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Date: 27/04/2012

DETERMINATION REPORT

LLC «MEZ YUG RUSI»

DETERMINATION OF THE "INTRODUCTION OF ENERGY-SAVING MEASURES WITH UTILIZATION OF BIOMASS FOR PRODUCTION OF ENERGY RESOURCES AT THE BUSINESS UNITS OF LLC "MEZ YUG RUSI"

REPORT NO. RUSSIA-DET/0134/2012

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Determination Report on JI project

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

Date of first issue:	Organizational unit:
25/04/2012	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
NCSF	Ms. Marat Latypov

Summary:

Bureau Veritas Certification has made the determination of the ”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi” project of company LLC «MEZ Yug Rusi» located in Krasnodar city, town of Labinsk, town of Kropotkin, all Krasnodar region, and town of Anna, Rostov region, Russian Federation, on the basis of UNFCCC criteria for the JI as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project’s baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Corrective Actions Requests, presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

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

Report No.:	Subject Group:
RUSSIA-det/0134/2012	JI

Project title:

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

Work carried out by:

Leonid Yaskin – Lead verifier

Work reviewed by:

Daniil Ukhanov – Internal Technical Reviewer

Work approved by:

Leonid Yaskin – Country Operational Manager

Date of this revision:	Rev. No.:	Number of pages:
25/04/2012	01	75

Abbreviations

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

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

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1 INTRODUCTION

Closed Joint Stock Company "National Carbon Sequestration Foundation" (hereafter referred 'NCSF') has commissioned Bureau Veritas Certification, on behalf of LLC "MEZ Yug Rusi", to verify the emissions reductions of its JI project "Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC "MEZ Yug Rusi" (hereafter called 'the project') located in Krasnodar city, town of Labinsk, town of Kropotkin, all Krasnodar region, and town of Anna, Rostov region, Russian Federation.

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

1.1 Objective

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

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

1.2 Scope

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

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

"Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC "MEZ Yug Rusi".

1.3 Determination team

The determination team consists of the following personnel:

Dr. Leonid Yaskin
Bureau Veritas Certification Climate Change Lead Verifier

This determination report was reviewed by:

Daniil Ukhanov
Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

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

To address Bureau Veritas Certification corrective action and clarification requests, CCGS revised the original PDD Version 01 dated

09/08/2010 and following a set of revisions resubmitted it as Version 06 dated 24/04/2012.

The first deliverable of the document review was the Determination Protocol Revision 01 dated 30/05/2011 which contained 30 CARs.

The determination findings presented in this Determination Report Revision 01 and its Appendix A relate to the project as described in the PDD Version 01 (published) through Version 05 (final).

2.2 Follow-up Interviews

Following the submission of Conclusions on PP Responses dated 07/12/2011, 27/03/2012, and 21-24 April 2012 the AIE Lead Verifier L. Yaskin performed interviews with project proponents to confirm selected information and to clarify some issues identified in the document review. The persons interviewed are indicated in References. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Project participant MEZ Yug Rusi 27/03/2012	➢ Project history and Implementation schedule ➢ Baseline scenario ➢ Project activity ➢ Input data for investment analysis ➢ QC & QA procedures of monitoring ➢ Measured data on project and baseline parameters ➢ Theoretical description of baseline scenario ➢ Investment barrier and common practice ➢ Additionality ➢ Monitoring plan ➢ Emission reduction calculation
CONSULTANT NCSF	➢ Ditto
Stakeholders	➢ N/A

2.3 Resolution of Clarification and Corrective Action Requests

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

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

a) Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;
b) Clarification request (CL), requesting the project participants to provide additional information for Bureau Veritas Certification to assess compliance with the JI project requirement in question;
c) Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

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

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

3 PROJECT DESCRIPTION (quoted by PDD v.06)

Project objective

The project is the production of thermal energy by burning husks of sunflower seeds at the sites of branches of LLC «MEZ Yug Rusi».

This project is based on the principles of sustainable development, with reduced adverse effects on the environment. The use of sunflower seed husks for energy purposes leads to a reduction in emissions of carbon dioxide (CO2), which reduces the greenhouse effect.

Project

The project is implemented at facilities of 4 manufacturing facilities of LLC «MEZ Yug Rusi» including «Annynskiy oil-extraction plant», «Kropotkinskiy oil-extraction plant», «Krasnodarskiy fat-oil-extraction plant» and «Labinskiy oil-extraction plant».

«Annynskiy oil-extraction plant» branch of LLC «MEZ Yug Rusi».

The branch is the Oil Extraction Plant and engaged in the production of sunflower oil. The branch has its own boiler house, which meets the needs of oil extraction in the production of heat.
Prior to implementation of the project in 2008, the boiler house was equipped with 3 steam boilers: 2 gas-KE 25-14-270 GM and 1 husk boiler «Age-Moor».
According to the project the conversion of the existing gas boiler KE-25-14-270 GM to the husk in 2009 was implemented. A reserve fuel natural is the natural gas.

«Kropotkinskiy oil-extraction plant» branch of LLC «MEZ Yug Rusi».
The branch is the Oil Extraction Plant and engaged in the production of sunflower oil. The branch has its own boiler house, which meets the needs of oil extraction in the production of heat.
Prior to implementation of the project in 2004, the boiler house was equipped with 2 steam boilers: 2 gas boilers Babcock & Wilcox and DE-25-14-225GM.
According to the project the husk boiler E-12-1,4-250DT was put in operation in 2004. A reserve fuel is the natural gas.

«Labinskiy oil-extraction plant» branch of LLC «MEZ Yug Rusi».
The branch is the Oil Extraction Plant and engaged in the production of sunflower oil. The branch has its own boiler house, which meets the needs of oil extraction in the production of heat.
Prior to implementation of the project in 2000, the boiler house was equipped with 3 steam boilers: 2 Keller 5,3/2,1-370 husk boilers and 1 DKVR 10/13-250gas boiler.
According to the project 2 husk boilers of E-16-21-350 GNDV and KE-18-24-GDV types were put in operation in 2000 and in 2004. A reserve fuel is the natural gas.

«Krasnodarskiy fat-oil-extraction plant» branch of LLC «MEZ Yug Rusi».
The branch is the Fat-oil-extraction plant and engaged in the production of sunflower oil. The branch has its own thermal power plant, which meets the needs of oil extraction in the production of heat. Prior to implementation of the project in 2005, boiler house was equipped with 3 steam gas boilers of GM-50-1; E-50-3,9-440GM and BG-35/39P types. It is redundant and delivered part of the heat in heat pipeline
According to the project the E-13-3,9DT husk boiler was put in operation in 2005. A reserve fuel is the natural gas.

Baseline scenario
Prior to the implementation of project activities on the branches of LLC «MEZ Yug Rusi» the heat energy for industrial purposes was produced

by husk boilers, which were installed a long ago (in 1960ies) along with gas boilers (installed in the late 1990's). Husks were used for energy purposes in some branches, but in small quantities, while the main volume of husk was utilized as a fertilizer and was taken away to the fields.

From 2001 until 2009 the conversion of old gas boilers to ones that use sunflower seed husk was done at these branches , as well as buying new husk boilers.

One of the main reasons for having introduced this project was the possibility of its realization in the framework of the Kyoto Protocol in order to minimize the cost of renovations, as feeding the boiler with seed husk requires in addition to the basic cost for the purchase of husk boilers, the additional cost of setting up filing husks in boilers and the purchasing of various non-conventional boiler auxiliary equipment. This fact is reflected in the letters of technical specialists of companies (the main power engineers, engineers) to the management of their respective companies.

The project is not financially attractive. However, the additional revenues from the sale of emission reduction units (ERUs) will help LLC «MEZ Yug Rusi» overcome in the implementation of the project as JI.

Emission reductions
As a result of project activities the efficient utilization of sunflower seed husks will be carried out t, which otherwise were used as a fertilizer. This action will reduce the production, transportation and distribution and consumption of carbon-intensive fuel (natural gas), which will lead to CO2 emission reductions.
Estimated GHG emission reductions amounts to 247873 tonnes of CO2-equivalent in the period 2008-2012.

Project History
LLC «MEZ Yug Rusi» was established in 2006. It consists of the following oil extraction plants: Annynskiy, Labinskiy, Kropotkinskiy, Liskinsky and Krasnodarskiy.

Prior to joining the Company "MEZ Yug Rusi", these were independent companies with the form ownership (OJSC). Since the installation of some boilers has happened long before the affiliation with «MEZ Yug Rusi», the history of some boilers will be related to the history of the relevant company (at that time).

4 DETERMINATION CONCLUSIONS

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

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

The Corrective Action Requests (CAR) and Clarification Requests (CL) are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 30 CARs.

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

Outstanding issues related to Project Description (Section 3) PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 01 CAR 07).

The issued requests concern:

- The situation prior to the starting date of the project for Labinskiy branch; the description of Krasnodarskiy branch and type of fuel used there before the project implementation (CAR 01).
- Technical, economic and institutional barriers (CAR 02).
- Provision of referred documents (CAR 03)
- Status of LLC "MEZ Yug Rusi" (CAR 04).
- Geographical coordinates of all plants and their sources (CAR 05)
- List of fuels at Annynskiy MEZ (CAR 06).
- The implementation schedule (CAR 07).

4.1 Project approvals by Parties involved (19-20)

The project has no approvals by the Host Party, therefore CAR 08 remains pending.

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

4.2 Authorization of project participants by Parties involved (21)

The participation of LLC "MEZ Yug Rusi" listed as project participant in the PDD is not authorized by the Host Party because the project approval by the Host Party was not received.

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

4.3 Baseline setting (22-26)

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

JI specific approach

The PDD provides a detailed theoretical description in a complete and transparent manner is provided for the applied JI specific approach. It includes:

(i) identification and listing of the plausible baseline scenarios;

(ii) Identification of key factors which influence the baseline scenario;

(iii) selection of the most plausible scenario is made through analysis of influence of key factors on alternatives;

(vi) provision of key information and data to be used to establish the baseline (refer to the tables in Section B.1 and baseline information in Annex 2).

