Bureau Veritas Certification Holding SAS

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Date: 03/06/2011

DETERMINATION REPORT

EN+ MAGNESIUM LIMITED

DETERMINATION OF THE INCREASE IN EFFICIENCY OF HEATING SUPPLY SYSTEM OF NOVO-LENINO DISTRICT, THE IRKUTSK CITY, IRKUTSK REGION, RUSSIAN FEDERATION

REPORT NO. RUSSIA-DET/0077/2010
REVISION NO. 01
BUREAU VERITAS CERTIFICATION

BUREAU VERITAS CERTIFICATION HOLDING SAS

Report No:RUSSIA-det/0077/2010 rev.01

Determination Report on JI project

Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation

Date of first issue:	Organizational unit:
01/06/2011	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
CJSC "EN+ MAGNESIUM LIMITED"	Arina Eftichiou

Summary:

Bureau Veritas Certification has made determination of the project "Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation" located in the city of Irkutsk, 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 on-site 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 Requests (CAR) and Clarification Requests (CL), 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 correctly applies Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.:	Subject Group:
RUSSIA-det/0077/2010	JI
Project title: Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation	
Work carried out by: Vladimir Lukin – Team Leader, Lead Verifier; Oleg Skoblik – Team member, Lead Verifier	
Work verified by: Leonid Yaskin – Internal Technical Reviewer	
Work approved by: Leonid Yaskin – Operational Manager	

Date of this revision:	Rev. No.:	Number of pages:
01/06/2011	01	76

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
CJSC	Closed Joint Stock Company
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EBH	Electric Boiler House
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
HFO	Heavy Fuel Oil
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
JSC	Joint Stock Company
KSPU	Coal Firing Boiler House at northern industrial block
LoA	Letter of Approval
N-ITPP	Novo-Irkutsk Thermal Power Plant
NPV	Net Present Value
OJSC	Open Joint Stock Company
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change
URES	United Regional Energy System

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1 INTRODUCTION

EN+ Magnesium Limited (hereafter referred as EN+) has commissioned Bureau Veritas Certification to determine the project "Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation" project (hereafter referred 'the project') located in the city of Irkutsk, 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, and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of 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:

Vladimir Lukin
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Oleg Skoblik
Bureau Veritas Certification Team Member, Climate Change Lead Verifier

This determination report was reviewed by:

Leonid Yaskin
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 original Project Design Document (PDD) v.1.0 dd. 23/08/2010 submitted by project developer GreenStreem for determination 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 and corrective action requests were reported.

To address Bureau Veritas Certification corrective action requests, GreenStreem revised the original PDD and resubmitted it as v. 2.0 submitted on 15/02/2011 followed by v.3.0 from 05/04/2011; v. 4.0 dd. 29/04/2011 and v. 5.0 from 13/05/2011.

The determination findings presented in this report relate to the project as described in the PDD versions 1.0, 2.0, 3.0, 4.0, and 5.0.

2.2 Follow-up Interviews

On 15/10/2010 Bureau Veritas Certification visited the project site where interviews with the project participants, and project owners: Irkutskenergo (project operator), NCSF (project developer), EN+ (Project owner) were performed to confirm selected information about the technical and economic characteristics and parameters of the project GTPP and to clarify issues identified in the review of the PDD v.1.0. Interviewed representatives of Irkutskenergo, NCSF and En+ are listed in References. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Project participants: Irkutskenergo NCSF; EN+;	• The of project history; • Starting date of the project; the history of JI component; • The Project Implementation schedule; • Technical details of the project; • Heat production and fuel consumption, historical and forecasted heat and power demands; • Project boundary; Project and baseline GHG emission sources; • Operational lifetime of baseline and project equipment; • Baseline selection; Analysis of plausible alternatives for proposed project activity; • Additionality proofs; • Investment analysis; The investment parameters and main assumptions; • Common practice; • Monitoring plan. Measuring equipment, QC/QA procedures, authority and responsibility distribution, operational and management structure; • Environmental Impact Assessment Documentation; • Stakeholders' consultations.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Request (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The JI requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

3 PROJECT DESCRIPTION (excerpts from PDD v. 5.0)

The Project's purposes are to increase an efficiency of heating supply system of Novo-Lenino, one of Irkutsk city districts, and to reduce greenhouse gases emissions.

Novo-Lenino is a district of large industrial and house construction. The main consumers of heat energy in Novo-Lenino are the housing-and-municipal sector, public buildings, utilities and the enterprises of various industries. In structure of Novo-Lenino heat loading the share of housing-and-municipal sector makes 70 %.

Before the Project heat supply of Novo Lenino was provided from a coal boiler-house of northern industrial block (KSPU) with available heat capacity of 185.4 Gcal/h and two electrical boiler houses (EBHs): "Bytovaya" with available heat capacity of 125,0 Gcal/h and "Novo-Lenino" with available heat capacity of 77,6 Gcal/h. All boiler-houses are interconnected through thermal distribution networks and operated by entities associated with a joint-stock company (JSC) "Irkutskenergo": closed CJSC "Baikalenergo" operates KSPU coal boiler house, while "Novo-Lenino" and "Bytovaya" EBHs are under operation by Novo-Irkutsk thermal power plant TPP (N-ITPP).

Under existing heat supply scheme the heat sources worked isolated (each for its site) that led to a low degree of heat supply reliability and to an absence of a possibility for optimization of installed equipment modes.

Baseline scenario
Continuation of the existing situation is considered as the baseline scenario, as available heat capacity of boiler-houses is sufficient to cover heat loadings both today's and those predicted in perspective till 2020.The Ikutskenergo policy aims at maintaining existing capital assets which will assure to provide reliable operation of heat supply system till 2012 as a minimum.

The electricity for heat production in EBHs is delivered from the regional power supply system of JSC "Irkutskenergo" that mainly uses coal as a fuel. The production of 1 Gcal of heat in Irkutsk EBH requires to burn circa 0,464 tonnes of coal equivalent (t.c.e) at Irkutskenergo power stations.

Project
The Project scenario includes a load shift from the two environmentally inefficient EBHs of Novo-Lenino district to a more effective coal boiler-house (KSPU). The average specific coal consumption for production of 1 Gkal of heat at KSPU makes 0,199 t.c.e. The specific fuel consumption for heat production by using electricity that generated by power supply system in condensation mode makes 0,464 t.c.e/Gkal. Thus, the baseline specific fuel consumption for heat production at EBHs as high as 2,3 than the specific fuel consumption at KSPU. Realization of the Project leads to economy of fuel (coal) in a power supply system and to a reduction of greenhouse gases emissions and pollutants due to reduction of coal burning.

Project activity includes:
- Construction of new heat network from KSPU to "Bytovaya" EBH with the length of 3711 m and 600 mm in diameter;
- Reconstruction of Lenin district heat network with the length of 2743 m and diameters of 500 mm, 600 mm, 700 and 800 mm;
- Reconstruction of KSPU boiler unit #3 for the total load shift from EBHs. Bytovaya and Novo-Lenino EBHs are transferred in reserve. The heat load will be provided due to increase in heat production at KSPU.

For the purpose of project reconstruction of existing main heating system between heat sources with pipe diameters expansion and construction of new pipeline sections are necessary. Due to new pipeline sections construction heat losses will increase on the value of heat losses from new pipeline sections. Reconstruction of existing pipeline will lead to decrease of heat losses. In conservative way, heat losses from existing pipelines involved in project is the same for both baseline and project.

The history of Project development
The project as a JI-project activity has begun on December, 29th, 2007. The management of JSC "Irkutskenergo" made a decision to include the project into the investment programme for 2008.

Decision was made considering possible revenue from the ERU sells. Without ERU sells the project is unattractive for JSC "Irkutskenergo".

During 2008-2009 a KSPU -"Bytovaya" EBH network section has been constructed and 100 percent and 50 percent load shift to KSPU from respectively "Bytovaya" and "Novo-Lenino" EBHs has been carried out.

As a result of project realization following purposes will be reached:
- Reliability enhancement of a heat supply of "Novo-Lenino" district
- Enhancement of an environmental situation in the region: reductions of GHG and pollutant's emissions.

On November, 28th, 2008 the first partial output of replaced heat from Bytovaya EBH has been carried out at KSPU.

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 communications are described in the Determination Protocol in Appendix A.

The Corrective Action Requests are stated, where appropriate, in the following sections and are further documented together with Clarification Requests in the Determination Protocol in Appendix A. The determination of the Project resulted in 21 Corrective Action Requests, and 9 Clarification requests.

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

4.1 Project approvals by Parties involved (19-20)
The project has no approval by the Parties involved. This was reported in CAR 03 which left open. Russian Federation is indicated as the Host party. Other party will be determined afterwards.

4.2 Authorization of project participants by Parties involved (21)

The participation of Irkutskenergo indicated as project participant in the PDD is not authorized by the Party involved as LoA has not been issued by the Parties involved.

The authorization is expected to be made through the issuance of LoA.

4.3 Baseline setting (22-26)

PDD v.5.0 explicitly indicates that baseline was set in accordance with appendix B of the JI Guidelines /16/ and with the Guidance on criteria for baseline setting and monitoring, version 01 /17/ (hereinafter referred to as JI specific approach).

JI specific approach

PDD sec. B.1 provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established by:

- listing and describing future scenarios available for the project operator Irkutskenergo and selecting the most plausible one;
- taking into account sectoral reform initiatives, local fuel availability, the economic situation in the project sector, availability of capital for the implementation of alternatives, local availability of technologies and techniques, skills and know-how regarding alternatives;
- In a transparent manner with regard to the choice of the JI specific approach and related methodologies, assumptions, parameters, data sources and key factors for baseline setting, which are listed in tabular format in Section B.1 and summarized in Annex 2;
- taking into account of the uncertainty and using a conservative assumption with regard to the multi-project electricity grid emission factor;
- in such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure;
- by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring" /17/.

