1.4.

For calculating estimates in 43, key factors influencing the baseline emissions and the activity level of the project and the emissions associated with the project are taken into account, as per the project approach. Data sources used for calculating the estimates in 43 are clearly identified, reliable and transparent. The estimation referred to above is based on conservative assumptions and the most plausible scenario in a transparent manner. The estimates referred to above are consistent throughout the PDD.

Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE.

Outstanding issues related to Estimation of emission reduction (42-47), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 15).

The issued CAR 15 concerns quality of the excel file, explanation of the days number, consistency of some input data between the PDD and excel file, lack of clarity as to why heat carrier consumption and water temperature are the same for different years.

4.10 Environmental impacts (48)

The reconstruction of the existing heating pipelines does not require specialized design documentation and is not a subject to state expertise.

The AIE confirms the statement in the PDD Section F.2 that “Project activity does not adversely impact on the environment, as it directed on the savings of fossil fuels, then, respectively, in its implementation will be saving carbon-intensive fuels (coal) and, accordingly, will be less than the emissions from extraction, processing, distribution and transportation of fuel, that automatically reduces the harmful effects on the environment” (end of quotation).

4.11 Stakeholder consultation (49)

This type of project is not liable to arrangement of stakeholders’ consultation in form of public hearing. No stakeholder consultation was undertaken.

4.12 Determination regarding small scale projects (50-57)

Not applicable.

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the “Heating mains losses decline in settlements of Tuva Republic, Russian Federation” project in Russia. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the

criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant used the JI specific approach for demonstration of the additionality. In line with this approach, the PDD provides investment analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment of stated criteria.

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. 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 03 dated 30/03/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

7 REFERENCES

Category 1 Documents:
Documents provided by GazTekhStroy that relate directly to the GHG components of the project.

/1/ “Heating mains losses decline in settlements of Tuva Republic, Russian Federation”

PDD Version 01 dated 26/01/2012

PDD Version 02 dated 22/03/2012

PDD Version 03 dated 30/03/2012

ER calculation file (excel)

/2/ GazTekhStroy responses to AIE requests dated 23/03/2012, 30/03/2012, 05/04/2012, 10/04/2012, and 14/04/2012.

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

/3/ Guidelines for the implementation of Article 6 of the Kyoto Protocol http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=2

/4/ Guidance on criteria for baseline setting and monitoring Version 03 http://ji.unfccc.int/Ref/Documents/Baseline_setting_and_monitoring.pdf

/5/ Letter from the Ministry of Industry and Energy of the Republic of Tuva number RK668 from 04 April 2012 about the financing of the project activity is not from the budgets of all levels.

/6/ 4 agreement about the assignment of ERUs and the lease of the property complex of heat pipes: BayHaak, Kyzyl Heat, HovuAksy, Progress Heat

/7/ Letter from the Agency for Housing of the Republic of Tuva № 4/976-1 on November 11, 2011 about the specific consumption of coal and heating water in the context of 13 organizations in 2008-2011

/8/ Letter from the Ministry of Industry and Energy of the Republic of Tuva # 2/786-19 from 12.11.11 about not increase the quantity of connected users.

/9/ Letter from the Ministry of Industry and Energy of the Republic of Tuva # 47 from 16.06.08 about the duration of the heating season

/10/ Letter from the Ministry of Industry and Energy of the Republic of Tuva # 27 from 16.05.08 about the approval of a plan of additional measures for the replacement of heating pipes in period 2008-2011

/11/ Letter from the Tariff Service of the Republic of Tuva # 169 from 21.02.12 about the investment in baseline

/12/ Minutes of the meeting with First Deputy Prime Minister of the Republic of Tyva #17 from 17.12.07 about Kyoto project

/13/ Data files from the 4 ГУП/МУП with real validated value of the feed water and the temperature difference between the forward and reverse feed water on 2005-2007 and 2008-2011 period (AkDovurak, Teplovik, XovuAksy, Shagonar)

Persons interviewed:

List persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above.

/1/ Mikhail Butakov – GazTekhStroy LLC, General Director;
/2/ Antomina Zemtsova – GazTekhStroy LLC, Financial Director.

BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

Table 1

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (REVISION 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The indicated title of the project is Heating mains losses decline in settlements of Tuva Republic, Russian Federation".		OK
-	Is the sectoral scope to which the project pertains presented?	The indicated sectoral scope of the project is: Sectoral scope: 2 – Energy distribution (heat energy distribution). **CAR 01.** Please provide the exact name of the scope.	CAR 01	OK
-	Is the current version number of the document presented?	The indicated Version is 01.		OK
-	Is the date when the document was completed presented?	The indicated PDD date is 26/01/2012. The PDD was provided to the AIE on 13/03/2012.		OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2	The PDD formulates the purpose of the project as follows: "The goal of the project is the decrease in fuel consumption	CL 01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	for heat energy production for feed water (heat carrier) heating. That is the result of leaks (spills) decrease from the non compactnesses of warn-out heating mains by their reconstruction. Implementation of this project is based on sustainable development; it means the decrease of impact on the environment. As a result of less quantity of carbon fuel used for the supply of the same number of customers with heat, is the reduction of GHGs and soot emissions. This helps to mitigate "greenhouse" effect and improves the environment conditions of Kyzyl city and in the whole Tuva Republic". Requirements a), b), c) to the content of Section A.2 are met. **CL 01.** Please clarify the official status of assignment of Ministry of industry and energy of Tuva Republic in the project implementation (refer to the PDD page 2).		
-	Is the history of the project (incl. its JI component) briefly summarized?	**CAR 02.** Please summarise the history of the project (incl. its JI component). Please provide the protocol of Tuva Republic Governmental meeting #14, mentioned on page 18.	CAR 02	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	The Party and project participant involved in the project are listed as follows: - Party A Russia and its legal entity CJSC "GazTekhStroy" LLC; - Party B is not defined.		OK
-	Is the data of the project participants presented in tabular format?	The data of the project participant are presented in due tabular format.		OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Russia is indicated as Host Party.		OK
Technical description of the project				
Location of the project				
-	Host Party	Russian Federation.		OK
-	Region/State/Province etc.	Tuva Republic.		OK
-	City/Town/Community etc.	Cities: Kyzyl, Chadan, Turan, Shagonar, Ak-Dovurak. Settlements: Sukpak, Tselinnoye, Khaiyrakan, Chaa-Khol, Kaa-Khem, Bai-Khaak, Khovy-Aksy, Kyzyl-Mazhalyk.		OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	The names of cities allow the unique identification of the project.		OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	Section A.4.2 outlines main technologies to be employed including relevant technical data and the implementation milestones.		OK
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				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	It is explained in Section A.4.3 on page 9 that “Project by reconstruction of heating mains leads to reduction in heat carrier (hot water) losses through the noncompactnesses of tubes and losses due to bad isolation when transferring of heat energy. This poses a decrease in loading of bolier houses in Tuva Republic, hence the reduction in fuel consumption for heat energy production. Consequently, the fossil fuel (coal) savings are considerable; hence emission		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		reductions of GHGs (mainly CO2) happen". The AIE confirms this as a well-established argument.		
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided.		OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual reduction for the chosen credit period is provided in tCO2e.		OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Table A.4.3.1.		OK
-	Is the length of the crediting period Indicated?	The length of the crediting period is indicated as 5 years.		OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided.		OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 03.** The project has no written approvals by the Parties involved. The project approval by Parties will be provided following the determination of the PDD at hand.	CAR 03	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is the Russian Federation.		OK
19	Has the DFP of the host Party issued a written project approval?	Conclusion is pending a response to CAR 03.		Pending
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.		OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party	The project participant "GazTekhStroy" LLC is deemed to be authorized with the issue of the project approval by the Host Party. Conclusion is pending a response to CAR 03.		Pending