Baseline is established:

(a) By listing and describing plausible future scenarios available for the project owner LLC "MEZ Yug Rusi" and selecting the most plausible one. The baseline scenario was identified as combination of alternatives for heat generation and husk utilization. Alternatives for husk utilization and heat generation were analyzed separately from each other

Five alternative scenarios (AS) for heat generation were listed as follows:

AS1. Continuation of the current situation, i.e. heat generation in the old boilers and construction of the new gas boilers;

AS2. The project itself (without being registered as a JI activity), i.e. sunflower seed husk utilization for energy purposes;

AS3. Using the old gas boiler with installation of new coal boilers for heat generation;

AS4. Using the old gas boiler with installation of new fuel oil boilers for heat generation;

AS5. Use of heat energy from external sources, for example the import of the heat energy from the nearby TPP.

Six alternative scenarios (AS) for husk utilization were listed as follows:

AS1. Continuation of the current situation in the absence of project activities, i.e. transportation of husks to the fields as a fertilizer.
AS2. Storage of husk at the plant for energy purposes.
AS3. The project itself without being registered as a JI activity), i.e. the use of sunflower seed husks for energy purposes.
AS4. Transportation of husk to the landfill for disposal
AS5. Uncontrolled burning of husk without utilization for energy purposes.
AS6. The use of husk as a raw material for various purposes (eg, in the pulp and paper industry).

Based on the alternatives analysis taking into account the results of the comparison investment analyses of AS1 and AS2 presented in Section B.2, a conclusion is made that combination of AS1 for heat generation and AS1 for husk utilization represents the most plausible baseline scenario.
(b) Taking into account relevant national and/or sectoral policies and circumstance regarding husk utilization as well as key factors that affect a baseline.
(c) In a basically transparent manner with regard to the choice of the JI specific approach and related 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
(d) Taking into account of uncertainties and using conservative assumptions.
(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.
(f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring".

Outstanding issues related to Baseline setting (22-26), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 09-CAR 16 and CAR 26).

The issues requests concern:
- Provision of evidence that all old boilers could continue their operation in the absence of the proposed project (CAR 09).
- Justification of the conclusion that AS2 for heat generation is unlikely due to technical (CAR 10).
- Mixture of three different options in analysis for (CAR 11).
- Sale of husk as an alternative for husk utilization (CAR 12).
- Contradiction of legislation for AS5 (CAR 13).
- Incomplete analysis of the AS3 for husk (CAR 14).

- Lack of consistency as to applicability of scenario of purchasing heat energy from external sources(CAR 15)
- Nontransparent description as how the measured volume is converted to weight (CAR 16).
- Incorrectness of Formulae for baseline and project emissions (CAR 26).

4.4 Additionality (27-31)

JI specific approach

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

Additionality proofs are provided similar to the CDM Additionality Tool, through three stages: Stage 1 Identification of alternatives, Stage 2 Investment analysis, and Stage 4 Common practice analysis. Stage 3 Barrier analysis id reasonably skipped.

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

At Stage 2, an Investment comparison analysis of the project activity without JI registration and the most plausible baseline scenario was carried out. Levelized cost of heat was used as the comparative indicator. Levelized cost was calculated for each of four sites independently for chosen baseline and project scenarios. Sensitivity analysis for changing of main parameters was implemented. Investment analysis is performed on four excel spread sheets made available to AIE, in terms of calculation of the levelized cost of heat for the baseline and project scenarios. The calculation shows that for the used input data and without JI registration the levelized cost of heat in the baseline scenario is lower than in the project scenario.The sensitivity analysis of ±10% changes of investment and operating costs confirmed that the conclusion regarding the financial non-attractiveness is robust to reasonable variations in the critical assumptions.

At Stage 3, the common practice analysis puts forward an argument that the project activity , in terms of scale and geography, is not the common practice in the project regions but is the first of its kind. Similar activities were implemented as JI projects.

All in all, a conclusion is made in PDD that the project activity is additional.

Outstanding issues related to Additionality (27-31), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 17 – CAR 19).

The issued requests concern:
- Not explicitly indicated which of the approaches to demonstrate additionality is used (CAR 17)
- Justification of input data for investment analysis such as total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance (CAR 18)
- Particular flaws in the investment analysis (CAR 19).

4.5 Project boundary (32-33)

JI specific approach

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

Project boundary is defined on the basis of case-by-case assessment of different emission sources. The only identified source of baseline emissions is CO2 from natural gas combustion. Project emissions are due electricity consumption from the grid and CH4 and N2O emissions from combustion of carbon neutral husk.

Outstanding issue related to Project Boundary (32-33), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 20, CAR 21).

The issued requests concern:
- Emissions from electricity consumption in the baseline and in the project scenario are not assessed and compared (CAR 20).
- Exclusion of N2O and CH4 emissions without justification (CAR 21).

4.6 Crediting period (34)

The project's starting is indicated as 30/11/2000 being the date of the precommissioning of the earliest by construction boiler.

Expected operational lifetime of the project is 25 years or 300 months: from 01/09/2008 till 01/09/2033.

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

The crediting period is defined as from 01/01/2008 to 31/12/2012 with the starting date being the date of the first emission reductions generated by the project.

Outstanding issue related to Crediting period (34), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 22).

The issued CAR 22 concerns the correct treatment and determination of the starting date of the project.

4.7 Monitoring plan (35-39)

JI specific approach

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

The monitoring plan describes:
(i) data to be monitored refer to Section D.1.2.1):
M1. Quantity of the sunflower seed on production
M2. Quantity of the oil fodder
M3. Quantity of the litter
M4. Quantity of the sunflower oil
M5. Quantity of the phosphatidic concentrate
M6. Quantity of the phosphatidic emulsion
M7. Quantity of the sunflower seed husk for sale
M8. Humidity of the sunflower seed
M9. Humidity of the sunflower oil
M10. Humidity of the oil fodder
M11. Humidity of the sunflower seed husk
M12. Humidity of the phosphatidic concentrate
M13. Humidity of the phosphatidic emulsion
M14.Natural gas consumption
M15 Electricity consumption
(ii) the period in which monitoring parameters should be monitored is described not for all parameters;
(iii) all decisive factors for the control and reporting of project performance: 2tp statistics forms; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan.

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

Constants used are the default values of the parameters as follows: emission factor for natural gas combustion, NCV of natural gas, NCV of sunflower seed husk, conversion factor from calories to joules, husk boilers efficiency, natural gas boilers efficiency. The most of default values originate from recognized sources and are presented in a transparent manner.

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

Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes (with reference to numbers in Appendix A:
(i) Refer to 36 (b.
(ii) N/A
iii) Refer to 36 (a.

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

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

QC/QA procedures are outlined in PDD Section D.2. These are routine operator procedures used at oil extraction enterprises. .

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

The monitoring plan indicates that the data monitored and required for verification will be kept for 10 years.

Outstanding issues related to Monitoring plan (35-39), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 23 – CAR 27).

The issued requests concern:

- Humidity measuring (CAR 23).
- Justification that the conservative value of husk's (CAR 24).
- Efficiency of boilers for husk and natural gas combustion (CAR 25).
- Errors in Formula (1) (CAR 26).
- Errors in calculation of husk amount (CAR 27).

4.8 Leakage (40-41)

JI specific approach

Leakage is conservatively neglected.

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

JI specific approach

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

The PDD provides the ex-ante estimates of:
(a) emissions for the project scenario: 17,016 tCO2e;
(b) leakage: 0;
(c) emissions for the baseline scenario 264,889 tCO2e;
(d) emission reduction: 247,873 tCO2e.

The estimates are given for 2008-2012. For calculating the estimates, key factors influencing the baseline emissions and the activity level of the project and the emissions associated with the project are taken into account, as per the project approach. Data sources used for calculating the estimates are clearly identified, reliable and transparent. The estimation referred to above is based on conservative assumptions and the most plausible scenario in a transparent manner. The estimates referred to above are consistent throughout the PDD.

The formulae used for calculating the estimates are referred in the PDD, Sections E.1 and E.4.

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

Outstanding issues related to Estimation of emission reduction (42-47), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 28 - CAR 29).

The issued requests concern:

- Errors in ER calculations on the excel spreadsheet (CAR 28).
- Evidences concerning the values of M1-M13 for 2008-2010. (CAR 29).

4.10 Environmental impacts (48)

Impact of the project on the environment does not exceed the levels permissible by legislation. Al project sites received Permits for air emissions issued by the state authority Rostekhnadzor and Sanitary-epidemiological conclusions issued by the state authority Rospotrebnadzor (with minor observations). Due references are provided in the PDD Section F.1.

4.11 Stakeholder consultation (49)

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

4.12 Determination regarding small scale projects (50-57)

Not applicable.

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

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

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

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

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC "MEZ Yug Rusi" project in Russia. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

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

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

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 06 dated 24/04/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

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

7 REFERENCES

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

/1/ "Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC "MEZ Yug Rusi"

PDD Version 01 dated 09/08/2010

PDD Version 02 dated 14/09/2011

PDD Version 03 dated 19/02/2012

PDD Version 04 dated 19/04/2012

PDD Version 05 dated 23/04/2012

PDD Version 06 dated 24/04/2012

ER calculation file (excel)
Investment analysis (excel file)

/2/ NCSF responses to AIE requests dated 07/12/2011, 27/03/2012, 21-24/04/2012.

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

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

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

/5/ Minutes of meeting of Labinskiy branch

/6/ Minutes of meeting of Kropotkinskiy branch

/7/ Minutes of meeting of Krasnodarskiy branch

/8/ Minutes of meeting of Annynskiy branch

/9/ Letter from Labinskiy branch to AIE about invisrments in boliers E-16 and KE-18.Aril 2012.

/10/ Technical-Economic Indicators of Kropotkinskiy, Labinskiy, Krasnodarskiy and Annynskiy MEZ for 2008, 2009, 2010.

/11/ Input data for investment analysis of husk boilers construction for branch of MEZ Yug Rusi

/12/ Industrial Technological Reglament for the production of oil and oil cake at oil-extracting plant with capacity of 600 tons per day of sunflower seeds TP 11/18/2005. Krasnodar.