According to the Guidance on criteria for baseline setting and monitoring Version 01 /17/ the baseline selection was made in stepwise manner.

At step 1 the approach to select the baseline was described. It includes 3 milestones: identification of alternatives, barrier analysis and common practice analysis.

At step 2 this approach was applied.

Three alternative scenarios were identified for the heat supply of Novo-Lenino district:

- continuation of current situation;
- the proposed project activity undertaken without being registered as JI;
- switch to another type of fuel for generation of heat to be supplied to Novo-Lenino.

During the review of local legislation undertaken as the part of determination process no requirements preventing implementation of these alternatives were identified.

The barrier analysis was applied to identify the most plausible scenario among the alternatives identified. Two barriers – technological and financial were recognized as potentially capable to affect the project realization. Trough the barrier analysis it was comprehensively demonstrated that the most plausible scenario is continuation of current practice implying prolongation of heat generation at EBHs.

Other alternatives would face the overwhelming barriers. It was demonstrated and confirmed through the interviews held on site that the coal based heat generation technology is the business-as-usual practice for the region because coal is the most available and cheap fuel. Hence the switch to another type of fuel would require significant efforts and investments for reconstruction of the heat generating facilities.

The Investment Analysis undertaken according to the local standard for investment attractiveness assessment /29/ supported by officially approved Investment Memorandum /10/ and relevant official decision /09/ adopted on the basis of its results confirm that the project without additional carbon revenues is not economically attractive.

The common practice analysis was applied to demonstrate that the proposed project activity is not the business-as-usual. It was evidenced with provision of references to publicly available sources that the use of electric boilers is widely speeded in Russia. The opposite cases of EBH decommissioning in several regions which became known to determiner were discussed under CAR 11. It was explained that in contrast to other Russian regions specific environment in the Irkutsk region does not facilitate the substitution of electric boilers. The project owner JSC Irkutskenergo operates as the power producer also. Large part of power is generated at Hydro power plants that make the power production to be respectively cheaper than in other regions. Thus the substitution of EBH activities have not been implemented in the similar environment as in the Irkutsk region, thus the project is not recognized as common practice.

Based on the analysis of alternatives and taking into account the results of the investment analysis, a conclusion is made that continuation of current situation with heat generation at EBHs is the most plausible scenario.

Outstanding issues related to Baseline setting (22-26), PP's response and the AIE conclusion are summarized in Appendix A (refer to CARs 04 – 08 and additional CAR 21 raised upon site visit).

The issued CARs and CLs concern:
- justification of terms used to indicate JI specific approach in the PDD (CAR 04);
- justification of alternatives selected for analysis (CAR 05);
- identification of the general tendency in heat output for the crediting period (CAR 06);
- explanation of different heat output values given for alternatives ## 1 and 2 in tables B.1.1 and B. 1.2 (CAR 07);
- Justification and gain a traceability in the defining of baseline parameters (heat production, specific fuel consumption, heat loses) (CAR 08);
- Justification of the conservativeness of grid emission factor (CAR 21).

4.4 Additionality (27-31)

The JI specific approach was used to demonstrate the additionality of project according to the Guidance on criteria for baseline setting and monitoring /17/.

The Investment analysis was applied to demonstrate that the project not being registered as JI is not financially attractive and hence unlikely to be the baseline. PP used benchmark analysis as the method for investment attractiveness evaluation. The benchmark effective for 2007 was identified conservatively according to the internal standard applied by JSC Irkutskenergo /29/ as 15% IRR. The internal standard is developed on the basis of the methodological guidelines for assessing of investment projects feasibility approved by the Ministry of Economy of Russia, Ministry of Finance 21.06.1999 № VC 477 /18/.

The project financial indicators were calculated through the provision of traceable financial model /03/. The following key input values used for the investment analysis were determined on the basis of reliable documentary evidence as following:

- Total investments, construction costs and operational expenses values were determined on the basis of the Investment Memorandum /10/ officially approved by Irkutskenergo.

- Tariffs on heat energy and tariffs for the transmission of heat energy are calculated from expected gross returns and the thermal energy sold /33/.
- Power tariffs was determined on the basis of the officially approved tariffs established by the local authorities /34/;

The sensitivity analysis with ±10% variation range for the key investment parameters (CAPEX, heat tariff, power price, and coal price) was selected to support the reliability of investment analysis outcome. The sensitivity analysis confirms that the conclusion regarding the financial non-attractiveness is robust to reasonable variations in the critical assumptions.

Preliminary JI consideration and the history of JI component was the subject for discussion under CL 07. It was determined that JI revenues were considered as decisive factor to launch the project as supported by the following documentary evidence:

- The minutes of technical meeting of Irkutskenergo's management held on 29/12/2007 /09/, and
- Investment memorandum on the reconstruction of heat network in Leninsky district, Irkutsk /10/,

where it stated that "the project could be considered economically feasible if the additional investments are attracted through JI mechanism".

Outstanding issues related to Additionality (27-31), PP's response and the AIE conclusion are summarized in Appendix A (refer to CARs 09-11, and CL 05).

The issued CARs concern:

- justification of formulae used for sensitivity analysis in the excel spreadsheet (CAR 09);
- justification of the time horizon used for the investment analysis and request for inclusion of residual value (CAR 10);
- common practice analysis (CAR 11)
- request for the documentary evidence to confirm the input values for the investment analysis (CL 05).

4.5 Project boundary (32-33)

JI specific approach

The project claims GHG emission reduction through the switch of heat load from the district electric boiler houses to the centralised coal based boiler house (KSPU). Without project activity the heat would be produced by EBHs with consumption of electricity from the grid.

The project boundary encompasses all anthropogenic emissions by sources of greenhouse gases as listed in Table B.3-1 which are:(i) under the control

of the project participants; (ii) reasonably attributable to the project; and (iii) significant.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD. The emission sources covered by project boundary include:

- CO2 emissions from fossil fuels combustion at the grid connected plants to produce the electricity consumed by the EBHs,
- CO2 emissions from the combustion of coal at KSPU;
- CO2 emissions from the combustion of the residual fuel - HFO at KSPU;

CH4 and N2O emissions from the combustion of coal at KSPU are calculated and recognized as insignificant (constituting less than 1% of total emissions) hence these sources were neglected.
Based on the assessment of the project documentation, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

Outstanding issue related to Project Boundary (32-33), PP's response and the AIE conclusion are summarized in Appendix A (refer to CL 06).

The issued CL 06 concern justification of negligibility of CH4 and N2O emissions from coal combustion at KSPU

4.6 Crediting period (34)

The starting date of the project is determined as 07/04/2008 that is the date of issuance of the order to start the construction works /11/.

PDD v.5.0 states the expected operational lifetime of the project in years and months, which is 30 years or 360 months, as defined by the life cycle of heat pipelines determined according to the national standard /13/.

The PDD states the length of the first crediting period in years and months, which is 4 years and 1 months, starting from 01/12/2008, which is on the date the first emission reductions or enhancements of net removals are generated by the project (acceptance of the pipelines constructed to deliver the heat from KSPU).

Identified areas of concern as to the project starting date, start and legth of crediting period and the project lifetime PP's response and BV Certification's conclusion are described in Appendix A Table 2 (refer to CL 08).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach regarding monitoring has been applied in accordance with Appendix B of the JI Guidelines /16/ and with the JISC Guidance on criteria for baseline setting and monitoring, Version 01 /17/.

JI specific approach

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

1/ The monitoring plan describes the parameters to be monitored to estimate the project emissions:

- Quantity of coal burned by KSPU;
- NCV of coal;
- project auxiliaries electricity consumption by KSPU for heat production;
- Project electricity consumption for heat output from "Novo-Lenino" EBH;
- Project auxiliary electricity consumption by "Novo-Lenino" EBH for heat production;
- Project electricity consumption for heat output from "Bytovaya" EBH;
- Project auxiliary electricity consumption by "Bytovaya" EBH for heat output;

and baseline emissions:

- NCV of coal;
- Project heat output from KSPU;
- Project heat output from "Novo-Lenino" EBH;
- Project heat output from "Bytovaya" EBH.

2/ The parameters not to be monitored but determined only once and available at the stage of determination, including:

- Project heat losses ratio (for new pipeline)
- Average specific coal consumption by KSPU for baseline heat output
- Average specific electricity consumption by "Novo-Lenino" EBH for baseline heat output
- Average specific electricity consumption by Bytovaya EBH for baseline heat output

- Average specific auxiliaries electricity consumption by KSPU for heat output
- Average specific auxiliaries electricity consumption by "Novo-Lenino" EBH for heat output
- Average specific auxiliaries electricity consumption by "Bytovaya" EBH for heat output;
- Grid emission factor;

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC /17/, as appropriate (project and baseline emissions and their components, and relevant emission factors).

Allocation of responsibilities for Monitoring Plan implementation and Monitoring Report preparation and an operational and management structure that IRKUTSKENERGO will implement to monitor emission reduction are described in the PDD and was checked and confirmed through the site visit.

Monitoring related quality control and quality assurance procedures are implemented according to the national monitoring standards referred to in the PDD and provided to verifier. During site visit the evidence to confirm the maintenance and timely undertaken calibration of heat metering complexes /19/, /20/, /21/ and power meters /22/, /23/ were provided to verifier. In general the monitoring plan uses the monitoring routines already applied by the project operator.

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

Outstanding issues related to Monitoring plan (35-39), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 12-16, CL 08-09 and additional CAR 20 raised on the basis of site visit results).