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?			
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated in the PDD Section B.1 that a JI specific approach is applied according to paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring, Version 3 (hereafter referred Guidance).		OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description of the baseline in a complete and transparent manner?	A detailed theoretical description of the baseline is provided in a complete and transparent manner (Formula B.1). The key information and data used to establish the baseline are provided in the required tabular forms. **CAR 04.** In Formula (B.1) Incorrect definition and dimension is given for 1/1000 (Gcal/tonne). This has to be specific heat capacity (Gcal/tonne.^{o}C) rather than enthalpy. Specific fuel consumption should be attributed to the baseline. **CL 02.** Please provide documented evidence for each parameter used to establish the baseline. In particular please justify that the project coal falls under the category of other bituminous coal in 2006 IPPP V1 Ch2. Please refer to the tabular forms in Section B.1.	CAR 04 CL 02	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	The baseline is established basically: /g/ By listing and describing future baseline scenarios available for the project participant and selecting the most likely scenario. Two alternative scenarios (AS) were identified as follows: AS1: The proposed project itself without JI component. AS2: Business as usual. Based on alternatives analysis with taking into account the key factors in (b) below a conclusion is made in Section B.1 that AS2 represents the baseline.. /h/ By taking into account key factors that affect a baseline, such as (i) energy sector legislation; (ii) heat demand in the Tuva Republic; (iii) availability of capital including investment barriers; (iv) local availability of technologies/techniques; (v) coal price and availability for the project. /i/ Basically in a transparent manner with regard to the choice of approaches, assumptions (traced by a finder), methodologies, parameters, data sources and key factors. /j/ **Please refer to CAR 13.** /k/ In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.. /l/ Basically by drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring. **Refer to CAR 05.** **CAR 05.** Please bring heat consumption and days number in conformity with the list of standard variables. Refer to paragraph 27 of the Guidance.	CAR 05 CAR 06 pending	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 06. Please confirm in the PDD that same level of service as in the project scenario would be offered in the baseline scenario. Please justify how the equality of head load at customers under the baseline and project activity is practically ensured.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	N/A		OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	N/A		OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively	The approach described in paragraph 2 (a) of Annex 1 to the "Guidance on criteria for baseline setting and monitoring" Version 03 was selected to demonstrate that the reductions of greenhouse gas emissions from sources achieved due to the project implementation are additional to those that might have otherwise occurred in the absence of the project. The approach applied includes Steps 1, 2 and 4 of the CDM Additionality Tool.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Conclusion is pending a response to CAR 06.	Pending	OK
29 (b)	Are additionality proofs provided?	Additionality proofs are provided through three stages: Stage 1 Identification of alternatives, Stage 2 Investment analysis, Stage 4 Common practice analysis, and Stage 5 Provision of additionality proofs.. At State 1, the two alternative scenarios identified in Section B.1 are listed. They are in line with the Russian legislation. At Stage 2, a simple cost analysis is reasonably applied. By the comparison of investments by the two scenarios it is concluded that Alternative scenario 2 is unprofitable for the project participant against the Alternative scenario 1. The AIE confirms this conclusion provided that the investment costs are correct. **Refer to CAR 07.** At Stage 3, the common practice analysis puts forward an argument that private investments in repair of municipal district heating network are not the common practice. **Refer**	CAR 07 CAR 08	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		to CAR 08. The AIE observes that there were evidently no similar activities implemented in the Tuva Republic of the same scale and under the same technology. At Stage 5, logic additionality proofs are provided in line with those in Section A.4.3. **CAR 07.** Please provide documented evidence of investments in alternative scenarios 1 and 2. **CAR 08.** Please provide evidence that the private company GasTekhStroy LLC invested own funds in the project activity.		
29 (c)	Is the additionality demonstrated appropriately as a result?	With pending CAR 07 and CAR 08 the additionality is not demonstrated.	Pending	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	N/A		OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses main anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant. The identified sources of the accountable CO2 emissions are: - Coal combustion for heating of more volume of feed		OK

		water (baseline); - Coal combustion for heating of lesser volume of feed water (project activity).		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.		OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	**CAR 09.** The project boundary on Fig. B.3.1 depicts customer which does not belong to the project activity. Please indicate gases on the figure.	CAR 09	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated; refer to 32 (a) above.		OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting date is determined to be 17.12.2007, when a discussion of intentions to implement the Project on massive reconstruction of heating mains as JI project took place (PDD refers to protocol of Tuva Republic Government meeting #14). **CAR 10.** The governmental meeting cannot be regarded as the event at which the implementation or construction or real action of the project began. Please indicate an appropriate starting date.	CAR 10	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes.		OK

34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	Expected operational lifetime of the project is 25 years or 300 months: from 01/09/2008 till 01/09/2033.		OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is defined as 5 years or 60 months.		OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Starting day is 01/01/2008 being the date of the first emission reductions generated by the project.		OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The crediting period is defined as from 01/01/2008 to 31/12/2012.		OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	N/A		OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated that a JI specific approach is chosen.		OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	The monitoring plan describes: (iv) data to be monitored (refer to D.1.2.1): - Heat carrier (water) consumption by object i in year y; - Temperature difference twixt outlet and input water of object i in year y (v) the period in which these parameters will be		OK

		monitored - constantly; (vi) all decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan.		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan generally specifies indicators, constants and variables used that are basically reliable, valid and provide transparent picture of the emission reductions to be monitored. For data to be monitored, please refer to 36(a) above. For constants please refer to the next paragraph.		OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	The only constant used as the default value is the coal emission factor taken from the recognized source.		OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	Project participants provide data on heat consumption by object i under the baseline and specific fuel consumption on the object i.. **CAR 11.** The monitoring plan does not indicate how heat consumption by object i under the baseline and specific fuel consumption on the object i under the baseline and in the	CAR 11	OK