/13/ Analytical Results of Husk NCV from DORADO PLUS and Rostov-on-Don

/14/ Passport of husk boiler "Age-Moor"

/15/ Passport of husk boiler KE-18-24-GDV

/16/ Passport of husk boiler E-16-21-350 GNDV

/17/ Passport of husk boiler E-13-3,9DT

/18/ Passport of husk boiler KE-25-14-270-GM

/19/ Passport of husk boiler E-12-1.4-250DT

/20/ Chart for husk boiler KE-25-14-270-GM

/21/ Chart for husk boiler E-12-1.4-250DT

/22/ Chart for husk boiler KE-18-24-GDV

/23/ Chart for husk boiler E-16-21-350 GNDV

/24/ Chart for of husk boiler E-13-3,9DT

/25/ Information about electricity consumption of Labinsk MEZ

/26/ Information about electricity consumption of Kropotkinskiy MEZ

/27/ Information about electricity consumption of Krasnodarskiy MEZ

/28/ Information about electricity consumption of Annynskiy MEZ

/29/ Environmental expertise, sanitary-epidemiological convulsions, environment protection chapters of design documentation for boiler construction projects

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/ Valery Tsygankov - MEZ Yug Rusi, Chief Power Engineer
/2/ Marat Latypov – NCSF, senior expert
/3/ Timofey Besedovsky - NCSF, senior expert
/4/ Nikolay Trofimov– NCSF, senior expert

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BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

Table 1

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of the project is presented. It reads: "Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC "MEZ Yug Rusi".		OK
-	Is the sectoral scope to which the project pertains presented?	The indicated sectoral scope of the project is: (1) Energy industries (renewable/non-renewable sources),		OK
-	Is the current version number of the document presented?	PDD Version 01.		OK
-	Is the date when the document was completed presented?	PDD dated 09/08/2010.		OK
Description of the project				
-	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	Section A.2 of the PDD defines the purpose of the project as "production of thermal energy by burning husk of sunflower seeds at the sites of branches of LLC "MEZ Yug Rusi". Requirements a), b), c) to the content of Section A.2 are met.	CAR 01 CAR 02	OK OK

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	c) Project scenario (expected outcome, including a technical description)?	**CAR 01.** (i) The situation prior to the starting date of the project for Labinskiy branch is described from 2003 viewpoint whereas under the project one of the boilers at this site was installed in 2000. Please correct accordingly. (ii) It is unclear from the description in Section A.2 if Krasnodarskiy fat-oil extraction plant has its own thermal plant or a boiler house. Please correct or extend the description accordingly. Please also describe what type/s of fuel was/were used before the project implementation at Krasnodarskiy branch. **CAR 02.** It is written in the short description of the baseline in Section A.2 that the project is connected with overcoming of a number of serious technical, economic and institutional barriers and JI revenues helps to overcome them. In fact in Section B no barrier analysis is presented. Please clearly indicate that the project is not financially attractive and remove misleading information about barriers or provide transparent analysis of these barriers. The project involves construction of new husk-fired boilers and retrofit of a natural gas fired boiler to a husk-fired boiler at four branches of LLC “MEZ Yug Rusi”. The branches are: Annynskiy oil-extraction plant (hereinafter OEP), Kropotkinskiy OEP, Labinskiy OEP and Krasnodarskiy fat-oil-extraction plant. Boilers included in the project will cover on-sites thermal energy needs.		

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project (incl. its JI component) is briefly summarized. **CAR 03.** (i) Please provide the AIE “letters of intent” (quoted by PDD Table A.1); (ii) Please provide the AIE “letters” (quoted by the footnote 2); (iii) Please provide the AIE documents confirming “date of assignment of project work” (quoted by PDD Table A.1); (iv) Please provide the AIE documents confirming “date of commissioning” (quoted by PDD Table A.1).	CAR 03	OK
(i) Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Party(ies) and project participants involved in the project are listed as follows: - Party A the Russian Federation and its legal entity LLC “MEZ Yug Rusi”; - Party B is not indicated.		OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants are presented in due tabular format.		OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD. **CAR 04.** It is stated in the Annex 1 that “LLC MEZ Yug Rusi is not the project participant what contradicts data in Section A.3.	CAR 04	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Russian Federation is indicated as Host Party.		OK
Technical description of the project				

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Location of the project				
-	Host Party(ies)	Russian Federation.		OK
-	Region/State/Province etc.	Krasnodar and Voronezh regions.		OK
-	City/Town/Community etc.	Krasnodar town, Labinsk city, Kropotkin city, and Anna city.		OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	**CAR 05.** Please provide the geographical coordinates of all plants and their sources in Section A.4.1.4.	CAR 05	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.3 in general provides relevant technical data of main equipment installed and actions to be implemented by the project. **CAR 06.** Husk is not listed in the list of fuels for KE-25-14-270 GM at Annynskiy MEZ. **CAR 07.** The implementation schedule is not presented in Section A.4.2 as it is required by Guidelines for users of JI PDD form, v.04.	CAR 06 CAR 07	OK OK
Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	Section A.4.3 reads: “the project will lead to a significant reduction in consumption of fossil fuels (natural gas), and, consequently, to prevention of the carbon dioxide emissions and the potential methane emissions from leaks in the extraction, refining, transportation and distribution of fossil fuels (natural gas)”.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		The main reasons of why the emission reductions would not would not accur in the absence of the project activity are: • Lack of sufficient incentives for the project: low level of gas prices , the availability of current gas infrastructure, and the ease of use of standard technology for heat generation do not motivate the company to invest significant funds in construction of new facilities for utilization of useful waste (husk) and to reduce GHG emissions. • Lack of investment attractiveness of projects of this kind, as indicators of economic efficiency of this project are incomparably lower than those come from traditional energy production based on fossil fuel use.		
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided.		OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual reduction for the chosen credit period is provided in tCO2e.		OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Table A.4.3.1.		OK
-	Is the length of the crediting period Indicated?	The length of the crediting period is indicated as 5 years.		OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided in accordance with the calculated values in the spreadsheet provided to the verifier.		OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project	**CAR 08.** The project has no written approvals by the Parties involved. Information of the project approval by a party	CAR 08	Pending