The issued CARs and CLs concern:
- Applicability of the the monitoring of baseline and project emissions (CAR 12);
- Application of the parameter of CAL (coal calorific capacity) (CAR 13);
- Justification of the methodology used for heat loses estimation (CAR 14);
- Justification of formulae for the ER estimation in sec. D.1.4. (CAR 15)
- Editorial note with regard to Russian language used in sec. D.4 (CAR 16);
- Application of fuel equivalent instead of natural fuel (coal) consumption for the calculation of project emissions (CAR 17);

- Clarification of coal type used as the fuel at KSPU (CL 08);
- Reference to the national monitoring standards (CL 09).

4.8 Leakage (40-41)

JI specific approach

The leakage effect is the net change of anthropogenic GHG emissions outside the project boundary caused by the proposed project activity including:

- upstream fugitive methane emissions from the recovering and transportation of additional amount of coal being supplied to KSPU;

It was demonstrated that the additional coal consumption at KSPU does not lead to increase in net anthropogenic emissions outside project boundary being compensated by reduced coal consumption at the grid connected power plants. Thus the project has no leakage effect.

The issues related to determination of Leakage (40-41), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 18).

Issued CAR 18 concerns estimation of leakage effect related to CH4 emissions from mining and transportation of additional amount of coal being consumed at KSPU.

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

JI specific approach

The PDD v. 5.0 provides the assessment of baseline and project emissions and the achieved ER in transparent and reproducible manner.

The PDD provides the ex ante estimates of emission reductions from the project (within the project boundary), which are 1,097,604 tCO2e for the crediting period;

The estimates referred to above are given:

- On an annual basis;
- From 01/12/2008 to 31/12/2012;
- On a source-by-source basis;
- For CO2 and CH4 as GHG emitted.
- In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3.

The formulae used for calculating the estimates referred above, which are Formulae in Sections D.1.1.2, D.1.1.4 and D.1.4 are consistent throughout the PDD. Input data for calculations and the calculations per se are presented on the spreadsheet /2/ in transparent and reproducible manner. Verifiers observed the final calculations as accurate. The results are summarized in Section E.

For calculating the estimates referred to above, key factors defined in the monitoring plan influencing the project and baseline emissions were taken into account, as appropriate.

The estimation referred to above is based on conservative assumptions and the most plausible scenario in a transparent manner.

No issues related to Estimation of emission reduction (42-47) are identified.

4.10 Environmental impacts (48)

The foreseen Environmental impacts caused by the proposed project activity mainly by air pollutant emissions from KSPU comply to the respective legal requirements and limits as recognized in the EIA developed as the part of project design that underwent official procedure of State Expertise and was confirmed by its positive conclusion /36/.

The issues related to Environmental Impact Assessment (48), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 19).

Issued CAR 19 concerns justification of the environmental impacts described in sec. F.1 PDD.

4.11 Stakeholder consultation (49)

Russian Federal Law 7-FZ "On Environmental Protection" cl. 13 para 2 requires stakeholders' comments to be considered in decision making process to start any activity potentially causing adverse environmental effect. Nevertheless stakeholders' consultation in form of open meeting is not mandatory IRKUTSKENERGO has taken voluntary action to engage with stakeholders. According to local legislation it is required to make the information of expected environmental impacts publicly available. The PDD section G states that Information about the Project has been made publicly available /37/. No comments from the local stakeholders have been received as confirmed by the interview with PP held on site.

No issues as to Comments by Local Stakeholders were identified.

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)

4.15 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.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the «Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation» project. 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 on-site interviews with project participants; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Using investment analysis and common practice analysis the project participants proved 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 fulfillment 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 5.0 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.

6 REFERENCES

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

/1/ PDD "Increase in efficiency of heating supply system of Novo-Lenino district, the Irkutsk city, Irkutsk region, Russian Federation
a/ Version: 1.0, dd. 23/08/2010;
b/ v. 2.0 dd. 15/02/2011;
c/ v. 3.0 dd. 05/04/2011;
d/ v. 4.0 dd. 29/04/2011;
e/ v. 5.0 dd. 13/05/2011.

/2/ Emission reduction calculation in excel spread sheet
a/file 'KSPU emission calculation ver.1' dd. 23 August, 2010;
b/ file 'KSPU emission calculation ver.2 received on 15/02/2010'

/3/ Investment analysis calculation in excel spread sheet
a/file 'Financial model ver.1' dd. 23 August, 2010
b/ file 'Financial model ver.2' received on 15/02/2010

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/4/ Industrial safety expertise conclusion for the electric boilers installed at EBH Bytovaya executed by NK-service licensed company:
KEV-6000/6 zts station #01, reg. # 6804, dd. 14/09/2009;
KEV-6000/6 zts station #02, reg. # 6803, dd. 14/09/2009;
KEV-6000/6 zts station #03, reg. # 6802, dd. 14/09/2009;
KEV-6000/6 zts station #04, reg. # 6801, dd. 14/09/2009;
KEV-6000/6 zts station #05, reg. # 6592, dd. 14/09/2009;
KEV-6000/6 zts station #06, reg. # 6589, dd. 14/09/2009;
KEV-6000/6 zts station #07, reg. # 6591, dd. 14/09/2009;
KEV-6000/6 zts station #08, reg. # 6590, dd. 14/09/2009;
KEV-6000/6 zts station #09, reg. # 7312, dd. 02/08/2010;
KEV-6000/6 zts station #10, reg. # 7310, dd. 02/08/2010;
KEV-6000/6 zts station #11, reg. # 7311, dd. 02/08/2010;
KEV-6000/6 zts station #12, reg. # 7313, dd. 02/08/2010;

KEV-6000/6 zts station #13, reg. # 7372, dd. 14/09/2009;

KEV-6000/6 zts station #14, reg. # 7369, dd. 14/09/2009;

KEV-6000/6 zts station #15, reg. # 7371, dd. 14/09/2009;

KEV-6000/6 zts station #16, reg. # 7370, dd. 14/09/2009.

/5/ The letter #07/09 from 06/09/2010 on the technical expertise of boilers installed at the district Novo-Lenino.

/6/ Explanation on the necessity of reconstruction of pipelines within the project "Optimization of heat supply area of Novo-Lenino Irkutsk"

/7/ Technical decision on the heat load switch for the housing estate "Sputnik" dd. 29/12/2007

/8/ Technical decision on the results of testing of heat load switch for the housing estate "Sputnik" dd. 31/03/2008

/9/ The minutes of technical meeting on the implementation of project of heat delivery network reconstruction in Leninsky district Irkutsk. Dd. 29/12/2007

/10/ Investment memorandum Reconstruction of heat network in Leninsky district, Irkutsk. Approved by the financial and development director of OJSC Irkutskenergo.

/11/ Order #33 on the approval of the earthworks execution dd. 11/03/2008

/12/ Commissioning certificate on the heating network segments dd. 01/12/2008

/13/ The order #253 dd. 24.06.2003 on approval of instruction BK-03-35/182 for prolongation of operation lifetime for vessels operated under the pressure http://law7.ru/legal2/se12/pravo12472/index.htm

/14/ Extract from the fuel testing certificates for brown coal collected at the coal storage place at KSPU in 2008.

/15/ The protocols of fuel's (coal) quality lab testing for 2008 y.

/16/ Guidelines for the implementation of Article 6 of the Kyoto Protocol http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=2

/17/ Guidance on criteria for baseline setting and monitoring Version 01 http://ji.unfccc.int/Ref/Documents/Baseline_setting_and_monitoring.pdf

/18/ "Methodological Recommendations on Evaluation of Investment Projects Efficiency 21.06.1999 N BK 477" http://www.businesspravo.ru/Docum/DocumShow_DocumID_18269.html

/19/ Certificate for heat counter SPT 961 #6702 installed at KSPU with calibration certificate #32/652 valid till 13/08/2013

/20/ Certificate for heat counter SPT 961 #9526 installed at Bytovaya EBH with calibration certificate #32/223 valid till 05/05/2013

/21/ Certificate for heat counter SPT 961 #6643 installed at KSPU with calibration certificate #32/731 valid till 16/09/2014

/22/ Certificate for the power meter "Mercury 230" № 03789168 installed at KSPU with calibration certificate dd. 13/07/2009

/23/ Certificate for the power meter "Mercury 230" № 04433999 installed at KSPU with calibration certificate dd. 19/06/2009

/24/ The list of 42 power meters installed at EBH Bytovaya and Novo-Lenino file-name: "Электросчётчики.xls"

/25/ Explanatory note "On the maintaining of heat capacity" Irkutskenergo signed by the Head of Analytic and Assessment department Mr. A.V. Vinokurov.

/26/ Explanatory note "On estimation of heat loses from heat network in project «heat supply optimization in Novo-Lenino district city of Irkutsk» signed by the Head of Analytic and Assessment department Mr. Vinokurov.

/27/ Explanatory note "On estimation of fuel consumption at KSPU» signed by the Head of Analytic and Assessment department Mr. A.V. Vinokurov.

/28/ Explanatory note "On investment analysis criteria were effective in 2007» signed by the Head of Analytic and Assessment department Mr. A.V. Vinokurov.

/29/ СТП 001.079.078-2007 Internal standard of Irkutskenergo "the method of investment effectiveness estimation (version had been valid in 2007)"

/30/ СО 153-34.20.523-2003 Methodical guidance on the developing of energy specification for the parameter "HEAT LOSES" for heat energy transportation systems

/31/ Certificates for steam boilers installed at KSPU:

a/ for steam boiler #1 ser. #1449 with the Conclusion on Industrial Safety dd. 12/11/08 (the prolongation of operation till 2012;

b/ for steam boiler #2 ser. #1452 with the Conclusion on Industrial Safety dd. 22/11/10 (the prolongation of operation till 2014;

c/ for steam boiler #4 ser. #1620 with the Conclusion on Industrial Safety dd. 13/11/09 (the prolongation of operation till 2013;

d/ for steam boiler #5 ser. #484 with the Conclusion on Industrial Safety dd. 25/12/07 (the prolongation of operation till 2015.