		project activity are obtained and justified.		
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	The precise reference to IPCC for the coal emission factor is provided in Section B.1 Conclusion is pending a response to CL 02.	Pending	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	**CAR 12.** Please specify the emergency procedures to be followed if the instrumental meter complex fails.	CAR 12	OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used. Conclusion is pending a response to CAR 05.		OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	N/A		OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is a basic consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.		OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”?	The monitoring plan basically draws on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”. Conclusion is pending a response to CAR 05.	Pending	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are	Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i) Refer to 36 (b). (ii) This has to be specific fuel consumption on object i under	Pending	OK

	determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	the project activity. **Refer to CAR 13.** iii) Refer to 36 (a). Conclusion is pending a response to CAR 13.		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The methods employed for data monitoring are described appropriately in the monitoring plan, including type of measuring equipment, recording frequency, proportion of data to be monitored, and how will the data be archived.		OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions. Please refer to basic Formula (D1). **CAR 13.** Formula (D1) and applied assumptions give rise to concerns as follows: - Please justify the derivation of Formula (D.1) or correct it. Product of delta HCC and delta t is questionable. Calculation on the excel sheet estimates the difference of baseline and project emissions which does not correspond to Formula (D.1). - It is not ensured that the specific fuel consumption on the object i under the project activity is constant and equals that for the baseline (2005-2007) as assumed by Formula (D.1). - It is not ensured that the weather temperature conditions under the project activity equal to those under the	CAR 13	OK

		baseline, as assumed by Formula (D.1). - Please justify conservativeness of the used assumptions or make amendments to the approach to ensure the conservativeness.		
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for Formula (D1) is not explained. Conclusion is pending a response to CAR 13.		OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.		OK
36 (f) (iii)	Are all equations numbered?	Yes.		OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes.		OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Conclusion is pending a response to CAR 13.	Pending	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A		OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	Conclusion is pending a response to CAR 13.	Pending	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	Conclusion is pending a response to CAR 13.	Pending	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current practice.		OK
36 (f) (vii)	Are references provided as necessary?	Yes.		OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Conclusion is pending a response to CAR 13.	Pending	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	Conclusion is pending a response to CAR 13.	Pending	OK

36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Uncertainty level of data is defined in Section D.2 as low.		OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	**CL 03**. Please clarify if the Federal Laws #261 (on energy efficiency) and # 190 (on district heating) fall under 36 (g). If yes, include comments on them in Section D.1.5.		OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	QC/QA procedures are outlined in PDD Section D.2. These are routine district heating network operator procedures.		OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The monitoring plan outlines the responsibilities and the authority regarding the monitoring activities. **CL 04.** Please clarify the commitments of Boiler Houses and the Ministry of Economy (correct name?) (Industry – correct name?) and Energy to monitoring.		OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines at Russian district heating sector.		OK

36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	**CAR 14.** The monitoring plan does not provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations.	CAR 14	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	The monitoring plan indicates that the data monitored and required for verification will be kept for 5 years after the last transfer of ERUs for the project.		OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/A		OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	Leakage related to coal production, transportation etc. is conservatively neglected.		OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A.		OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				

Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Approach (a) is clearly indicated by the scope of Section E. The AIE observes that this approach does not match Option 2 used for monitoring (pertains to PDD Version 01). In PDD Version 03, Option 1 is applied.		OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	Yes, ex ante estimates of project emissions, baseline emissions and emission reduction are provided in Section E. Calculations are made on the excel spreadsheet. The PDD provides the ex-ante estimates of: (a) emissions for the project scenario: 1 756 568 tCO2e; (b) leakage: 0; (c) emissions for the baseline scenario: 6 787 042 tCO2e; (d) emission reductions: 4 839 942 tCO2e. The formulae used for calculating the estimates are referred in the PDD, Sections D.1.1.2, D.1.1.4, and D.1.4. **CAR 15.** The calculations give rise to concerns as follows: (i) The purpose of blacked rows on the excel sheet is unclear. (ii) Day numbers are included in calculation without any explanation (e.g. 106, 240, 133, 144+96 days for Кызыл Мажалык). (iii) Values of baseline HCC for Кызыл Мажалык are different in the PDD and on the excel file; please check consistency for all baseline data for all objects. (iv) It is unclear why heat carrier consumption and water	CAR 15	OK

		temperature are the same for different years. (v) Due to the above, a conclusion on the correctness of the results is pending.		
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A		OK
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?	a) Estimates in 42 are given: (i) For 2008-2012. (ii) Yes. (iii) On a source-by-source basis. (iv) For the only GHG CO2. (v) In tones of CO2 equivalent. b) The formulae used for calculating the estimates in 43 are not consistent. **Refer to CAR 13.** c)For calculating estimates in 43, key factors influencing the baseline emissions and the activity level of the project and the emissions associated with the project are taken into account, as per the project approach. **Refer to CAR 13.** d) Data sources used for calculating the estimates in 43 are clearly identified, reliable and transparent. **Refer to CAR 11.** e) **Refer to CL 02.** f) Yes. g) **Refer to CAR 15**. h) Yes.	Pending	OK