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	approvals?	involved other than the host Party is not provided. The project approval by the Host Party will be provided after the determination statement is issued by the AIE.		
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is the Russian Federation.		OK
19	Has the DFP of the host Party issued a written project approval?	Conclusion is pending a response to CAR 08.		Pending
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.		OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party 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?	The project participant LLC "MEZ Yug Rusi" will likely be authorized with the issue of the relevant project approvals. Conclusion is pending a response to CAR 08.		Pending
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated in the PDD Section B.1 that a JI specific approach is applied according to the Guidance on criteria for baseline setting and monitoring, version 02.		OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical	A detailed theoretical description in a complete and		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	description in a complete and transparent manner?	transparent manner is provided for the applied JI specific approach. It includes: (i) identification and listing of the plausible baseline scenarios; (ii) Identification of key factors which influence the baseline scenario; (iii) selection of the most plausible scenario is made through analysis of influence of key factors on alternatives; (vi) provision of key information and data to be used to establish the baseline (refer to the tables in Section B.1 and baseline information in Annex 2).		
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	Baseline is established: (a) By listing and describing plausible future scenarios available for the project owner LLC "MEZ Yug Rusi" and selecting the most plausible one. The baseline scenario was identified as combination of alternatives for heat generation and husk utilization. Alternatives for husk utilization and heat generation were analyzed separately from eachother Five alternative scenarios (AS) for heat generation were listed as follows: AS1. Continuation of the current situation, i.e. heat generation in the old boilers and construction of the new gas boilers; AS2. The project itself (without being registered as a JI activity), i.e. sunflower seed husk utilization for energy purposes; AS3. Using the old gas boiler with installation of new coal boilers for heat generation; AS4. Using the old gas boiler with installation of new fuel oil	CAR 09 CAR 10 CAR 11 CAR 12 CAR 13 CAR 14 CAR 15 CAR 16 Pending	OK OK OK OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”, as appropriate?	boilers for heat generation; AS5. Use of heat energy from external sources, for example the import of the heat energy from the nearby TPP. Six alternative scenarios (AS) for husk utilization were listed as follows: AS1. Continuation of the current situation in the absence of project activities, i.e. transportation of husks to the fields as a fertilizer. AS2. Storage of husk at the plant for energy purposes. AS3. The project itself without being registered as a JI activity), i.e. the use of sunflower seed husks for energy purposes. AS4. Transportation of husk to the landfill for disposal AS5. tUncontrolled burning of husk without utilization for energy purposes. AS6. The use of husk as a raw material for various purposes (eg, in the pulp and paper industry). Based on the alternatives analysis taking into account the results of the comparison investment analyses of AS1 and AS2 presented in Section B.2, a conclusion is made that combination of AS1 for heat generation and AS1 for husk utilization represents the most plausible baseline scenario. (b) Taking into account relevant national and/or sectoral policies and circumstance regarding husk utilization as well as key factors that affect a baseline. (c) In a basically transparent manner with regard to the choice of the JI specific approach and related assumptions, parameters, data sources and key factors for baseline setting, which are listed in tabular format in Section B.1 and		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		summarized in Annex 2. (d) Taking into account of uncertainties and using conservative assumptions. (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure. (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring". **CAR 09.** Please provide evidences that all old boilers could continue their operation in the absence of the proposed project. Please provide evidences that additional amount of natural gas could be supplied for newly installed under AS1 gas boilers. Please also provide the research under the footnote 8. **CAR 10.** The conclusion that AS2 for heat generation is unlikely due to technical obstacles is not justified. Verifiers observe that whereas husk combustion technology is more expensive and complicated rather than natural gas combustion technology, implementation of AS2 depends on costs but not on technological obstacles. **CAR 11.** Three different options are mixed in analysis for AS1 (heat generation): continuation of old gas boilers operation, construction of new gas boilers and rehabilitation of gas fired boilers to husk fired boilers. It is stated for the whole AS that "there is no need to carry out and further investment…". Obviously installation of new gas boilers requires investments. Please provide transparent analysis		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		for each site independently with regards to its peculiarities (it can be done in the frame of AS1 analysis). **CAR 12.** One of the monitored parameters is amount of husk for sale. Sale of husk is not considered as an alternative for husk utilization. **CAR 13.** It is written in the beginning of the Section B.1 that "None of the alternatives contradict the current legislation…." whereas AS5 for husk utilization obviously contradicts. **CAR 14.** Analysis of the AS3 for husk utilization is not full. The scenario reads "Storage of husk at the plant for energy purposes". Only storage of husk is analyzed and no description of "energy purposes" is provided. Please provide a description how storage of husk in reservoirs correlates with energy purposes. **CAR 15.** The AS 5 for heat generation was considered as not feasible. The chosen baseline scenario (AS1) also does not contain any description of purchasing of heat energy from external sources. However the investment analysis for Krasnodarskiy MEZ in Section B.2 contains payments for purchasing of heat energy from external sources. Please provide consistency between all descriptions of the baseline scenario throughout the PDD. **CAR 16.** Sunflower oil, phosphatic concentrate and phosphatic emulsion is measured both in weight (kg,t) and in volume (liters). The formulae to calculate ER implies usage of tonnes or kilograms. Please add transparent description how measured volume will be converted to weight. Conclusion is pending a response to CAR 18		
24	If selected elements or combinations of	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	N/A		OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-	**CAR 17.** It is not explicitly indicated which of the approaches to demonstrate additionality is used. Some sort of analysis to demonstrate additionality which includes 4 steps is used in the Section B.2. This analysis reproduces an approach similar to the one in the CDM "Tool for the demonstration and assessment of additionality". The applied approach includes the following four steps: - Step 1. Identification of alternatives; - Step 2. Investment analysis of alternatives, and - (or); - Step 3. Analysis of barriers; - Step 4. Analysis of common practice. It is stated that "If the investment analysis shows that the project activity is not an alternative, the most attractive in terms of financial indicators, from step 2 should proceed to step 4". Following this approach the step 3 was omitted.	CAR 17.	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	The PDD does not provide a justification of the applicability of the approach with a clear and transparent description as the approach itself is not indicated. Conclusion is pending a response to CAR 16. Only plausible alternatives identified in the Section B.1 are subjects of the analysis in the Section B.2. Verifiers observe this approach as reasonable.	Pending	OK
29 (b)	Are additionality proofs provided?	To prove additionality of the project two types of analysis were implemented: - Investment comparison analysis of the project activity without JI registration and the most plausible baseline scenario. Levelized cost of heat was used as the comparative indicator. Levelized cost of heat was calculated for each of four sites independently for chosen baseline and project scenarios. Sensitivity analysis for changing of main parameters was implemented. Investment analysis is performed on four excel spread sheets made available to AIE, in terms of calculation of the levelized cost of heat for the baseline and project scenarios. The calculation shows that for the used input data and without JI registration the levelized cost of heat in the baseline scenario is lower than in the project scenario.The sensitivity analysis of ±10% changes of investment and operating costs partially confirmed that the conclusion regarding the financial non-attractiveness is robust to	CAR 18 CAR 19	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		reasonable variations in the critical assumptions. The project activity is asserted to have been not the common practice in Russia. Similar activities were implemented as JI projects. All in all, a conclusion is made in PDD that the project activity is additional. **CAR 18.** Requests as regards the investment analysis are as follows: (i) Please justify the input data in a manner that can be determined by the AIE. The request concerns: a. For Annynsky MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. b. For Kropotkinskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. c. For Labinskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. d. For Krasnodarskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for heat purchasing from external sources		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		expenses for repair and maintenance. **CAR 19.** The investment analysis contains following flaws: - different efficiencies of boilers are not taken into account; - sale/use of husk as a fertilizer is not taken into account. Use of husk in the baseline scenario gives additional revenues as compared to the project scenario. These revenues should be taken into account. - Data for Kropotkinskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Data for Labinskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Data for Krasnodarskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Table B.2.3 and Table B.2.5 provide wrong values of baseline emissions.		
29 (c)	Is the additionality demonstrated appropriately as a result?	With pending CAR 16 the additionality is not demonstrated.	Pending	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	N/A		OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses main anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant. The only identified source of emissions is CO_2 from natural gas combustion in the baseline scenario. **CAR 20.** Emissions from electricity consumption in the baseline and in the project scenario are not assessed and compared. **CAR 21.** Exclusion of N_2O and CH_4 emissions is not justified. The average annual CH_4 baseline emissions from husk combustion equals 827 t. of CO_2-eq what constitutes around 1.1% from annual emission reductions. The average annual N_2O baseline emissions from husk combustion equals 1627 t. of CO_2-eq what constitutes around 2.2% from annual emission reductions. According to the clause 14 of Guidance on criteria for baseline setting and monitoring, version 2 – “In the case of a JI project aimed at reducing emissions, the project boundary shall Encompass all anthropogenic emissions by sources of GHGs which are Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO2 equivalent, whichever is lower.	CAR 20 CAR 21	OK OK
32 (b)	Is the project boundary defined on the basis of	Project boundary is defined on the basis of case-by-case		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	assessment of different emission sources.		
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?	Delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using the Table B.3.1 and the Figure B.3.1.		OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated; refer to 32 (a) above. All exclusions made are appropriate as a conservative or logic assumption. Conclusion is pending a response on CAR 20 and CAR 21.	Pending	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The project's starting is indicated as 30/11/2000 being the date of the precommissioning of the earliest by construction of the project boilers. **CAR 22.** According to the Guidelines for users of JI PDD form, version 4 the starting date of a JI project is the date on which implementation or construction or real action of the project begins. According to the PDD construction of the first boiler at Labinskiy MEZ started in 1998. Verifiers consider equipment purchasing agreement signing and construction works as "construction or real action". Thus the starting date of the project is indicated incorrectly. Please note that JI projects are eligible only from 2000.	CAR 22	OK
34 (a)	Is the starting date after the beginning of 2000?	Refer to 34 (a). Conclusion is pending a response on CAR 22	Pending	OK
34 (b)	Does the PDD state the expected operational	Operational lifetime is defined as 25 years (300 months).	Pending	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	lifetime of the project in years and months?	Conclusion is pending a response to CAR 18.		
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is defined as 5 years (60 months).		OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Starting day is 01/01/2008 which is the date of the first emission reductions generated by the project.		OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The crediting period is defined as from 01/01/2008 till 31/12/2012.		OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	N/A		OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated that a JI specific approach is chosen.		OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored?	The monitoring plan describes: (iv) data to be monitored: M1. Quantity of the sunflower seed on production	CAR 23	OK

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	M2. Quantity of the oil fodder M3. Quantity of the litter M4. Quantity of the sunflower oil M5. Quantity of the phosphatidic concentrate M6. Quantity of the phosphatidic emulsion M7. Quantity of the sunflower seed husk for sale M8. Humidity of the sunflower seed M9. Humidity of the sunflower oil M10. Humidity of the oil fodder M11. Humidity of the sunflower seed husk M12. Humidity of the phosphatidic concentrate M13. Humidity of the phosphatidic emulsion M14.Natural gas consumption Monitoring of these parameters is described in the section D.1.2.1. (v) the period in which monitoring parameters should be monitored is described not for all parameters; (vi) all decisive factors for the control and reporting of project performance: 2tp statistics forms; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan. **CAR 23.** All qualitative monitoring parameters are measured continuously. Humidity of all qualitative parameters is measured “periodically”. Please include in the monitoring plan a transparent description and formulae how several periodical values of humidity will be applied to a one value of continuously measured parameter. Also please add		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		description of monitoring periods (annual, monthly, daily…) for parameters in the formula (1) in the section D.1.2.2. It is unclear if the formula (1) will be used for calculation of annual ER or monthly ER or periodically ER. If it is used for annual ER calculation then it is not written how periodically measured parameter should be applied.		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan generally specifies indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored. For data to be monitored, please refer to 36(a) above. For constants please refer to the next paragraph. Conclusion is pending a response to CAR 24.	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?	Constants used are the default values of the parameters as follows: emission factor for natural gas combustion, NCV of natural gas, NCV of sunflower seed husk, conversion factor from calories to jouls, husk boilers efficiency, natural gas boilers efficiency. The most default values originate from recognized sources and are presented in a transparent manner. N/A for statistical analysis. **CAR 24.** NCV of husk is taken constant and humidity of husk is measured. Verifiers observe that if humidity can vary NCV of husk cannot stay constant. Please provide a transparent and clear justification that a conservative value of husk's NCV is used. Please provide "Kasatkin reference manual for	CAR 24	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		heat engineering industry" (extraction of necessary pages can be provided) which confirms applied husk's NCV value. Please also specify in the PDD that applied value is applicable to husk with moisture content (i.e. not a value for dry husk).		
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	**CAR 25.** Please provide evidences which confirm applied efficiency of boilers for husk and natural gas combustion (this could be boiler flow charts, boiler passports, or technical design specifications). It is unclear for which boiler efficiency on natural gas is given, for gas boilers before retrofitting to natural gas or for husk boilers after retrofitting. E.g. before the project implementation Annynskiy MEZ has gas fired boiler which was retrofitted to husk combustion. Baseline efficiency of this boiler is given as 82.4%. It is highly unlikely that gas boiler before retrofitting has lower efficiency on natural gas then the same boiler after retrofitting to husk.	CAR 25	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	The monitoring plan provides clearly indicates the precise references from which these default values are taken (refer to footnotes 25-34). N/A for justification of the conservativeness of the values. Conclusion is pending a response to CAR 24 and CAR 25.	Pending	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Available ex ante data is used.		OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.		OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	but are obtained through monitoring?			
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.		OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring".		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?	Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i) Refer to 36 (b). (ii) N/A. iii) Refer to 36 (a).		OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	Most of methods employed for data monitoring are described appropriately in the monitoring plan. Conclusion is pending a response to CAR 23.	Pending	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline	The monitoring plan elaborates the formula (1) in Section D.1.2.2 to calculate emission reductions from the project. **CAR 26.** The formula (1) has following mistakes:	CAR 26 CAR 27	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	• the left part of the formula is adjusted to Joules and the right part is adjusted to calories (both NCV of husk and NCV of natural gas are in calories, however only left part of the formula is multiplied on 4.1868 to adjust to joules); • the right part of the formula doesn't make sense (i.e. incorrect). Please note that ($\eta_{husk\ boiler\ r}$ -$\eta_{gas\ boiler}$ / $\eta_{gas\ boiler}$) reads as ($\eta_{husk\ boiler\ r}$ – 1). **CAR 27.** Calculation of the parameter FCsh is incorrect. Subtraction is used for humidity accounting whereas humidity is measured in per cents (multiplication should be used).		
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the algorithms/formulae does not need explanation.		OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.		OK
36 (f) (iii)	Are all equations numbered?	Yes.		OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes.		OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A		OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A		OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There are some inconsistencies between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and on spreadsheet. Conclusion is pending a request to CAR 24 – CAR 27.	Pending	OK