/32/ The letter on the technical expertise conclusion executed by accredited entity "Nondestructive Control Service" for electric boilers installed at EBH "Novo-Lenino" dd. 06/09/2010.

/33/ Calculation of the power tariff for the electricity to be sold at the wholesaling market on the contracts in framework of limited (minimal and maximal) volumes of electricity sold on regulated tariffs.

/34/ Resolution of the Mayor of Irkutsk dd. 25/12/2007 # 031-06-2683/7 On approval of Tariffs for the Thermal Energy Delivered by Boiler Houses owned by CJSC "Baikalenergo"

/35/ Industrial program for the KSPU and EBHs for 2011

/36/ State Expertise conclusion (positive) on the project documentation "Heat network reconstruction in Leninsky district, City of Irkutsk" #97-37-262/9 dd.08/06/2009.

/37/ http://www.frrio.ru/news/?135

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/ Mr. Shumeev D.S. OJSC Irkutskenergo the Head of Strategy department

/2/ Mr. Vinokurov A.V. OJSC Irkutskenergo the Head of Analysis and Assessment department

/3/ Mr. Yudintsev A.G. OJSC Irkutskenergo The Head of Capital Construction Dept.

/4/ Mr. Persidskiy O.V. CJSC Baikalenergo The Head of Planning dept.

/5/ Mrs. Mozuleva J.S. OJSC Irkutskenergo Senior Economist

/6/ Mrs. Baidakova E. NCSF Project developer

/7/ Mr. Sakharov N. En+ Project manager

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DETERMINATION PROTOCOL

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 02)

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
Guidelines for JI PDD Form Users Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented? Is the sectoral scope to which project pertains presented? Is the current version number of the document presented? Is the date when the document was completed presented?	The title of the project is: "Increase in Efficiency of Heating Supply System of Novo-Lenino District, the Irkutsk city, Irkutsk region, Russian Federation". The sectoral scope is (1) Energy industries (renewable/non-renewable sources). The PDD Version 1.0 was presented to Bureau Veritas and reviewed as a part of determination. PDD is dated 23/08/2010.	N/A	OK
A.2 Description of the project				
A.2	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome,	The Project's purposes are to increase an efficiency of heating supply system of Novo-Lenino, one of Irkutsk city districts, and to reduce greenhouse gases emissions. N/A	N/A	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	including a technical description). Is the history of the project (incl. its JI component) briefly summarized?			
A.3 Project participants				
A.3	Are project participants and Party(ies) involved in the project listed? Is contact information provided in Annex 1 of the PDD?	Host Party is the Russian Federation. Legal entity for A1 is Irkutsk Joint Stock Company for Energy and Electrification (JSC Irkutskenergo). The contact information is provided in PDD Annex 1. N/A		OK
A.4 Technical description of the project				
A.4.1	Location of the project	Refer to A.4.1.1-A.4.1.4.		OK
A.4.1.1	Host Party(ies)	The Russian Federation.		OK
A.4.1.2	Region/State/Province etc.	Irkutsk Region.		OK
A.4.1.3	City/Town/Community etc.	The city of Irkutsk.		OK
A.4.1.4	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	**CAR 01**. The project physical location is not described consistently to allow the unique identification of the project. Please indicate the co-ordinates of project site. The Russian language is used in figure 4.1.4.1. Closed on the basis of review of corrections made in PDD v. 2.0	**CAR 01**	OK
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project				
A.4.2	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all	Section A.4.2 PDD provides description of technology and measures to be implemented to gain proposed emission reductions. They include overhaul of the district heat supply system and retrofit of boiler		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	relevant technical data and the implementation schedule described?	#3 at KSPU.		
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
A.4.3	Is it explained briefly how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page.)	It is explained in PDD Section A.4.3 that the GHG emission will be reduced owing to shift of heat load from electric boilers consuming electricity from the regional grid where it produced with specific coal equivalent consumption equal to 0.464 t.c.e./Gkal to new coal firing boilers consuming 0.186 t.c.e per Gcal. Hence the load shift to more efficient heat production technology will lead to reduction of specific fuel consumption and hence will result in GHG emissions reduction. **SV 01.** Fuel equivalent consumption estimation shall be confirmed with relevant documentary evidence during site visit. **CAR 02.** The project will result in decrease of heat output. The average annual heat output prior to project start (2005-2008) is equal to 807 Gcal whereas after the project start (2009-2010) the average heat output dropped to 784 Gcal. For the period 2011-2012 heat output is planned to be equal to 758 Gcal/year. JI guidelines, Annex B requires that emission reduction can not be earned for decreases in activity levels outside the project activity. The decrease of heat output may indicate the activity level lowering outside the project. Please explain the reasons for the heat output decrease under the project. Closed on the basis of the new data provided and the review of new version of PDD (v. 5)	**CAR 02** **CL 01** **CL 02** **CL 03.**	OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		CL 01 According to the description given in section A.4 eight units installed in Novo Lenino EBH are operated for more than 40 years. None of equipment is operated less than 20 years. Please provide relevant evidence to ensure the capability of equipment to be operational through the whole crediting period. Operationability of electric boilers at EBH Bytovaya till 2013 is confirmed through the review of Technical expertise conclusions /4/. Boilers at EBH Novo-Lenino underwent technical expertise in 2010 /5/. **SV 02**. Check the local heat demands and ensure on the basis of documents review that project is capable to met the local heat demands or provide the same level of service as the baseline does. The local heat demands are determined on the basis of city development plans established by municipal authorities. As per interview with D. Shumeev **SV 03.** Check and collect evidence against baseline equipment. It shall be demonstrated that the equipment will be operational through the whole crediting period. **CL 02.** Please clarify how the heat transportation system redesign will affect the project emissions. It is not evident that the heat transportation system overhaul is attributable to project. Construction of additional heat pipeline will increase the heat loses. **CL 03**. Table A 2 PDD does not provide the heat output but heat		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		generation values (heat loses are not considered). Closed on the basis of explanation provided and review of corrections made in PDD v.3.		
A.4.3.1. Estimated amount of emission reductions over the crediting period				
A.4.3.1	Is the length of the crediting period Indicated? Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	The length of the crediting period is indicated to be 5 years. Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided.		OK
A.5. Project approval by the Parties involved				
A.5	Is written project approvals by the Parties involved attached?	**CAR 03.** The project has no approval of the host Party. The project approval by the Host Party will be provided after the determination of the PDD.	Pending	CAR 03
DVM				
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	No, pending a response to CAR 03.	Pending	CAR 03
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party is the Russian Federation. Legal entity for A1 is Irkutsk Joint Stock Company for Energy and Electrification (JSC Irkutskenergo). Party B will be determined after the project approval by host country.		OK
19	Has the DFP of the host Party issued a	No, pending a response to CAR 03.	Pending	CAR 03