	(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE.		OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The reconstruction of the existing heating pipelines does not require specialized design documentation and is not a subject to state expertise.		OK

48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	The AIE confirms the statement in the PDD Section F.2 that "Project activity does not adversely impact on the environment, as it directed on the savings of fossil fuels, then, respectively, in its implementation will be saving carbon-intensive fuels (coal) and, accordingly, will be less than the emissions from extraction, processing, distribution and transportation of fuel, that automatically reduces the harmful effects on the environment." (end of quotation).		OK
Stakeholder consultation				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	This type of project is not liable to arrangement of stakeholders' consultation in form of public hearing.		OK
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

Table 2 Resolution of Corrective Action Requests and Requests for Information

Draft report clarifications and corrective action requests by validation team	Ref. to check list question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. Please provide the exact name of the scope.	-	The exact name of the scope is provided. See PDD on p. 2	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 02. Please summarise the history of the project (incl. its JI component). Please provide the protocol of Tuva Republic Governmental meeting #14, mentioned on page 18.	-	Corrected /see p3 and provided files 18-19 and Protocol 1 and 2	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD and the supporting documentation provided to the AIE.
CAR 03. The project has no written approvals by the Parties involved.	19	The written approvals will be received after the end of determination and getting of positive feedback from the auditor company.	Pending.
CAR 04. In Formula (B.1) Incorrect definition and dimension is given for 1/1000 (Gcal/tonne). This has to be specific heat capacity (Gcal/tonne.^{o}C) rather than enthalpy. Specific fuel consumption should be attributed to the baseline.	23	Definition and dimension in formula (B.1) was corrected (see PDD on p.14, 16). Specific fuel consumption by the project and baseline are assumed to be equal. The project activity does not influence on the boilers and their efficiency for heat energy producing. That's why we use the same figure of specific fuel consumption for baseline (like in formula B.1) and for project scenario.	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 05. Please bring heat consumption and days number in	23	Corrected. See PDD.	Conclusion on Response 1

conformity with the list of standard variables. Refer to paragraph 27 of the Guidance.			Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 06. Please confirm in the PDD that same level of service as in the project scenario would be offered in the baseline scenario. Please justify how the equality of head load at customers under the baseline and project activity is practically ensured.	23	Answer Project activity – reconstruction of heating mains doesn't influence on boiler houses or customers. Only one function of GazTekhStroy LLC is to transport heat energy and keep heating mains in order. Reconstruction measures of GazTekhStroy don't presumes construction of new heating mains and/or connection of new customers. Reconstruction of worn out tubes do not influence the equality of heat load. Anyway customers are supplied by heat with or without losses of heat energy during transportation by heating mains. See corrected PDD p. 8 and p. 12. Answer 3 Please see attached files/ about all rayons (13) with validated operational data on water volumes and water temperature at the inlet and outlet of the boiler house and customer under the project activity (2008-2011) and under the baseline. Answer 4 We send you copies of documents for the four organizations and the response from the Service of Tariff. Data on the heat temperature by Service of Tariff - is the data that are approved each year by analyzing the number of connected users and amount of payments for the heat energy used by each ГУП/МУП. The continued importance for the entire period suggests that the burden for consumers remains the same, ie number of consumers has	<u>Conclusion on Response 2</u> Response is accepted as to the confirmation in the PDD that same level of service as in the project scenario would be offered in the baseline scenario. To demonstrate the equality of head load at customers under the baseline and project activity please provide, for 4 different rayons (out of 13), validated operational data on water volumes and water temperature at the inlet and outlet of the boiler house and customer under the project activity (2008-2011) and under the baseline. CAR is not closed. <u>Conclusion on Response 3</u> Response is not accepted. The data provided with the administrative letters do not demonstrate the equality of head load at customers under the baseline and project activity because they relate to heat energy and heat carrier let go to customers. Data for heat energy and heat carrier received by the customer under the baseline and project activity