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	N/A.		OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current operational routines.		OK
36 (f) (vii)	Are references provided as necessary?	Conclusion is pending a response to CAR 24.	Pending	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner if needed.		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		OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Uncertainty level of data is indicated as low. Calibration of main equipment is carried out by Krasnodar and Voronezh Center of Standardisation and Metrology is according with established regulations.		OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	Monitoring plan refers to state statistic forms 2-tp listed in the Section D.1.5.		OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		OK
36 (i)	Does the monitoring plan present the quality	QC/QA procedures are outlined in PDD Section D.2. These		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	are routine enterprise procedures.		
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 sufficient detail in PDD Section D.3.		OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines at SNG.		OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Table D.1.2.1 provides compilation of all data needed to monitor project and baseline emissions.		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?	It is indicated in the Section D.3 that data will be stored within 10 years.		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	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	or combination, together with elements supplementary developed by the project participants in line with 36 above?			
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	According to the project there are no leakages associated with the project.		OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A		OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Direct assessment of emission reductions 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? (c) Emissions or net removals for the baseline	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?			
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?	PDD provides ex ante estimates of: (a) Emission reductions (Section E.1); (b) This clause is inapplicable (Section E.2); (c) This clause is inapplicable.		OK
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project	(a) Estimates in 42 are given: (i) on the periodic basis; (ii) from the beginning until the end of the crediting period, in tones of CO2 equivalent; (iii) On a source-by-source basis; (iv) For each GHG; (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol. (b) The formulae used for calculating the estimates in 44 are consistent throughout the PDD; (c) For calculating estimates in 44, 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 are taken into account, as appropriate; (d) Most data sources used for calculating the estimates in 44 are clearly identified, reliable and transparent; (e) Emission factors (including default emission factors)	CAR 28 CAR 29	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?	used for calculating the estimates in 44 are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice; (f) The estimation in 44 is based on conservative assumptions and the most plausible scenarios in a transparent manner; (g) The estimates in 44 are consistent throughout the PDD; (h) The annual average of estimated emission reductions or enhancements of net removals are 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. **CAR 28.** ER calculations in the excel spreadsheet are incorrect: (a) While calculating husk consumption (lines 17, 46, 75, 104) moisture is subtracted from 100 whereas it should be subtracted from 1 (moisture is indicated in per cents and 1 = 100%). (b) While calculating husk consumption (lines 17, 46, 75, 104) humidity of sunflower seed is used for litter assessment. According to the PDD litter has its own measured humidity. (c) the part of formulae in lines 17, 46, 75, 104 connected with emissions from natural gas both does not make sense and inconsistent with the PDD. **CAR 29.** Please provide to AIE evidences confirming parameters M1-M13 for 2008-2010 used for husk consumption calculation. Please also confirm that there were no litter at Labinskiy MEZ during 2008-2010.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE. Some calculation errors were observed with a reservation concerning CAR 28.	Pending	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	**CAR 30.** Please provide in the PDD exact references to the documentation on the analysis of the environmental impacts of the project, in accordance with procedures as determined by the host Party. The project has no transboundary impacts.	CAR 30	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	Russian legislation does not use the term "significant environmental impacts". The company is permitted to operate on the basis on permission of air emission issued by the state authority Rostekhnadzor.	OK	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	Stakeholder consultation is not required by the Russian legislation. Hence public hearings were not organized.		OK

”Introduction of energy-saving measures with utilization of biomass for production of energy resources at the business units of LLC “MEZ Yug Rusi”.

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	comments have been addressed?			
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

Table 2 Resolution of Corrective Action Requests and Requests for Information

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. (i) The situation prior to the starting date of the project for Labinskiy branch is described from 2003 viewpoint whereas under the project one of the boilers at this site was installed in 2000. Please correct accordingly. (ii) It is unclear from the description in Section A.2 if Krasnodarskiy fat-oil extraction plant has its own thermal plant or a boiler house. Please correct or extend the description accordingly. Please also describe what type/s of fuel was/were used before the project implementation at Krasnodarskiy branch.	-	06/06/2011 NCSF comment: (i and ii) Correct/please see p.2 and 3 (blue marker) 09/02/2012 NCSF comment: (ii) Correct/boiler house term throughout the PDD (i)Please see car22	Conclusion 1. (i) Conclusion is pending a response to CAR 22. (ii) Correction made is not accepted; please use one term throughout the PDD (boiler house or thermal plant). Conclusion 2 (i) Response is accepted in the context of CAR. (ii) Correction made is accepted. CAR is closed based on appropriate correction made to the PDD.
CAR 02. It is written in the short description of the baseline in Section A.2 that the project is connected with overcoming of a number of serious technical, economic and institutional barriers and JI revenues helps to	-	06/06/2011 NCSF comment: Correct/please see p. 3 (blue marker) (i remove misleading information about barriers)	Conclusion 1. CAR is closed based on appropriate correction made to the PDD.

overcome them. In fact in Section B no barrier analysis is presented. Please clearly indicate that the project is not financially attractive and remove misleading information about barriers or provide transparent analysis of these barriers.			
CAR 03. (i) Please provide the AIE "letters of intent" (quoted by PDD Table A.1); (ii) Please provide the AIE "letters" (quoted by the footnote 2); (iii) Please provide the AIE documents confirming "date of assignment of project work" (quoted by PDD Table A.1); (iv) Please provide the AIE documents confirming "date of commissioning" (quoted by PDD Table A.1).	-	06/06/2011 NCSF comment: Please see attached folder «История проекта» 09/02/2012 NCSF comment: (Correct/ throughout the PDD accordance with the previous folder «История проекта» 19/04/2012 NCSF comment: Corrected please see page 4,10 in new version of PPD, version 04 23/04/2012 NCSF comment: Corrected, please see p.4 in PDD. Investment for the boiler E-16-21-350 and KE-18-24-GDV and additional equipment in 2000 and 2004 amounted to 12 150ths.rub. Total investment for the Labinsk – 12 150 ths.rub. which include investment for equipment – 9 500 ths.rub. and investment for Building and Assembly Works – 2 650	Conclusion 1. Dates of commissioning of boilers at Labinskiy MEZ are inconsistent with evidences provided to the AIE. Conclusion 2. Dates were not corrected appropriately. According to the passport of the boiler E-16-21-350 it was installed in 1999 and according to the act of commissioning it was commissioned on 24 November 2003. As the boiler was installed before the year 2000 inclusion of this boiler in the project requires a particular justification. CAR is not closed. Conclusion 3 Response is not accepted. 1999 is indicated on page 4 as installation date. 1999 is in the installation date per the boiler passport. Please refer to Conclusion 3 on CAR 22. Investment analysis for Labinsk should be redone with accounting those investments which needed to put the boiler into operation.

		ths.rub.	CAR is not closed. Conclusion 4 /1/ PDD page 2 reads: According to the project 2 husk boilers of E-16-21-350 GNDV and KE-18-24-GDV types were put in operation in 2000 and in 2004. This is incorrect as to E-16. /2/ PDD pate 4 reads: E-16-21-350 GNDV was installed on 17.08.2003. This is incorrect. It was installed in 21999 as per passport. /3/ Investment analysis was not redone. CAR is not closed. Conclusion 5 CAR is closed based on appropriate correction made to the PDD.
CAR 04. It is stated in the Annex 1 that "LLC MEZ Yug Rusi is not the project participant what contradicts data in Section A.3.	-	06/06/2011 NCSF comment: Correct/please see p. 64 (blue marker) 09/02/2012 NCSF comment: Correct	Conclusion 1. Please delete the sentence "NCSF is not the project participant" from Annex 1 as it does not make sense in this section. Conclusion 2. CAR is closed based on appropriate correction made to the PDD.
CAR 05. Please provide the geographical coordinates of all plants and their sources in Section A.4.1.4.	-	06/06/2011 NCSF comment: Correct/please see p. 6-7 (blue marker) 09/02/2012 NCSF comment: In the JI there are no clear requirements,	Conclusion 1. The sources of the geographical coordinates were not provided as it had been requested by CAR 05. Please correct. Conclusion 2. CAR is closed based on appropriate correction

		indicating that it is necessary to bring the geographical coordinates, together with references. We corrected the exact address, including postal. Please see green marker in Section A.4.1.4.	made to the PDD.
CAR 06. Husk is not listed in the list of fuels for KE-25-14-270 GM at Annynskiy MEZ.	-	06/06/2011 NCSF comment: Correct/please see p. 7 (blue marker)	Conclusion 1. CAR is closed based on appropriate correction made to the PDD.
CAR 07. The implementation schedule is not presented in Section A.4.2 as it is required by Guidelines for users of JI PDD form, v.04.	-	06/06/2011 NCSF comment: Correct/please see p. 9 (blue marker)	Conclusion 1. CAR is closed based on appropriate addition made to the PDD.