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	written project approval?			
20	Are all the written project approvals by Parties involved unconditional?	No approvals from parties involved. Pending a response to CAR 03.	Pending	CAR 03
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 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?	Legal entity for A1 is Irkutsk Joint Stock Company for Energy and Electrification (JSC Irkutskenergo).		OK
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	**CAR 04** PDD states that the **own approach** is used for baseline identification, additionality demonstration and monitoring. The own approach is not determined by JI guidelines as possible option for baseline choice and monitoring. Please specify if JI specific approach is chosen. Closed on the basis of the review of changes made in PDD v. 5.	**CAR 04**	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	Alternatives analysis is applied to select the baseline scenario from two possible alternatives:		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		1/ Continuation of the current situation (in the absence of the proposed project activity), and 2/ the proposed activity not being registered as JI.		
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	Baseline is established on the basis of analysis of plausible alternative scenarios. Alternatives analysis is not convincing. **CAR 05**. Alternatives analysis is not sufficient. Please explain why other options of heat generation were not considered as such as export of heat energy from sources outside proposed project boundary e.g. TPP, or installation of new local boiler houses using less carbon intensive fossil fuel or biofuel. There are three alternatives discussed: continuation of current situation, project not being registered as JI and other than coal based heat generation. Analysis of alternatives and justification of baseline establishing is now found sufficient and convincing. **CAR 06** Alternative 01 description is not consistent. PDD reads: *"The planned increase of heat loads in "Novo-Lenino" district would be covered by even development of KSPU and EBHs"* whereas table B.1.1 indicates gradual decrease of heat load. Please justify. Closed on the basis of PDD ver.2 review. **CAR 07**. Tables B.1.1 and B 1.2 provide different heat outputs under alternatives 01 and 02. The same also partains to the excel sheet attached to the PDD showing different heat output to consumers and different heat loses in project and in baseline. The comparative alter-	**CAR 05** **CAR 06** **CAR 07** **CAR 08** **CL 05**	OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	"Guidance on criteria for baseline setting and monitoring", as appropriate?	natives analysis cannot be applied if alternatives result in different output. Closed on the basis of PDD ver.2 review. The baseline was chosen on the basis of barrier analysis demonstrating that the project activity without being registered as JI is not economically feasible. The basic assumptions for baseline estimation are presented in PDD tables and in the more details in the excel spreadsheet. **CAR 08** 1/ The values mentioned in Data/Parameter 1 Baseline heat production by KSPU represents the heat supplied in the form of heat water (steam production is not considered as per comparative analysis with excel sheet), whereas the total heat production includes steam generation. Please justify. Steam production does not affect baseline heat generation. The value is similar in both baseline and project. 2/ It is unclear why the specific coal consumption for heat production at KSPU shows a variation under the project scenario whereas in 2005-2007 it remained constant (0,186 t.c.e./Gcal). Please check the value 0.180 t.c.e./Gcal on page 20. SFC baseline is calculated on the basis of average for three previous years.		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		3/ Heat loses are not considered in calculation of SFC for KSPU and SEC for EBH. According to RD 34.08.552-95, SFC and SEC for output energy characterizes the efficiency of energy source, but not the heat supplying system. Heat loses are considered separately. 4/ Calculation of natural fuel consumption by KSPU in baseline and project is not traceable in excel sheet. Corrected in the baseline. Natural fuel consumption for the project in 2008-2010 is taken by fact data, in 2011-2012 year is taken from the KSPU production program. 5/ Calculation of specific fuel equivalent consumption is not traceable (formulae used in cells for the fuel equivalent consumption is unclear. 6/ Please provide an explanation of more than 50% increase of heat output from KSPU in 2008. Increase of fuel consumption in 2008 was related to testing works /7//8/. This year was excluded from the calculation of SFC as not representative. Closed on the basis of the revision made in PDD v. 3. **CL 05.** Please justify the conservativeness of calculation method for SEC for both EBHs on the basis of historical data bearing in mind that the relation between load and power consumption was not analyzed. It was explained that in view of the fact that efficiency is not applicable to the Electric Boilers it is found reasonable to estimate specific electricity consumption as the weighted average of consumed fuel.		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		SV 05 Check all assumptions and input values used for investment analysis applied to confirm the relevance of financial barrier. **SV 06** Check the coal quality certificates to confirm the actual NCV of coal used in KSPU.		
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		
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	The Grid Emission Factor for Irkutsk Region is applied for baseline and Project emissions estimation. Grid emission factor was estimated on the basis of JSC "Irkutskenergo" software: "Program complex of automated collection, processing and fuel use analysis system of CHP-plants and Power and electrification production association". **SV 07** Check the "Program complex of automated collection, processing and fuel use analysis system of CHP-plants and Power and electrification production association" and the database for the grid emission factor calculation. Check Regulating document 34.08-559-96 "Methodical guidance for analysis of specific fuel consumption changes at electric power stations and power associations" referred to in relation to fuel equivalent consumption estimation and assure the conservative approach used for fuel equivalent consumption estimation.	CAR 21	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		CAR 21 The approach used for the grid emission factor calculation does not give the most conservative estimation among those available for Siberian energy system. Please demonstrate that the standard approach prescribed by the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" is used. The value of grid emission factor corresponds to that has already determined for another JI project: "Increase in efficiency of water resources use at Bratsk HPP, Irkutsk region, Russian Federation".		
Approved CDM methodology approach only **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 determined that a comparable project (to be) implemented under com-	PDD does not specify which approach is applied to demonstrate additionality. Pending a response to CAR 04 Investment analysis (benchmark analysis) was applied in order to demonstrate that proposed project activity is not economically feasible. National Policies and circumstances were taken into consideration while baseline establishing.	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	parable 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?	Pending a response to CAR 08.	Pending	OK
29 (b)	Are additionality proofs provided?	Investment analysis was provided **CAR 09.** The formulae used for sensitivity analysis are not traceable in the excel sheet. Please provide the traceable calculation for sensitivity analysis. Financial model was applied to each variation of the key parameters to gain traceability in sensitivity analysis outcome. CAR 09 is closed on the basis of the revision of PDD v.3. **CAR 10** The selected time horizon for investment analysis is 13 years that is far less than operation lifetime defined as 25 years in sec. C. 2. The residual value shall be considered as cash inflow in investment analysis. Residual value (= terminal value) is included into the calculation. Financial model was corrected appropriately **CL 05.** 1/ Please provide relevant evidence to confirm the assumptions for	**CAR 09** **CAR 10** **CL 05**	OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		invest analysis and to demonstrate that all of them were actual and applicable at the time of investment decision adoption. Evaluating the effectiveness of investment projects carried out in accordance with the approved internal standard, "Methodology to evaluate the effectiveness of investment projects of JSC Irkutskenergo STP 001.079.078-2007 (the STP). This methodology is based on the methodological guidelines for assessing of investment projects feasibility approved by the Ministry of Economy of Russia, Ministry of Finance 21.06.1999 № VC 477. 2/ Please provide justification on conservativeness of the benchmark choice and risk premiums. 3/ The sensitivity analysis is not sufficient. Please analyze the variation of coal price and heat tariffs. 4/ Please clarify why the heat tariff for KSPU significantly dropped in 2009. Please provide the reliable evidence for the electricity and heat tariffs that were effective at the time of investment decision making. Evaluating the effectiveness of investment projects carried out in accordance with the approved internal standard, "Methodology to evaluate the effectiveness of investment projects of JSC Irkutskenergo STP 001.079.078-2007 (the STP). This methodology is based on the methodological guidelines for assessing of investment projects feasibility approved by the Ministry of Economy of Russia, Ministry of Finance 21.06.1999 № VC 477. The discount rate for all projects is determined as 15% (Section 6.8.4).		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		Additional power output is sold by free market prices (Section 5.3.6). Tariffs on heat energy and tariffs for the transmission of heat energy are calculated from expected gross returns and the thermal energy sold. **SV 08.** Collect the evidence for investment analysis.		
29 (c)	Is the additionality demonstrated appropriately as a result?	Pending a response to CL6, CAR 8 CAR 9. **CAR 11.** Common practice analysis does not explicitly states and convincingly demonstrates that activity similar to the proposed project is rare in the region. Please revise the description of common practice given in PDD and provide reliable evidence. An appropriate explanation was provided in PDD v.3	**CAR 11**	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 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?	Project boundary comprises KSPU, EBHs and power plants supplying the power into regional grid. PDD provides description of project emission sources in section B 3.		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	(iii) Significant?			
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?	Yes. Project boundary is defined on the basis of case-by-case analysis of 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?	**CL 06.** The rational for exclusion of CH4 and N2O emissions generating by coal burning from project emissions as well as residual fuel combustion emissions are vague. The reference to IPCC should be further clarified The calculation of CH4 and N2O emissions was provided. Closed on the basis of correction made in PDD ver.2.0	**CL 06**	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?	Pending a response to CL 07	Pending	OK
Approved CDM methodology approach only **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 defined as April 7, 2008 – the date when the works were started up. **CL 07.** Please provide the documentary evidence such as relevant board decision, contracts, official permissions, information from equipment manufacturer etc. to confirm: 1/ Preliminary JI consideration as a decisive factor for project implementation.	**CL 07**	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		Preliminary JI consideration is confirmed with documentary evidence - The minutes of technical meeting of Irkutskenergo's management held on 29/12/2007 /9/ - Investment memorandum on the reconstruction of heat network in Leninsky district, Irkutsk. /10/ 2/ The starting date – April 07, 2008, Order # 33 from 11.03.2008 /11/ 3/ The start of crediting period which was on or after the day when emissions reduction began – December 1, 2008, Confirmed through the review of acceptance certificate from 1.12.2008 /12/ 4/ Project operation lifetime – 25 years. According to the point 1.2 (pipelines of IV category) of "Instruction for pipelines of I,II,III and IV category operating life prolongation" approved by Order of Minenergo of Russia # BK-03-35/182 from 2.07.2003 operation lifetime is 30 years.		
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?	Operational lifetime is defined as 25 years. Conclusion is pending a response to CL 07.	Pending	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 4 years, 1 month.		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 re-	Pending a response to CL 07.	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	movals generated by the project?			
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?	Yes, crediting period starts on 01 December '08 after the beginning of 2008.		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	PDD states that own approach is used. Pending a response to CAR 04	Pending	OK
JI specific approach only				