		changed. These figures indicate how much the consumer should receive "hands on". Tariff Service is guided by zakononom 210-FZ of 30.12.2004. "On the basis of regulation of tariffs of public utilities," which is defined: ".Federal law establishes the basis for regulation of tariffs of public utilities that provide electricity, heat, water, sewerage and wastewater treatment, disposal (burial) of municipal solid waste and surcharges to the prices (tariffs) for consumers " ie to establish a price for the sale of the product. Please see attached files.	in 2008-2011 are not provided. The AIE observes that the equality of the heat loads in the baseline and the project activity could be demonstrated through data of commercial accounting (коммерческий учет) of heat energy and heat carrier in accordance with Правила учета тепловой энергии и теплоносителя от 25 сентября 1995 г. N 954 and Федеральный закон Российской Федерации от 27 июля 2010 г. N 190-ФЗ О теплоснабжении, статья 19. CAR is not closed. Conclusion on Response 4 Response is accepted. CAR is closed based on the analysis of the provided response from the Service of Tariff.
CAR 06. Please indicate which of the approaches (a), (b), (c) is used THIS CAR IS CLOSED AND WITHDRAWN	28	The indication is made. See PDD p. 16.	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 07. Please provide documented evidence of investments in alternative scenarios 1 and 2.	29 (b)	Please see the documents: file 33 & 33-1 and INVESTMENT (summarised of each) Answer 2 1/ See file excel balance of all completed works (see	Conclusion on Response 1 Response is not accepted. /1/ Please provide the excel balance of all completed works and compare the sum with the investment cost 230 MRUB.

		file “excell balance of acts.xls”. Corrected sum -218 MRUB 2/ See file attached later file 33-1. 3/ files will be passed to a courier.	/2/ Please provide documented evidence of investments 9,7 MRUR in alternative scenario 1. /3/ Please refer to Conclusion on response to CAR 08. CAR is not closed. <u>Conclusion on Response 2</u> /1/ Response is accepted. /2/ Response is accepted. /3/ Response is accepted. CAR is closed.
CAR 08. Please provide evidence that the private company GazTekhStroy LLC invested own funds in the project activity.	29 (b)	For evidence refer to documents: file 44 and 18 line 4. And attached files INVESTMENT Answer 2 For answer on /1/, /2/ see attached acts/ For the case is not significant what is the source of funds (earned by the company or taken from the bank as credit). It is very difficult to separate the origination of every particular ruble. The owner of money is GazTekhStroy, so they can be called “private”. The main aim of this issue is to show that such investments could not happen under baseline. So we emphases on the follows: 1. All reconstruction activities was recommended to make by the private funds. See order of deputy of minister (file “18”). So is the official document that	<u>Conclusion on Response 1</u> Response is not accepted. /1/ The provided Acts of Complete Works do not have signature and stamp of the customer. /2/ The stamp of the contractor is not distinguishable. /3/ The acts may indicate only that the Works were completed and do not say who paid funds; at least the contractor GazTechStroy could not be payer. CAR is not closed. <u>Conclusion on Response 2</u> /1/ Response is accepted. Signed and stamped acts were received, /2/ Response is accepted. Refer to /1/. /3/ Response is not accepted. Please provide a

		local government would not pay state funds for reconstruction. 2. By attached file 33 (from Ministry of industry and energy) the reconstruction works and heating mains were not included in current repair plan on 2008-2011. It is mean that by baseline (without project) this heating mains will not be reconstructed anyway, because were outside the frames of year repairs. 3. And finally, exist acts of completed works that includes title of company GazTekhStroy, title of the object where reconstruction was done and it has signatures and stamps, therefore it is official financial document. Answer 3 3.Please see attached 4contracts for different rayons /folder 4договора с МУП. Conditions of assignment of rights on ERU in all contract are determing in 3.2 of contract 4.Please see attached file «О не выделении средств из бюджетов» The minutes of the meeting indicated an annual plan for financing their own expense Gaztehstroya. In the case of budget financing in the protocol must be reflected BCC (Budget Classification Code), in which the budget had been planning the amount of money at the expense of which would finance. In our case, this information is missing. This means that funds for these repairs have not	sample of 4 contracts for different rayons (different from those under CAR 06) between the heat supplier and GazTekhStroy to determine who invests money and what are conditions of assignment of rights on ERU. 4/ Protocol of meeting at 1st Deputy Chairman of Government of Republic Tuva No 14 dated 17 December 2007 refers to “целевое получение финансовых средств”. Were financial assets appropriated to GazTekhStroy by the Government? Please clarify. CAR is not closed <u>Conclusion on Response 3</u> /1/ Response is accepted. /2/ Response is accepted. /3/ Response is accepted as regards the requested provision of 4 contracts. However, paragraph 1.5 of the contracts needs further clarification. It reads: “Cash resources received by Borrower as a result of using the property in accordance with paragraph 1.1 becomes property of the Borrower”. Please confirm that the sources of this cash are not born by the project activity. /4/ Response is accepted. CAR is not closed