CAR 08. The project has no written approvals by the Parties involved. Information of the project approval by a party involved other than the host Party is not provided.	19	06/06/2011 NCSF comment: Correct/please see section A5 on p. 12(blue marker) 19/04/2012 NCSF comment: Correct/please see section A5 on p. 12(blue marker)	Conclusion 1. Information of the project approval by a party involved other than the host Party was added to the PDD as requested. CAR will be closed after approval by the Host Party is provided to the AIE. Conclusion 3. CAR is closed based on appropriate addition made to the PDD.
CAR 09. Please provide evidences that all old boilers could continue their operation in the absence of the proposed project. Please provide evidences that additional amount of natural gas could be supplied for newly installed under AS1 gas boilers. Please also provide the research under the footnote 8.	23	06/06/2011 NCSF comment: ***Evidences that all old boilers could continue their operation in the absence of the proposed project:*** Please see attached files about the continuation of their work (folder «Подтверждение работы старых котлов») ***Research under the footnote 8-*** http://www.ecoenergo.su/info/opinion/problems-pod-combustion.htm 09/02/2012 NCSF comment: Evidences that all old boilers could continue their operation –Please see new attached folder «Паспорт котла». New web link http://www.ecoenergo.su/publikaczii/kotly-	Conclusion 1. Please provide scans of boiler passports which confirm dates of next inspections (quoted by word file provided to the AIE). The given web link is not operational. Conclusion 2. Evidences that all old boilers could continue their operation were reviewed by the AIE and accepted. The research under the footnote 10 (former footnote 8) was studied and accepted by the AIE. CAR is closed based on appropriate explanation.

		dlya-szhiganiya-luzgi-izmelchennyx-rastitelnyx-i-drugix-goryuchix-otxodov	
CAR 10. The conclusion that AS2 for heat generation is unlikely due to technical obstacles is not justified. The AIE observe that whereas husk combustion technology is more expensive and complicated than natural gas combustion technology, implementation of AS2 depends on costs but not on technological obstacles.	23	06/06/2011 NCSF comment: Corrected/please see p16 In this term «Technical feasibility» in pdd means - Under this obstacle the possibility of realization of the alternative is analyzed from technical and economic viewpoints, taking into account the remoteness of facilities, investment costs, the availability and development of infrastructure. 16/02/2012 NCSF comment: Corrected.please see p16 blue marker /words "the economic performance indicators of this alternative without the participation in the mechanism of Joint Implementation are lower than those of other alternatives that use fossil fuels to generate heat in the boiler equipment" are delete/	Conclusion 1. The conclusion for AS2 that "the economic performance indicators of this alternative without the participation in the mechanism of Joint Implementation are lower than those of other alternatives that use fossil fuels to generate heat in the boiler equipment" is not justified. The reference (footnote 12) to the Section B.2 is also inadequate as this alternative is only compared with the project scenario but not with other alternatives identified in the Section B.1. Conclusion 2. The correction made is accepted. CAR will be closed when the sub-name *Storage of husk at the plant for energy purposes* is removed from the name of Alternative Scenario 2 as inadequate to the project activity. .

		19/04/2012 NCSF comment: Corrected.please see p13 green marker.	Conclusion 3. CAR is closed based on appropriate addition made to the PDD.
CAR 11. Three different options are mixed in analysis for AS1 (heat generation): continuation of old gas boilers operation, construction of new gas boilers and rehabilitation of gas fired boilers to husk fired boilers. It is stated for the whole AS that "there is no need to carry out and further investment…". Obviously installation of new gas boilers requires investments. Please provide transparent analysis for each site independently with regards to its peculiarities (it can be done in the frame of AS1 analysis).	23	06/06/2011 NCSF comment: Corrected/please see p15 16/02/2012 NCSF comment: Corrected/please see p15 yellow marker And please see evidence for continuation of old gas boilers operation in folder «Паспорт котла» 19/04/2012 NCSF comment: Husk boiler was in operation condition, please see attachment in folder CAR11.	Conclusion 1. The description and analysis of AS1 for Annynsky MEZ is still not transparent. According to the description there are 2 КЕ-25-14-270 GM boilers and 1 husk boiler «Age-Moor». Please provide a transparent description of future use of all installed boilers with sufficient analysis of total heat capacity. Please also provide sufficient evidences that husk boiler «Age-Moor» was in non-operating condition and couldn't continue its operation. Please also provide sufficient evidences that husk boiler «Age-Moor» was decommissioned. Conclusion 2. The description and analysis of AS1 for Annynsky MEZ is still not transparent. Please provide a transparent description of future use of all installed boilers with sufficient analysis of total heat capacity. Evidences confirming that husk boiler «Age-Moor» was in non-operating condition and couldn't continue its operation and that husk boiler «Age-Moor» was decommissioned were not discovered in the folder «Паспорт котла». Please provide. CAR is not closed. Conclusion 3

			The AIE studied the provided evidence and accepted it. This CAR is closed.
CAR 12. One of the monitored parameters is amount of husk for sale. Sale of husk is not considered as an alternative for husk utilization.	23	06/06/2011 NCSF comment: Since the sale was carried out husk is extremely small (less than 1%) and then not always. 09.02.2012 NCSF comment: Please see attached folder реализация лузги. Please see p 14 green marker	Conclusion 1. Please add an appropriate justification to the PDD and provide evidences that amount of husk for sale was insignificant. <u>Conclusion 2.</u> The AIE studied the provided evidence and accepted it. This CAR is closed.
CAR 13. It is written in the beginning of the Section B.1 that “None of the alternatives contradict the current legislation….” whereas AS5 for husk utilization obviously contradicts.	23	06/06/2011 NCSF comment: Corrected/please see p14 blue marker 16/02/2012 NCSF comment: Corrected/ The use of biofuels (inc seed husk) for energy companies to be welcomed, the current legislation as an example of a law on energy efficiency. 19/04/2012 NCSF comment: Corrected	<u>Conclusion 1.</u> The correction made is inadequate. Please provide transparent description how “The use of husk as raw material for various purposes” (AS5) contradicts the current legislation. <u>Conclusion 2.</u> The correction made is inadequate. AS4 (former AS5) for husk utilization contradicts the current legislation. Please correct the description of how given alternative scenarios comply with the current legislation and regulations. CAR is not closed. <u>Conclusion 3.</u> CAR is closed based on appropriate addition made to the PDD.
CAR 14. Analysis of the AS3 for husk	23	06/06/2011 NCSF comment:	<u>Conclusion 1.</u>

utilization is not full. The scenario reads "Storage of husk at the plant for energy purposes". Only storage of husk is analyzed and no description of "energy purposes" is provided. Please provide a description how storage of husk in reservoirs correlates with energy purposes.		Corrected/please see p16-17 blue marker 09/02/2012 Corrected	The list of alternatives in the beginning of B.1 Section is not consistent with alternatives listed below the list. Please provide consistency. <u>Conclusion 2</u> Response is accepted. CAR is closed based on appropriate correction made to the PDD.
CAR 15. The AS 5 for heat generation was considered as not feasible. The chosen baseline scenario (AS1) also does not contain any description of purchasing of heat energy from external sources. However the investment analysis for Krasnodarskiy MEZ in Section B.2 contains payments for purchasing of heat energy from external sources. Please provide consistency between all descriptions of the baseline scenario throughout the PDD.	23	06/09/2011 NCSF comment: Corrected purchasing of heat energy from external sources in this context means a fence of heat from its own CHP plant. It is redundant and delivered part of the heat in heat pipeline 16/02/2012 NCSF comment: Investment analysis is a string of the sale of heat, but it is a formality, since the Krasnodar branch is redundant, and can implement heat "yourself" is formally in the baseline scenario 19/04/2012 NCSF comment: Please see attachment in folder CAR15.	<u>Conclusion 1.</u> The comment given is unclear. Please provide a full and transparent description. <u>Conclusion 2.</u> The comment given is unclear. Please provide a transparent description. CAR is not closed. <u>Conclusion 3</u> Folder CAR 15 is not received. It is stated on PDD page 15: ***Sale of husk is not considered as an alternative for husk utilization because amount of seed husk for sale was insignificant.*** CAR is closed based on appropriate correction made to the PDD.
CAR 16. Sunflower oil, phosphatic concentrate and phosphatic emulsion is	23	06/09/2011 NCSF comment: Recalculate the amount of mass in	<u>Conclusion 1.</u> The given formula should be added to the PDD.

measured both in weight (kg,t) and in volume (liters). The formulae to calculate ER implies usage of tonnes or kilograms. Please add transparent description how measured volume will be converted to weight.		accordance with the formula: M = r x V; where M - mass in kg; r – amount coeff 0.92 V - volume in liters. Translation occurs automatically when workman on site entering data into the program of accounting data. The program uses a constant coefficient of 0.92, since the enterprise is not possible to always check the actual density of oil and other variables. 06/02/2012 NCSF comment: Please see footnote 15 and 21 0,92-density conversion factor –kg/l 19/04/2012 0.92 is density of sunflower oil. http://ru.wikipedia.org/wiki/%D0%9F%D0%BE%D0%B4%D1%81%D0%BE%D0%BB%D0%BD%D0%B5%D1%87%D0%BD%D0%BE%D0%B5_%D0%BC%D0%B0%D1%+81%D0%BB%D0%BE	Please also justify "amount coeff 0.92". Conclusion 2. Justification of the coefficient was not provided. The justification can contain analysis of conservativeness. CAR is not closed. Conclusion 3. The AIE studied the provided evidence and accepted it. This CAR is closed.
CAR 17. It is not explicitly indicated	28	06/09/2011 NCSF comment:	Conclusion 1.

which of the approaches to demonstrate additionality is used.		Correct/please see p.26-27 (blue marker) 06/02/2012 NCSF comment: Correcred The analysis provided in Section B.1. proves that the proposed project is not the baseline scenario. To demonstrate the project additionality the JI specific approach was chosen. For this purpose we used the approach (a) set out in paragraph 44 of Annex I to the "Guidance on criteria for baseline setting and monitoring", namely provision of traceable and transparent information showing that 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 reductions of anthropogenic emissions by sources. 19/04/2012 NCSF comment: Corrected. Please see Sec B.2	JISC guidance on criteria for baseline setting and monitoring version 02 does not envisage such approach as "JI specific approach" for demonstration of additionality. Conclusion 2. The approach is not indicated. For clarity please refer to *paragraph 44 of Annex I to the "Guidance on criteria for baseline setting and monitoring", namely provision of traceable and transparent information showing that 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 reductions of anthropogenic emissions by sources*". CAR is not closed. Conclusion 2. CAR is closed based on appropriate correction made to the PDD.