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
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 covers parameters, and QA/QC procedures for the measurement, maintenance, and data handling to guarantee traceable emission reduction calculations.		OK
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?	Pending a response to CAR 08	Pending	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?	Default value for EF of coal consumption is used on the basis of IPCC. The source is recognized and supported with statistical data. **CL 08** Please clarify what type of coal used at the KSPU and how the EF was chosen. **SV 08** Check the type of coal used at the KSPU and make sure the relevance of EF chosen. NCV of 3962 Kcal/kg is the average for 2007-2010 y for the coal used at the KSPU. The data for 2008 was validated against testing results extract provided by Irkutskenergo /14/.	**CL 08**	OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the	Parameters for project emissions monitoring were defined in table D 1.1.1. **CAR 12**. PDD section D.1.1. reads that the monitoring of project and	**CAR 12**	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	values are to be selected and justified?	baseline emissions is not applicable but further this options was applied. Please provide consistency in the monitoring plan description and indicate which option (1 or 2) was applied.		
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?	Yes, PDD provides explicit description of the data sources for monitoring parameters.		OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	All parameters included in Monitoring plan are to be monitored in the frameworks of regular operational practice.		OK
36 (b) (iv)	Are International System Unit (SI units) used?	**CAR 13** Parameter CAL is not defined consistently through the PDD. It is named as "Low Heating Value", or "Coal calorific capacity". Please use the single term through the PDD. Closed on the basis of correction made in the PDD v. 3	**CAR 13**	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?	Yes, the project heat generation is used for baseline emission calculation.		OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	**CAR 14** Please clarify how the heat loses mentioned in the excel sheet are considered in the project and baseline emissions calculation.	**CAR 14**	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		Heat loses in the project are higher than in the baseline as new pipe-line is envisaged to be constructed as the part of project. Heat loses for the new pipeline are assumed to be constant. Other heat loses are assumed to be equal for both the project and the baseline Loses affects Closed on the basis of correction made in the PDD v. 5		
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"?	Pending a response to CAR 13	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 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?	**CAR 20 (additional)** 1/Please separate the parameters in sec B.2 to that not to be monitored but determined only once and remain fixed through the crediting period and parameters to be monitored. 2/ Please include EF for coal as the monitoring parameter in sec. B.2. Description of the monitoring plan in Section D and Annex 2 distinguishes: a) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD as specified in the tabular form in Section B.1 and summarised in Section D. b) Data and parameters that are to be monitored throughout the crediting period.	**CAR 20**	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	Yes, the methods used and data collection frequency are clearly defined in the Monitoring plan		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 data to determine project and baseline emissions are to be obtained during monitoring of the parameters indicated in table D.1.1.1 and D.1.1.3. QC/QA procedures are described in section D.2. PDD. **SV 10** Check the QC/QA procedures at place.		OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	**CAR 15.** The description of formulae used for ER estimation is missing in section D.1.4. Section is left empty without rationale. Leakages are not considered. Closed on the basis of the review of PDD ver.2.0	**CAR 15**	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	**CAR 16.** Russian text is left in table D.2. Closed on the basis of the review of PDD ver.2.0	**CAR 16**	OK
36 (f) (iii)	Are all equations numbered?	Yes.		OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes variables are indicated correctly.		OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Pending a response to CAR 14 and CL 08	Pending	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
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?	**CAR 17.** In the excel sheet the fuel equivalent consumption is used in the project emissions calculation instead of natural fuel consumption that leads to underestimation of project emissions. Please justify. Closed on the basis of the review of ER calculation spreadsheet ver.2.0	**CAR 17**	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	N/A		
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 operational routines.		OK
36 (f) (vii)	Are references provided as necessary?	Pending a response to CL 08 **SV 13.** Check the original data used for grid emission factor estimation.	Pending	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	No, the exclusion of leakages is not explained. Please refer to CAR 18.	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?	N/A		
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	Yes uncertainty is described in Table D.2 **SV 14** Uncertainty of metering equipment shall be checked against manufacturer's certificates.	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	emission reductions or enhancements of net removals provided?			
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 09**, Please provide the reference to national monitoring standards used for monitoring routines.	**CL 09**	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		
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?	Yes QC/QA procedures are specified in table D.2. **SV 15**. The relevant procedure shall be checked on site.	Pending	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure that the project participants(s) will implement in order to monitor emission reduction generated by the project is described in PDD Section D.4. **SV 16.** The authority/ responsibility distribution for data collection, achieving and storing will be checked on site.	Pending	OK
36 (k)	Does the monitoring plan, on the whole,	Monitoring techniques are in line with current operation routines.		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	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?			
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?	Yes, Monitoring plan provides the data to be monitored for baseline and project emissions estimation in Sections D.1.1.1 and D.1.1.3.		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?	**SV. 16** the data storage procedure is to be checked on site.	Pending	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		
Approved CDM methodology approach only **JI specific approach only**				

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
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?	Leakages are assumed to be zero. **CAR 18** The leakages (methane emissions from coal mining, CO2 emissions from fuel combustion etc.), attributable to coal mining and transportation due to increased coal consumption at KSPU shall be considered as leakages. Otherwise their negligibility shall be substantiated. Project will lead to reduction of coal consumption in Irkutsk region, so coal mining and transportation will be reduced too.	**CAR 18**	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Pending a response to CAR 18.	Pending	OK
Approved CDM methodology approach only **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	Assessment of emissions or net removals in the baseline scenario and in the project scenario is chosen.		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?	The formulae to estimate project emissions are described in section D.1.1.2 Leakages are not considered Baseline emissions defined as CO2 emissions from coal combustion at the KSPU and electricity consumed by EBHs and auxiliary electric-	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	(c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	ity consumption by KSPU. The estimated values for the baseline emissions are presented in PDD Section D.1.1.4. The calculations in excel spreadsheet are made available. The formulae used for emission reduction calculation is consistent with PDD. Pending a response to CAR 18		
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		
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 re-	Estimates are given on the periodic basis. The formulae used in PDD are consistent. The effect of load on the specific fuel consumption through the efficiency is not considered in the emission reduction calculation. Pending a response to CAR 08.	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	vised 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? (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 consis-			

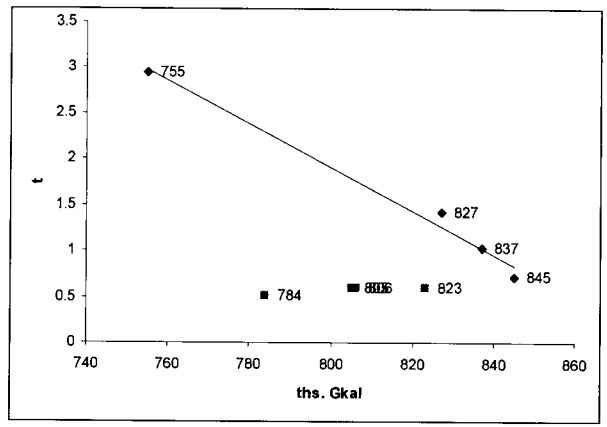
Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	tent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals 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?	PDD includes ex-ante estimation of baseline emissions		OK
Approved CDM methodology approach only **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?	**CAR 19.** Adverse environmental effects being caused by project are not described in section F. Significant copy&paste from section D.1.5 could not be considered applicable. PDD ver.2.0 was corrected. CAR 19 has been closed on the basis of the revision made in PDD v.2.0 Analysis of the environmental impacts of the project is described in PDD Section F1.	**CAR 19**	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		SV 17. EIA and evidence for its official approval in accordance to procedure as determined by Host Part will be checked on site.		
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?	Under the RF Urban Development Code N 190-ФЗ, the project design for the proposed project activity including EIA as the part of project documentation should undergo the State Expertise to obtain official permission from local authorities. **SV 18.** The relevance and contents of licenses should be further checked out during site visit and document review.	Pending	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?	According to local legislation it is required to make the information of expected environmental impacts publicly available. The PDD section G states that Information about the Project has been posted on website http://www.frrio.ru/news/?135. There were no any comments received by PP. **SV 19.** Check and collect evidence to confirm the project has appropriate system of stakeholders informing and gathering of comments.	Pending	OK
Determination regarding small-scale projects (additional elements for assessment) **Applicable to all JI SSC projects** **Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)**				

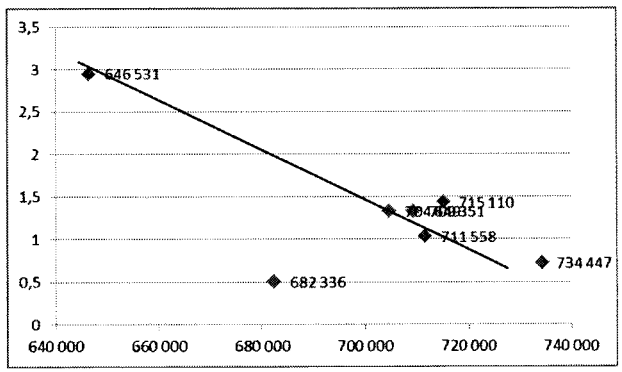
Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
JI specific approach only				
Approved CDM methodology approach only				
Determination regarding programmes of activities (additional/alternative elements for assessment)				

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 01. The project physical location is not described consistently to allow the unique identification of the project. Please indicate the coordinates of project site. The Russian language is used in figure 4.1.4.1.	A.4.1.4	**PP response 1:** Corrected (page 7)	22/04/2011 LV Figure A.4.1.4.1 is corrected. GPS coordinates are indicated at the map. Closed
CAR 02. The project will result in decrease of heat output. The average annual heat output prior to project start (2005-2008) is equal to 807 Gcal whereas after the project start (2009-2010) the average heat output dropped to 784 Gcal. For the period 2011-2012 heat output is planned to be equal to 758 Gcal/year. JI guidelines, Annex B requires that emission reduction can not be earned for decreases in activity levels outside the project activity. The decrease of heat output may indicate the activity level lowering outside the project. Please explain the reasons for the heat output decrease under the project.	A.4.3	**PP response 1:** Corrected. See new data on excel sheets in file "KSPU Emission calculation". **LV comment 1:** Heat output values in table A-2 were revised. If the annual values of total heat output for 2005-2009 are compared with corresponding average annual temperature in Irkutsk available at official climate database (http://aisori.meteo.ru/ClimateR), the heat output for 2009 looks underestimated as well as the forecast for 2010 – 2011 (see table and graph bellow).	22/04/2011 LV The argumentation of heat output shortage in 2009 with leaks elimination is acceptable and officially confirmed by explanation provided by Irkutskenergo. Closed on the basis of explanation provided and review of new version of PDD (v. 5.0) Closed.

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in tables 1, 2, 3</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>Total heat output (table A-2 PDD)</td><td>average annual tem-perature in Irkutsk (http://aisori.meteo.ru/ClimateR)</td></tr>
<tr><td>2005</td><td>837</td><td>1.03</td></tr>
<tr><td>2006</td><td>845</td><td>0.72</td></tr>
<tr><td>2007</td><td>755</td><td>2.95</td></tr>
<tr><td>2008</td><td>827</td><td>1.43</td></tr>
<tr><td>2009</td><td>784</td><td>0.51</td></tr>
<tr><td>2010</td><td>805</td><td>0.6 (http://ru.wikipedia.org/wiki/%D0%98%D1%80%D0%BA%D1%83%D1%82%D1%81%D0%BA#.D0.9A.D0.BB.D0.B8.D0.BC.D0.B0.D1.82)</td></tr>
<tr><td>2011</td><td>806</td><td>0.6</td></tr>
<tr><td>2012</td><td>823</td><td>0.6</td></tr>
</table>
</td><td></td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		 The data are not acceptable unless being properly justified and substantiated with documentary evidence. **PP response 2:** According to the approved documents, the following data should be used.	