		been allocated. Also, attach official response from the Ministry, as the recipient and distributor of budget funds that finance the budget of all levels have not been allocated. Answer 4 Paragraph 1.5 states that all monies received by the Borrower from the operation of the leased property are the proceeds of the borrower and used (consumed) at its own discretion. Cash received by the Borrower in the implementation of ERUs achieved under the project they spent on their own, without any reservations. Hence we obtain that Gaztehstroy refund for the work to replace the heating pipes only at the expense of ERUs resulting from the project.	<u>Conclusion on Response 4</u> /3/ Response is accepted. CAR is closed based on the analysis of the provided supporting documentation and clarifications.
CAR 09. The project boundary on Fig. B.3.1 depicts customer which does not belong to the project activity. Please indicate gases on the figure.	32 (c)	Corrected/ see fig b3.1	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 10. The governmental meeting cannot be regarded as the event at which the implementation or construction or real action of the project began. Please indicate an appropriate starting date.	34 (a)	The starting date was indicated. See page 21. Answer 2 See the attached documents	<u>Conclusion on Response 1</u> Response is accepted. CAR will be closed when documented evidence of the start of construction works is provided to the AIE.

			Conclusion on Response 2 Response is accepted. CAR is closed based on the provision of due documented evidence (GazTekhStroy's СПРАВКА).
CAR 11. The monitoring plan does not indicate how heat consumption by object i under the baseline and specific fuel consumption on the object i under the baseline and in the project activity are obtained and justified.	36 (b) (i)	Section D of PDD was redone. See p.24, 25,26 (Table D.1-1, D.1.1.1, D.1.1.3). Answer 2 Corrected. See p. 25, 26.	Conclusion on Response 1 Response is not accepted. Please check notation of parameters in the left column. CAR is not closed. Conclusion on Response 2 Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 12. Please specify the emergency procedures to be followed if the instrumental meter complex fails.	36 (b) (iii)	Emergency procedures are specified in Section D.3. See p.31.	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 13. Formula (D1) and applied assumptions give rise to concerns as follows: (a) Please justify the derivation of Formula (D.1) or correct it. Product of delta HCC and delta t is questionable. Calculation on the excel sheet estimates the	36 (f)	(a) formula (D.1) was corrected. Option 2 of Monitoring Plan was replaced by Option 1. See Section D.1.1.2, D.1.1.4, D.1.4. (b) explanations was added in Table D.1-1. Formula D.1 was changed. (c) possible change of local climate in Tuva is small for 2008-2012 because of the short of time period. Heating regimes are based on annual whether	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the PDD.

difference of baseline and project emissions which does not correspond to Formula (D.1). (b) It is not ensured that the specific fuel consumption on the object i under the project activity is constant and equals that for the baseline (2005-2007) as assumed by Formula (D.1). (c) It is not ensured that the weather temperature conditions under the project activity equal to those under the baseline, as assumed by Formula (D.1). (d) Please justify conservativeness of the used assumptions or make amendments to the approach to ensure the conservativeness.		measurements for long period of meteo observations. Besides, the figure of temperature difference for baseline and project have taken as average heating temperature of ambient air. So, all occasional peaks or lows of weather temperature is ensured by averaging of temperature difference figure. (d) Conservativeness was ensured please see changes in Section D of PDD.	
CAR 14. The monitoring plan does not provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations.	36 (l)	Monitoring plan was redone. Complete compilation of data is provided. See Table D.1-1, D.1.1.1, D.1.1.3. Answer 2 See changes in PDD p.24, 25, 27.	<u>Conclusion on Response 1</u> Response is not accepted. Please provide, in tabular form, a complete compilation of the data that need to be collected for its application, for instance number of days of heating period, specific fuel consumption, emission factor of coal, etc. CAR is not closed. <u>Conclusion on Response 2</u>

			Response is accepted. CAR is closed based on due amendments made to the PDD.
CAR 15. The calculations give rise to concerns as follows: (i) The purpose of blacked rows on the excel sheet is unclear. (ii) Day numbers are included in calculation without any explanation (e.g. 106, 240, 133, 144+96 days for Кызыл Мажалык). (iii) Values of baseline HCC for Кызыл Мажалык are different in the PDD and on the excel file; please check consistency for all baseline data for all objects. (iv) It is unclear why heat carrier consumption and water temperature are the same for different years. Due to the above, a conclusion on the correctness of the results is pending.	43	Answer. (i) black rows were deleted. (ii) calculations was changed. 133 means days of heating period for 1-st half of year (1-st January-15 May), 106 means days of heating period for 2-d half year (15 September – 31 December); 240 means total days of heating period in year; 144+96 is mistake (was deleted). (iii) corrected. (iv) it is because the load of heating boilers is constant because of the absence of customers growing. So the demands are constant and heat carrier consumption and water temperature is stable for different years.	Conclusion on Response 1 Response is accepted. CAR is closed based on due amendments made to the calculations.
CL 01. Please clarify the official status of assignment of Ministry of industry and energy of Tuva Republic in the project implementation (refer to the PDD page 2).	-	The official status of assignment by Ministry was explained in the History of the project description (incl. JI component) written in PDD by answer on CAR 02.	Conclusion on Response 1 Response is accepted. CL is closed based on due amendments made to the PDD.