CAR 18. Requests as regards the investment analysis are as follows: (ii) Please justify the input data in a manner that can be determined by the AIE. The request concerns: a. For Annynsky MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. b. For Kropotkinskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. c. For Labinskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for repair and maintenance. d. For Krasnodarskiy MEZ - total investment, life of the project, expenses for natural gas, expenses for preparation of husk, expenses for electricity, expenses for heat purchasing from external	29 (b)	06/09/2011 NCSF comment: Please see attached folder «Затраты.Инвестиции» Since the original documents showing the above figures, based on reason or another, has been preserved, confirming that the material presented in the form of an official letter on letterhead signed by the directors of branches. For Labinskiy MEZ the evidence are provide in PDF form with the signature/ Please see attached file 19/04/2012 NCSF comment: Please see attachment in folder CAR18	<u>Conclusion 1.</u> For Annynsky MEZ: Values of project investments, heat production and operation costs for both project and baseline scenario used in the investment analysis are inconsistent with evidences provided to the AIE (two evidences with different values for these parameters were provided). For Labinskiy MEZ the evidence cannot be accepted as it is just a word document with added scan of a signature. For Krasnodarskiy MEZ costs of purchased heat are not accounted in the investment analysis. <u>Conclusion 2.</u> Responses for requests regarding Annynsky MEZ and Krasnodarskiy MEZ were not provided. CAR is not closed. Conclusion 3 The AIE compared the provided evidence with data on excel sheet and accepted it. This CAR is closed.

sources expenses for repair and maintenance.			
CAR 19. The investment analysis contains following flaws: - different efficiencies of boilers are not taken into account; - sale/use of husk as a fertilizer is not taken into account. Use of husk in the baseline scenario gives additional revenues as compared to the project scenario. These revenues should be taken into account. - Data for Kropotkinskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Data for Labinskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Data for Krasnodarskiy MEZ in Tables B.2.1-B.2.2. in Section B.2 of the PDD is inconsistent with data in the excel spreadsheet. Please provide consistency. - Table B.2.3 and Table B.2.5 provide	29 (b)	06/06/2011 NCSF comment: Corrected/please see attached files (investment taken into account differ efficiencies of boilers. sale/use of husk as a fertilizer is not taken into account becose is very small volume and do not considered in branch accounting. 16/02/2011 NCSF comment: The difference in the efficiency of boilers in the baseline and the project has already account in calculating the default (this is inherent in the development of heat and the corresponding value of operating costs), it is also confirmed by the signature of the Director General of each branch, according to the certificate cost-Investing. Applied in the last answer. "literally, operating costs for each scenario take into account the difference in efficiency" Please provide evidences that sale of husk as a fertilizer is inconsiderable./Please see attached folder «Реализация лузги» 19/04/2012 NCSF comment:	Conclusion 1 Tables with results of the sensitivity analysis were removed from the PDD. Please add these data back. Please provide evidences that sale of husk as a fertilizer is inconsiderable. Different efficiencies of boilers are still not taken into account in the investment analysis. Conclusion 2 Tables with results of the sensitivity analysis were removed from the PDD. Please return these data back. The evidence which confirms that sale of husk is negligibly small was reviewed by the AIE and accepted. CAR is not closed. Conclusion 3 CAR is closed based on appropriate amendment made to the PDD.

wrong values of baseline emissions.		Returned, please see Sec B.2. in PDD.	
CAR 20. Emissions from electricity consumption in the baseline and in the project scenario are not assessed and compared.	32 (a)	14/09/2011 NCSF comment: Correct/emission from electricity consumption include in project emissions see Excel file and PDD/blue marker 09/02/2012 Corrected/Please see p27 and 35 (green marker) kW-corrected /always in kw Since the companies do not maintain separate accounting records for the project husk boilers, but only for all transactions associated with the burning of husk on the branches (including the boilers are not included in the project), it was used a conservative approach is to integrate all the electricity on all operations , slightly more than the amount of electricity is the boiler to the project. Thus, slightly overstating the project emissions reductions, we underestimate, so this is a conservative approach. Other data obtained from the plant is not possible. 19/04/2012 NCSF comment: Corrected, please see Sec.D.1. and ER excel	<u>Conclusion 1</u> Choice of the applied grid emission factor is not described and justified. Please also include this parameter to Section B.1. Data on electricity consumption is unrealistic. Whereas no husk was burnt at Annynsky MEZ in 2008 Electricity consumption is almost the same as in 2010 when husk fired boiler was already in operation. Electricity consumption at Annynsky MEZ is more than ten times bigger than at Krasnodarskiy MEZ, at the same time production is almost similar. There is confusion in dimensions of electricity consumption (in evidences - kW, in excel - ths. kW...) Please use one single approach to forecasts electricity consumption. <u>Conclusion 2</u> The table with the applied grid emission factor was added to the PDD. The given justification of the applied grid emission factor is not transparent. Please provide all related documents to the AIE and add a transparent description how to the PDD the grid emission factor for Tyumen region is applicable for the project (the project is located in a different region). Please also add a link to the "Netherlands study" and provide this document to the AIE. Please add a transparent description how electricity is measured at each site.

		file. In accordance with conservative way, we used all electricity consumption at MEZ, because there are no separate measuring devices at each boiler.	Section D.1 contains a sentence that the parameter M15 is "Electricity consumption at husk transport operations" what contradicts the description given in Section D.1.1.1. Please provide evidences which confirm power consumption at each site. CAR is not closed. Conclusion 3 The AIE accepts the use of the Netherland 2004 study since this overestimates project emissions for the grid South as compared with more accurate CTF or ECF data. Correction of M15 is accepted. CAR is closed..
CAR 21. Exclusion of N_2O and CH_4 emissions is not justified. The average annual CH_4 baseline emissions from husk combustion equals 827 t. of CO_2-eq what constitutes around 1.1% from annual emission reductions. The average annual N_2O baseline emissions from husk combustion equals 1627 t. of CO_2-eq what constitutes around 2.2% from annual emission reductions. According to the clause 14 of Guidance on criteria for baseline setting and monitoring, version 2 – "In the case of a JI project aimed at reducing emissions, the project boundary shall Encompass all anthropogenic emissions by sources of GHGs which are Significant, i.e., as a	32 (a)	06/06/2011 NCSF comment: Corrected, N2O and CH4 emission include in project emissions/Please see Excel file and PDD. 09/02/2012 Corrected 19/04/2012 NCSF comment: lines 26-29; 55-58; 84-87; 136-139 – are not used for calculation. 23/04/2012 NCSF comment: Corrected, boilers efficiency was excluded from the calculation of the amount of TJ.	Conclusion 1 The added calculations contain following mistakes: (vii) Summation in the cell P 57 is incorrect, it doesn't account cells E55-F55. (viii) Amount of TJ in the cell M12 is incorrect. Conclusion 2 (1) The excel file with calculation of ER does not contain descriptions for the lines 26-29; 55-58; 84-87; 136-139. Please add descriptions of the parameters and dimensions. (2) The calculation of the amount of TJ in the cell M12 on Лист 01 was not corrected. (3) Please include sources of CH4 and N2) emissions in Section B.3. CAR is not closed.

rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO2 equivalent, whichever is lower.		Please see excel file.	Conclusion 3 Responses to (1) and 3) are accepted. Response to (2) is not accepted. Please make it clear if calculation of M12 was corrected. If yes, please state what was corrected. CAR is not closed. Conclusion 4 CAR is closed based on the correction made to the excel and the explanation provided.
CAR 22. According to the Guidelines for users of JI PDD form, version 4 the starting date of a JI project is the date on which implementation or construction or real action of the project begins. According to the PDD construction of the first boiler at Labinskiy MEZ started in 1998. The AIE consider equipment purchasing agreement signing and construction works as "construction or real action". Thus the starting date of the project is indicated incorrectly. Please note that JI projects are eligible only from 2000.	34 (a)	06/06/2011 NCSF comment: Correct/please see section C1 on p. 36(blue marker) 06/02/2012 NCSF comment: letter to Labinsk branch was October 24, 2000, and suggests that if the intention is not the company's management on the implementation of JI, then installed the boiler, which has stood for more than two years without a start-up, so would not have been running since company was disposed of husk goal just like that. 19/04/2012 NCSF comment: There was no Kyoto consideration from October 2010. Minutes of meeting of Labinsk branch is from October 24, 2000. Please see attachment in folder CAR22.	Conclusion 1. The issue raised in CAR 22 was not addressed. "Letter of Intent of the project under the Kyoto Protocol" for Labinskiy MEZ provided to the AIE is dated 24 October 2010 and cannot be considered as an evidence of Kyoto consideration for husk fired boiler commissioned in July 2000. Conclusion 2. The response is not accepted. Please make it transparent in the PDD that the boiler was installed in 1999, was subjected to inspection in 2000 but was idle for two years (justify why) and was put into operation in 2003 due to incentives offered by JI status. Investment analysis for this site should be redone and additionality should be proven. CAR is not closed. Conclusion 3 Protocol of Labinsk branch meeting dated 24

			October 2000 is well received. It confirms that the boiler E-14-21-350 was installed but was not put into operation ad that Kyoto incentives make it expedient to commission this boiler and use for husk combustion. The participation of ths boiler in JI project is justified with a RESERVATION: it should pass a common investment analysis with only those investments needed to put the boiler into operation. **Investment calculation for Labinsk should be redone under CAR 02.**. CAR is closed.
CAR 23. All qualitative monitoring parameters are measured continuously. Humidity of all qualitative parameters is measured "periodically". Please include in the monitoring plan a transparent description and formulae how several periodical values of humidity will be applied to a one value of continuously measured parameter. Also please add description of monitoring periods (annual, monthly, daily…) for parameters in the formula (1) in the section D.1.2.2. It is unclear if the formula (1) will be used for calculation of annual ER or monthly ER or periodically ER. If it is used for annual ER calculation then it is not written how periodically measured parameter should be applied.	36 (a)	06/06/2011 NCSF comment: Correct/please see p. 52-53(blue marker) 09/02/2012 NCSF comment: Please see Техрегламент folder Measurement of "always" is the only possible definition for these parameters based on the principle of the conveyor production and manufacturing output target	<u>Conclusion 1</u> Please provide evidences that humidity of parameters M8-M13 is measured constantly. <u>Conclusion 2</u> Response is accepted. The humidity is measured in external laboratory at least once a year. CAR is closed based on appropriate correction made to the PDD.