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in tables 1, 2, 3</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th></th><th>Total productive supply</th><th>average annual temperature in Irkutsk (http://aisori.meteo.ru/ClimateR)</th></tr>
<tr><td>2005</td><td>711 558</td><td>1.03</td></tr>
<tr><td>2006</td><td>734 447</td><td>0.72</td></tr>
<tr><td>2007</td><td>646 531</td><td>2.95</td></tr>
<tr><td>2008</td><td>715 110</td><td>1.43</td></tr>
<tr><td>2009</td><td>682 336</td><td>0.51</td></tr>
<tr><td>2010</td><td>704 649</td><td>1.328 (average temperature 2005-2009)</td></tr>
<tr><td>2011</td><td>709 351</td><td>1.328</td></tr>
<tr><td>2012</td><td>709 351</td><td>1.328</td></tr>
</table>
</td><td></td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		 The diagram shows that forecast data lays in the forecast area. Only year 2009 shows smaller productive supply (8% less than in year 2006, when temperature was near the temperature of the year 2009). It caused by heat water leakage elimination in this year. Additional consumers were connected in subsequent periods and productive supply has returned to the forecast area.	
CAR 03	A.5	**LV comment 1:**	Open

Draft report clarifications and corrective action requests by determination team	**Ref. to checklist question in tables 1, 2, 3**	**Summary of project owner response**	**Determination team conclusion**
The project has no approval of the host Party.		The project approval by the Host Party will be provided after the determination of the PDD	
CAR 04 PDD states that the own approach is used for baseline identification, additionality demonstration and monitoring. The own approach is not determined by JI guidelines as possible option for baseline choice and monitoring. Please specify if JI specific approach is chosen.	22	**PP response 1:** Corrected **LV comment 1:** "JI specific approach" – not "specific approach" No other variants are deemed appropriate! Please check again and rectify. **PP response 2:** Corrected	22/04/2011 LV PDD was corrected Closed on the basis of the review of changes made in PDD v. 5.0.
CAR 05. Alternatives analysis is not sufficient. Please explain why other options of heat generation were not considered as such as export of heat energy from sources outside proposed project boundary e.g. TPP, or installation of new local boiler houses using less carbon intensive fossil fuel or biofuel.	23	**PP response 1:** Corrected (page 14)	22/04/2011 LV Three alternatives discussed: continuation of current situation, project not being registered as JI and other than coal based heat generation. Analysis of alternatives and justification of baseline establishing is now found sufficient and convincing.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			Closed
CAR 06 Alternative 01 description is not consistent. PDD reads: *"The planned increase of heat loads in "Novo-Lenino" district would be covered by even development of KSPU and EBHs"* whereas table B.1.1 indicates gradual decrease of heat load. Please justify.	23	**PP response 1:** Corrected (Phrase is deleted)	22/04/2011 LV Closed on the basis of PDD ver.2 review.
CAR 07. Tables B.1.1 and B 1.2 provide different heat outputs under alternatives 01 and 02. The same also pertains to the excel sheet attached to the PDD showing different heat output to consumers and different heat loses in project and in baseline. The comparative alternatives analysis cannot be applied if alternatives result in different output.	23	**PP response 1:** Corrected (page 14)	22/04/2011 LV Closed on the basis of PDD ver.2 review.
CAR 08 1/ The values mentioned in Data/Parameter 1 Baseline heat production by KSPU represents the heat supplied in the form of hot water (steam production is not considered as per comparative analysis with excel sheet),	23	**PP response 1:** 1/Corrected (page 18); 2/Corrected; 3/According to RD 34.08.552-95, SFC and SEC for output energy characterizes the effi-	LV 21/03/2011 1/Steam production does not affect baseline heat generation. The value is similar in both baseline and project.

Draft report clarifications and corrective action requests by determination team	**Ref. to checklist question in tables 1, 2, 3**	**Summary of project owner response**	**Determination team conclusion**
whereas the total heat production includes steam generation. Please justify. 2/ It is unclear why the specific coal consumption for heat production at KSPU shows a variation under the project scenario whereas in 2005-2007 it remained constant (0,186 t.c.e./Gcal). Please check the value 0.180 t.c.e./Gcal on page 20. 3/ Heat loses are not considered in calculation of SFC for KSPU and SEC for EBH. 4/ Calculation of natural fuel consumption by KSPU in baseline and project is not traceable in excel sheet. 5/ Calculation of specific fuel equivalent consumption is not traceable (formulae used in cells for the fuel equivalent consumption is unclear. 6/ Please provide an explanation of more than 50% increase of heat output from KSPU in 2008.		ciency of energy source, but not the heat supplying system. Heat loses are considered separately. See formula D 1.4. on page 43. 4/ Corrected in the baseline. Natural fuel consumption for the project in 2008-2010 is taken by fact data, in 2011-2012 year is taken from the KSPU production program. 5/ Corrected 6.Test switching of load for practically check of these switching capability without project was carried out. See technical decision.	2/SFC baseline is calculated on the basis of average for three previous years. Corrected now. The formula for SFC is traceable 3/Explanation found acceptable. closed 4/Pending original data sources. – LV 12/05 Data source (the internal report on the coal consumption) is provided. 5/ PDD is corrected 6/Increase of fuel consumption in 2008 was related to testing works /7//8/. This year was excluded from the calculation of SFC as not representative. Closed
CAR 09. The formulae used for sensitivity analysis are not traceable in excel sheet.	29 (b)	**PP response 1:**	LV 21/03/2011 Financial model was applied to

Draft report clarifications and corrective action requests by determination team	**Ref. to checklist question in tables 1, 2, 3**	**Summary of project owner response**	**Determination team conclusion**
Please provide the traceable calculation for sensitivity analysis.		Investment analysis was provided Corrected. See file "Financial model"	each variation of the key parameters to gain traceability in sensitivity analysis outcome. Closed
CAR 10 The selected time horizon for investment analysis is 13 years that is far less than operation lifetime defined as 25 years in sec. C. 2. The residual value shall be considered as cash inflow in investment analysis.	29 (b)	**PP response 1:** Residual value (= terminal value) is included into the calculation. See explanatory note on financial model.	LV 21/03/2011 Financial model was corrected appropriately Closed
CAR 11. Common practice analysis does not explicitly states and convincingly demonstrates that activity similar to the proposed project is rare in the region. Please revise the description of common practice given in PDD and provide reliable evidence.	29 (c)	**PP response 1:** Corrected (page 17) **LV comment 1:** LV 21/03 Please justify if the activities implying similar measures described under the following links: http://www.ids55.ru/ks/articles/energo/105---l-r-------.html	22/04/2011 LV Specific environment in the Irkutsk region does not facilitate the substitution of electric boilers by the coal based one as of following reasons: Project owner JSC Irkutskenergo operates as the power producer also. Large part of power production is produced at Hydro power

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		http://sovbel.ucoz.ru/news/2009-4-17-125-987- http://www.mvestnik.ru/shwpgn.asp?pid=201012154655 are not similar to the proposed project. Please update PDD accordingly. **PP response 2:** PDD updated, see p.18	plants that make the power production to be respectively cheaper than in other regions. Given explanation looks acceptable. closed
CAR 12 PDD section D.1.1. reads that the monitoring of project and baseline emissions is not applicable but further this options was applied. Please provide consistency in the monitoring plan description and indicate which option (1 or 2) was applied.	36 (b) (i)	**PP response 1:** Corrected	21/03/2011 LV Closed on the basis of the review of PDD ver.3.
CAR 13 Parameter CAL is not defined consistently through the PDD. It is named as "Low Heating Value", or "Coal calorific capacity". Please use the single term through the PDD.	36 (b) (iv)	**PP response 1:** Corrected	LV 21/03/2011 Closed on the basis of PDD v. 3 review.
CAR 14 Please clarify how the heat loses	36 (b) (v)	**PP response 1:**	12/05/2011 LV:

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mentioned in the excel sheet are considered in the project and baseline emissions calculation.		Baseline and project heat loses will differ on the value of heat loses from new pipeline. It is consider in calculation of Baseline heat production on the page 43-44 of PDD and in the file "KSPU emission calculation" 22/04 **LV comment 1:** Project heat losses are higher than that in the baseline 5.3% heat loses difference for new pipeline was validated through the additional calculations provided. Another part of heat loses is the same for both baseline and project. This loses are not subject for monitoring hence they should be determined as the singular adjustment factor applicable for calculation of baseline and project heat output value. Please update sections B.2. and D accordingly.	The explanation is acceptable. Heat production will be adjusted for the additional heat losses from the new pipeline only. Closed on the basis of explanation provided.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		29/04/2011 **PP response 2:** Heat losses for existing pipelines are not needed for heat output value calculation. This parameter is needed for heat productive supply calculation. Heat productive supply is presented for reference only and it is not needed for the purpose of monitoring.	
CAR 15. The description of formulae used for ER estimation is missing in section D.1.4. Section is left empty without rationale. Leakages are not considered.	36 (f) (i)	**PP response 1:** Corrected (page 59)	LV 21/03/2011 Closed on the basis of the review of PDD ver.2.0
CAR 16. Russian text is left in table D.2.	36 (f) (ii)	**PP response 1:** Corrected (page 61)	LV 21/03/2011 Closed on the basis of the review of PDD ver.2.0
CAR 17. In the excel sheet the fuel equivalent consumption is used in the project emissions calculation instead of natural fuel consumption that leads to underestimation of project emissions. Please justify.	36 (f) (vi)	**PP response 1:** Corrected	LV 21/03/2011 Closed on the basis of the review of ER calculation spreadsheet ver.2.0
CAR 18 The leakages (methane emissions from coal mining, CO2 emissions from fuel	40 (a)	**PP response 1:**	LV 25/05/2011

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combustion etc.), attributable to coal mining and transportation due to increased coal consumption at KSPU shall be considered as leakages. Otherwise their negligibility shall be substantiated.		Project will lead to reduction of coal consumption in Irkutsk region, so coal mining and transportation will reduce too. 21/03/2011 **LV comment 1:** Explanation is ceptable. Please update PDD accordingly	Closed on the basis of the review of revision made in PDD v. 5.0
CAR 19. Adverse environmental effects being caused by project are not described in section F. Significant copy&paste from section D.1.5 could not be considered applicable.	48 (a)	**PP response 1:** Corrected (page 61)	LV 21/03/2011 Closed on the basis of the review of PDD ver.2.0
CAR 20 1/Please separate the parameters in sec B.2 to that not to be monitored but determined only once and remain fixed through the crediting period and parameters to be monitored. 2/ Please include EF for coal as the monitoring parameter in sec. B.2.	36 (d)	**PP response 1:** Corrected 12/05/2011 **LV comment 1:** Please check the relevance of parameters indicated as fixed in sec. B.1. Heat Output – is not fixed parameter. Further PDD revision is required. 14/05/2011 **PP response 2:** PDD has been revised. See v. 5.	LV 25/05/2011 Closed on the basis of PDD v.5.0 review.