<table>
<tr>
<td>CL 02. Please provide documented evidence for each parameter used to establish the baseline. In particular please justify that the project coal falls under the category of other bituminous coal in 2006 IPPP V1 Ch2. Please refer to the tabular forms in Section B.1.</td>
<td>23</td>
<td>Provided/see folder Baseline
Other bituminous coal category refers to the energy coals, often burned for energy. In addition, the emission factor IPCCC 2006 for this category is the lowest, ie, conservative. (corrected/see p 16)

Answer 2
(i) IPCC Guidelines 2006 for emission factors in energy industries shows different types of coal from anthracite to other bituminous coal. Category “other bituminous coal” has lowest emission factor. This figure used in PDD

<table>
<tr><td>Antracite</td><td>98 300</td><td>94 600</td></tr>
<tr><td>Coke coal</td><td>94 600</td><td>87 300</td></tr>
<tr><td>Other bituminous coal</td><td>94 600</td><td>89 500</td></tr>
<tr><td>Sub-bituminous coal</td><td>96 100</td><td>92 800</td></tr>
</table>
(ii) See corrections in p.16, 25

Answer 3
Please see attached files (validated documented evidence for the above baseline values: average 2005-2007 values of specific fuel consumption, water volume and water temperature difference and passport for monitoring devises with calibration)

Answer 4

We send you copies of documents for the four</td>
<td>Conclusion on Response 1

Response is not accepted.
(i) Sub-bituminous coal has a lower emission factor than the bituminous coal. Please prove it is the bituminous coal that is used in Tuva.
(ii) Please clarify in PDD the how specific fuel consumption of boilers was defined: on 3 year basis or otherwise?

CL is not closed.

Conclusion on Response 2

(i) Response is accepted.
(ii) Correction is accepted

Please refer to CL 02 which states a request to provide documented evidence for each parameter used to establish the baseline. This was done just partially. The averaged for 2005-2007 values of specific fuel consumption, water volume and water temperature difference were not justified though these data will be directly used for monitoring. Please provide validated documented evidence for the above baseline values. (For guidance: “evidence” shall be based on validated operational data which should be provided as well).

CAR is not closed.</td>
</tr>
</table>

		organizations with the validated operational data for each of 2005, 2006, 2007 and 2008-2011. We used the rounding to whole numbers for ease of calculation, in order to conservatism. We can use these figures with the signs after the decimal point for the monitoring reports for verification. Please see attached files	Conclusion on Response 3 Response is not accepted. The AIE received averaged values of specific fuel consumption, water volume and water temperature difference for 2005-2007 with the administrative letters of heat suppliers. This is not enough for determination. Please provide validated operational data for each of 2005, 2006, 2007 years which would justify the parameters indicated in the received letters. Please indicate the accuracy of these data. Please note that the same requirement will be put forward at the monitoring stage with regard to parameters under the project activity. CL is not closed. Conclusion on Response 4 Response is accepted. CAR is closed based on the analysis of the provided supporting documentation for the four organizations with the validated operational data for each of 2005, 2006, 2007 and 2008-2011.
CL 03. Please clarify if the Federal Laws #261 (on energy efficiency) and # 190 (on district heating) fall under 36 (g). If yes, include	36 (g)		Conclusion on Response 1 Response is accepted. CL is closed based on due amendments made to the PDD.

comments on them in Section D.1.5.			
CL 04. Please clarify the commitments of Boiler Houses and the Ministry of Economy (correct name?) (Industry – correct name?) and Energy to monitoring.	36 (j)	The Ministry of Industry and Energy (correct name) is the management center of boiler houses in Tuva Republic. GazTekhStroy got the permission to rent heating mains and make their reconstruction by its private funds (file 18 19 110 111 112. All the rights on emission reductions are delegated to the GasTekhStoroy (see document Протокол 1 and 2 and 18). But GazTekhStroy has not ways to influence the boiler houses directly. Thus it has to make requests to the Ministry for getting the necessary information.	Conclusion on Response 1 Response is accepted. CL is closed based on appropriate clarification in the response