CAR 24. NCV of husk is taken constant and humidity of husk is measured. The AIE observe that if humidity can vary NCV of husk cannot stay constant. Please provide a transparent and clear justification that a conservative value of husk's NCV is used. Please provide "Kasatkin reference manual for heat engineering industry" (extraction of necessary pages can be provided) which confirms applied husk's NCV value. Please also specify in the PDD that applied value is applicable to husk with moisture content (i.e. not a value for dry husk).	36 (b)	06/06/2011 NCSF comment: Please see attached folder «NCVhusk» NCV of husk taken as a constant value of the textbook "Kasatkin reference manual for heat engineering industry", because it is conservative (less than actually measured.) And also because the enterprise is not possible to conduct continuous monitoring of NCV, because UG Rusi does not have chemical laboratory. Attached measuring real values of NCV were performed only once in the laboratory of Novoshakhtinsk GPP. Please see attached files/ «Теплотворность лузги» and A copy of "Kasatkin reference manual for heat engineering industry" is not available, since it is absent at UG Rusi. 06/02/2012 NCSF comment: Corrected at sections in PDD NCVsh – sunflower seed husk NCV, kcal/kg; conservative value equal to 3685 (The smallest value used in the enterprise MEZ Yug Rusi», supported by conservative real measurements in the laboratory.)	<u>Conclusion 1</u> Based on provided evidences The AIE concluded that used value of husk NCV is conservative. As "Kasatkin reference manual for heat engineering industry" is not available it cannot be used as a source of information. Please exclude it from the PDD and clearly state that the used value of husk NCV is based on preliminary measurements and the most conservative value was taken. <u>Conclusion 2</u> Response is accepted. CAR is closed based on appropriate correction made to the PDD.
CAR 25. Please provide evidences which confirm applied efficiency of boilers for husk and natural gas	36 (b) (i)	06/06/2011 NCSF comment: Corrected, please see attached evidences	<u>Conclusion 1</u> Please justify that using average efficiency of two boilers at Labinskiy MEZ is in line with the principle

combustion (this could be boiler flow charts, boiler passports, or technical design specifications). It is unclear for which boiler efficiency on natural gas is given, for gas boilers before retrofitting to natural gas or for husk boilers after retrofitting. E.g. before the project implementation Anninskiy MEZ has gas fired boiler which was retrofitted to husk combustion. Baseline efficiency of this boiler is given as 82.4%. It is highly unlikely that gas boiler before retrofitting has lower efficiency on natural gas then the same boiler after retrofitting to husk.		which confirm applied efficiency of boilers 09/02/2012 NCSF comment: Since the values are approximately identical, to simplify the calculation uses the average of two numbers. It is used because there is no separate rate for each boiler. Accordingly, if we assume that for each boiler, and then added and averaged, then get the same. 19/04/2012 NCSF comment: corrected, please see new version of PDD and excel file.	of conservatism. Conclusion 2 Please use the most conservative value of boiler's efficiency. CAR is not closed. Conclusion 3 Response is accepted. CAR is closed based on appropriate correction made to the PDD and excel.
CAR 26. The formula (1) has following mistakes: • the left part of the formula is adjusted to Joules and the right part is adjusted to calories (both NCV of husk and NCV of natural gas are in calories, however only left part of the formula is multiplied on 4.1868 to adjust to joules); • the right part of the formula doesn't make sense (i.e. incorrect). Please note that ($\eta_{husk\ boiler\ r} - \eta_{gas\ boiler} / \eta_{gas\ boiler}$)	36 (f)	06/06/2011 NCSF comment: Please note: NCV of natural gas are in TJ from IPCC. Corrected/please see p.53 formula 1 06/02/2012 NCSF comment: Formula 1 is corrected/ Please see 06/04/2012 NCSF comment: Corrected/please see p.53 formula 1 19/04/2012 NSCF comment: Corrected please see PDD and excel file.	Conclusion 1 The formula (1) is fully incorrect. A part of the formula "$\sum FCsh*NCVsh*4,1868*\eta_{husk\ boiler} / \eta_{gas\ boiler}$ "is repeated three times! As emergency natural gas consumption is measured directly there is no need to account efficiency of gas boilers. PDD developers may use a different approach to calculate emission reductions for the project. Instead of measuring dozens of parameters one single appropriately justified "seed to husk" coefficient may be used. Such coefficients are usually adopted and used at oil production plants.

reads as ($\eta_{husk\ boiler\ r} - 1$).		23/04/2012 NCSF comment: Corrected, please see PDD an excel file.	<u>Conclusion 2</u> The formula (1) was not fully corrected. As emergency natural gas consumption is measured directly there is no need to account efficiency of husk boilers. CAR is not closed. <u>Conclusion 3</u> (1) Formula for ER on page 26 does not contain gas emission factor in the first term (2) The formula on page 69 was not corrected as to emergency regime. (3) AIE considers that gas will be combusted in emergency in the project activity. If so, the term in Formula should be with sign MINUS since this is project emission. If AIE is correct please make corrections in PDD and excel. CAR is not closed <u>Conclusion 4</u> (1) No correction made. (2) No correction made. (3) No correction made in all placed. CAR is not closed. <u>Conclusion 5</u> CAR is closed based on due correction made to the PDD.

CAR 27. Calculation of the parameter FCsh is incorrect. Subtraction is used for humidity accounting whereas humidity is measured in per cents (multiplication should be used).	36 (f)	06/06/2011 NCSF comment: Corrected/please see p.53 blue marker 19/04/2012 NCSF comment: Corrected	Conclusion 1 Formula in the PDD for calculation of parameter FCsh is still incorrect. Conclusion 2 Formulae in the PDD for calculation of parameter FCsh is still incorrect Please justify the division of the term in brackets in Formula (1) by the term (1-humidity of husk). CAR is not closed. Conclusion 3 CAR is closed based on due correction made to Formula (1).
CAR 28. ER calculations in the excel spreadsheet are incorrect: (a) While calculating husk consumption (lines 17, 46, 75, 104) moisture is subtracted from 100 whereas it should be subtracted from 1 (moisture is indicated in per cents and 1 = 100%). (b) While calculating husk consumption (lines 17, 46, 75, 104) humidity of sunflower seed is used for litter assessment. According to the PDD litter has its own measured humidity. (c) the part of formulae in lines 17, 46, 75, 104 connected with emissions from natural gas both does not make sense	45	06/06/2011 NCSF comment: a)corrected (please see Excel file) b)Corrected/ litter has not own measured humidity. C) what is meant? (in lines 17..104 does not content accounting of NG emissions) Its pure consumption of seed husk. If means lines 24,53,82,111 that the right-hand side of the formula takes into account the possible accidental emissions from the combustion of gas in husk boilers in accordance with the PDD.	Conclusion 1 Points (a) and (b) were corrected appropriately. Point (c) was not corrected as the formula (1) is still incorrect (please refer to the conclusion 1 on CAR 26). Conclusion 2 Conclusion is pending a response to CAR 26. CAR is not closed. Conclusion 3 Lines 17, 46, 75, 104 are all right now. Please explain coefficient 0,667 in the formula

and inconsistent with the PDD.		19/04/2012 NCSF comment: Please see response to CAR26. 23/04/2012 NCSF comment: 0.667 is a density of methane CH4 under standard conditions. Please see Sec B1 in PDD.	below (line 24) =(E17*E18*E20/E21+(E22*0,667/1000)*E23*(E20-E21/E21))*E19 CAR is not closed. <u>Conclusion 4</u> CAR is closed based on the provided clarification.
CAR 29. Please provide to AIE evidence confirming parameters M1-M13 for 2008-2010 used for husk consumption calculation. Please also confirm that there were no litter at Labinskiy MEZ during 2008-2010.	45	06/06/2011 NCSF comment: Please see attached documents 06/02/2012 NCSF comment: Corrected/please see Excel file -The data from the file "Потребление лузги" priority, because this is the number of husks for burning. -fuz is not considered, since it is insignificant and is not involved in the calculations. because the value of husk without the litter Other files contain erroneous and error and	<u>Conclusion 1</u> For Anninskiy MEZ: Data on M1-M7 parameters provided in "Потребление лузги" folder is inconsistent with data in "История" folder. Certificates contain information about oil sludge (in Russian "fuz") which is not taken into account in the current PDD. Labinskiy MEZ Data for June and July 2010 is absolutely identical. Please check correctness. Data for September-December 2010 in the excel spreadsheet is inconsistent with provided evidences. For all plants data for 2010 and for 2011 is already available. Please use factual data for more accurate calculations. <u>Conclusion 2</u>

		correct interpretation of the data Data for 2010 and 2011 are not yet available to developers in connection with the reorganization of production. The actual data for the 2010-2011-2012 will use in a monitoring report. 19/04/2012 NCSF comment: Please see archive CAR29. 23/04/2012 NCSF comment: corrected, please see PDD and excel file.	Response as on data for 2010 and 2011 id accepted. For Anninskiy MEZ: The answer regarding M1-M7 parameters is accepted. The answer regarding oil sludge is not accepted as non-reasoned. For Labinskiy MEZ No clear answer was given for the request in Conclusion 1. CAR is not closed. <u>Conclusion 3</u> Labinskiy: Data for September-December 2010 in the excel spreadsheet is inconsistent with provided evidences. This was stated in Conclusion 1. Please correct excel. CAR is not closed. <u>Conclusion 4</u> Excel file is not provided. CAR is not closed. <u>Conclusion 5</u> CAR is closed based on due correction made to

			the PDD.
CAR 30. Please provide in the PDD exact references to the documentation on the analysis of the environmental impacts of the project, in accordance with procedures as determined by the host Party.	48 (a)	06/06/2011 NCSF comment: Corrected/please see p.58 blue marker 06/06/2011 NCSF comment: Please see attached folder «environmental expertise» 19/04/2012 NCSF comment: Corrected, Please see Sec.F.2. Please see attachment in folder CAR30.	<u>Conclusion 1</u> Response is not accepted. Please provide information regarding: (ix) environmental expertise or justification why such expertise is not necessary; (x) analysis of environmental impact of the project activity; Please also provide confirming documents to the AIE. <u>Conclusion 2</u> Please reconsider the incorrect statement in Section F.2 "Project activity does not adversely impact on the environment". Please provide the AIE the opinion and expertise conclusions enlisted below (pages showing the status of the document) : Krasnodarskiy MEZ: - opinion of 01.01.2009 № B5/25 (during the period 01.01.2009 - 01.01.2010) on emissions of pollutants into the air, issued by Rostechnadzor. Labinskiy MEZ: - opinion of 30.12.2008 № B8/309 (during the period 01.11.2008 - 01.11.2009) on emissions of pollutants into the air, issued by Rostechnadzor. Kropotkinskiy MEZ: (xi) positive conclusion of examination of sanitary and epidemiological expertise

			Annynskiy MEZ: (xii) opinion № 54 of 01.05.2008 (during the period 01.05.2008 - 01.11.2012) on the emissions of pollutants into the air, issued by Rostekhnadzor. CAR is not closed. <u>Conclusion 3</u> The AIE studied the provided evidence and accepted it. This CAR is closed.