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CAR 21 The approach used for the grid emission factor calculation does not give the most conservative estimation among those available for Siberian energy system. Please demonstrate that the standard approach prescribed by the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption" is used.	25	**PP response 1:** Approach used for the grid emission factor calculation is based on calculation of average weighted specific fuel consumption for electricity production in condensation mode by TPP's of Irkutskenergo. The most ineffective method for electricity production is electricity production in condensation mode. That is why, electricity consumption reduction will reduce electricity production in the most ineffective mode - condensation mode. Not all Irkutskenergo TPPs have bad efficiency and high specific fuel consumption for electricity production in condensation mode, but due to the project only most ineffective TPPs are unloaded. Effective TPP's are also included in calculation. That is why, the used approach is conservative. Grid emission factor calculation includes 3 year statistic before the project realization - Operating margin. Build margin is not included in calculation because Irkutsenergo has surplus of capacity and there is no need to build	12/05/2011 LV The value of grid emission factor corresponds to that has already determined for another JI project: "Increase in efficiency of water resources use at Bratsk HPP, Irkutsk region, Russian Federation". Closed

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		new one. Also increase of energy system efficiency by repair works is compensated by ageing of equipment. The method of calculation and value of EF_{grid} for Irkutsk region was approved in project "Increase in efficiency of water resources use at Bratsk HPP" by BVC.	
CL 01 According to the description given in section A.4 eight units installed in Novo Lenino EBH are operated for more than 40 years. None of equipment is operated less than 20 years. Please provide relevant evidence to ensure the capability of equipment to be operational through the whole crediting period.	A.4.3	**PP response 1:** Expert conclusions are enclosed	22/04/2011 LV Operationability of electric boilers at EBH Bytovaya till 2013 is confirmed through the review of Technical expertise conclusions /4/. Boilers at EBH Novo-Lenino underwent technical expertise in 2010 /5/. Closed.
CL 02. Please clarify how the heat transportation system redesign will affect the project emissions. It is not evident that the heat transportation system overhaul is attributable to project.	A.4.3	**PP response 1:** Explanatory note is enclosed. 17/03/2011 **LV comment 1:** It was explained through the communication with project operator /6/ that redesign of heat transportation system was included in the pro-	22/04/2011 LV PDD was updated. Closed on the basis of revision made in PDD ver. 2.0

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		ject as it is necessary due to shift from three independent heat sources to single one. Explanation sounds plausible. Please update PDD accordingly. Please state it clearly whether or not ER will achieved trough the reduction of heat loses. 22/04/2011 **PP response 2:** PDD updated, see p.4	
CL 03 Table A 2 PDD does not provide the heat output but heat generation values (heat loses are not considered).	A.4.3	**PP response 1:** There is not heat productive supply, but heat output provided in Table A2. 17/03/2011 **LV comment 1:** Closed, further discussion is continued under CAR 02.	22/04/2011 LV closed on the basis of explanation provided and review of corrections made in PDD v.3. Closed
CL 04. Please justify the conservativeness of calculation method for SEC for both EBHs on the basis of historical data bearing in mind that the relation between load and power consumption was not analyzed.	A.4.3	**PP response 1:** Relation between load and power consumption is included in SEC. Different working regimes are included in historical data. Electro boilers are not the basic power-engineering equip-	LV 21/03 Explanation is acceptable. In view the efficiency is not applicable to the Electric Boilers it is found reasonable to estimate specific elec-

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		ment, that is why they don't have characteristics of working efficiency. There is no any aggregate reporting at EBH's, that is why there is no any other way for SEC calculation.	tricity consumption as the weighted average of consumed electricity. Closed
CL 05. 1/ Please provide relevant evidence to confirm the assumptions for invest analysis and to demonstrate that all of them were actual and applicable at the time of investment decision adoption. 2/ Please provide justification on conservativeness of the benchmark choice and risk premiums. 3/ The sensitivity analysis is not sufficient. Please analyze the variation of coal price and heat tariffs. 4/ Please clarify why the heat tariff for KSPU significantly dropped in 2009. Please provide the reliable evidence for the electricity and heat tariffs that were effective at the time of investment decision making.	29 (b)	**PP response 1:** 1. 2. & 4/ See explanatory note on financial model. **LV comment 1:** According to the explanatory letter provided by Irkutskenergo the effectiveness of investment projects was evaluated in accordance with the approved internal standard, "Methodology to evaluate the effectiveness of investment projects of JSC Irkutskenergo STP 001.079.078-2007 (the STP). This methodology is based on the methodological guidelines for assessing of investment projects feasibility approved by the Ministry of Economy of Russia, Ministry of Finance 21.06.1999 № VC 477. The discount rate for all projects is determined	LV 21/03/2011 Sensitivity analysis was amended and now looks sufficient to demonstrate reliability of investment analysis outcome. Closed

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		as 15% (Section 6.8.4). Additional power output is sold by free market prices (Section 5.3.6). Tariffs on heat energy and tariffs for the transmission of heat energy are calculated from expected gross returns and the thermal energy sold. **PP response 2:** Due to the growth of heat supply, while fixed expenses are affected by inflation only, the tariffs are assumed below than that approved in 2008 As the project scenario assumes increased supply of heat energy, tariffs are lowered significantly. 21/03/2011 **LV comment 2:** The calculation of expected gross returns is based on the profit in the tariff value for 2008 (cell D88 'Модель БЕ') Please explain where this value is taken from. **Additional issue:**	

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		Following http://www.rosteplo.ru/Tech_stat/stat_shablon.php?id=2320 The continuation of electric boilers is **economically unfeasible under the forecasted tariffs for the heat and power**. It contradicts the claim of additionality. Please substantiate the values of tariffs used in investment analysis. **PP response 3:** Tariffs used in investment analysis corresponds to resolutions of local authorities at the moment of decision making – year 2007. Then tariffs indexed by rates of growth according to the Methodology of JSC Irkutskenergo for estimation of projects economic efficiency. 3/ Variation of coal price and heat tariffs has been analyzed. See excel file "financial model"	
CL 06. The rational for exclusion of CH4 and N2O emissions generating by coal burning from project emissions as well as residual	33	**PP response 1:** See calculation and references in the excel file	LV 12/05 closed on the basis of correction

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fuel combustion emissions are vague. The reference to IPCC should be further clarified		"KSPU Emission calculation". 21/03 **LV comment 1:** The calculation of CH4 and N2O emissions was provided. Further justification required: Why fuel equivalent consumption is used for the emission calculation instead of net heat output? **PP response 2:** Calculation was made according to methodology represented in IPCC 2006. Default emission factors for stationary combustion in the energy industries were used. LV 22/04 **LV comment 2:** please include the figures of calculated N2O and CH4 emissions into PDD sec. B.3. table B.3.1 and demonstrate that they are less than 1%.	made in PDD ver.5.0
CL 07. Please provide the documentary evidence such as relevant board decision, con-	34 (a)	**PP response 1:**	LV 21/03/2011:

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
tracts, official permissions, information from equipment manufacturer etc. to confirm: 1/ Preliminary JI consideration as a decisive factor for project implementation. 2/ The starting date – April 07, 2008, 3/ The start of crediting period which was on or after the day when emissions reduction began – December 1, 2008, 4/ Project operation lifetime – 25 years.		1.See protocol from 29.12.2007 2. See Order # 33 from 11.03.2008 3. See acceptance certificate from 1.12.2008 4.Corrected on 30 years. According to the point 1.2 (pipelines of IV category) of "Instruction for pipelines of I,II,III and IV category operating life prolongation" approved by Order of Minenergo of Russia # BK-03-35/182 from 2.07.2003.	1/ Preliminary JI consideration is confirmed with documentary evidence - The minutes of technical meeting of Irkutskenergo's management held on 29/12/2007 /9/ - Investment memorandum on the reconstruction of heat network in Leninsky district, Irkutsk. /10/ "The project can be deemed economically feasible if being pushed through JI mechanism only". 2/ Confirmed through the document review. /11/ 3/Confirmed through the document review. /12/ 4/ Confirmed through the document review. /13/
CL 08 Please clarify what type of coal used at the KSPU and how the EF was chosen.	36 (b)	**PP response 1:**	LV 21/03/2011 3962 Kcal /kg is the average for

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		See Protocol of selection of fuel tests	2007-2010 y. The data for 2008 was validated against testing results extract provided by Irkutskenergo /14/. Closed
CL 09, Please provide the reference to national monitoring standards used for monitoring routines.	36 (g)	**PP response 1:** Reference is provided (page 45) **LV comment 1:** Please detail the application of monitoring standards. **PP response 2:** Corrected, see p.45	LV 22/04/2011 Closed on the basis of PDD revision made in PDD v. 3.0.