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# DETERMINATION REPORT

## CJSC "NIZHNEVARTOVSKAYA GRES"

### DETERMINATION OF THE IMPLEMENTATION OF 800 MW POWER GENERATING UNIT No.2 AT NIZHNEVARTOVSKAYA GRES

REPORT No. RUSSIA-DET/0233/2012

REVISION No. 01

BUREAU VERITAS CERTIFICATION



Determination Protocol on JI project

Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

Date of first issue: 22/03/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: VEMA S.A.	Client ref.: Ms. Daryna Sas
<p>Summary:</p> <p>Bureau Veritas Certification has made the determination of the “Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES” project of company CJSC “Nizhnevartovskaya GRES” located near the Izhluchinsk settlement, Nizhnevartovskiy rayon, Khanty-Mansiysk Autonomous Okrug - Yugra, 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.</p> <p>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 &amp; Opinion, was conducted using Bureau Veritas Certification internal procedures.</p> <p>The first output of the determination process is a list of Corrective Actions and Clarification Requests, presented in Appendix A. Taking into account this output, the project proponent revised its project design document.</p> <p>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.</p>	

Report No.: RUSSIA-det/0233/2012	Subject Group: JI	<input checked="" type="checkbox"/> No distribution without permission from the Client or responsible organizational unit
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Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

**Abbreviations**

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




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 Determination Protocol on JI project
 

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 Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya  
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## 1 INTRODUCTION

VEMA S.A. (hereafter called VEMA) has commissioned Bureau Veritas Certification to determine on behalf of CJSC “Nizhnevartovskaya GRES” their JI project “Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES” (hereafter called “the project”) located near the Izhluchinsk settlement, Nizhnevartovskiy rayon, Khanty-Mansiysk Autonomous Okrug - Yugra, Russian Federation.

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

### 1.1 Objective

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

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

### 1.2 Scope

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

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

### 1.3 Determination team

The determination team consists of the following personnel:

Dr. Leonid Yaskin



Bureau Veritas Certification Climate Change Lead Verifier

This determination report was reviewed by:

Daniil Ukhanov  
Bureau Veritas Certification, Internal reviewer

## 2 METHODOLOGY

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

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

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

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

### 2.1 Review of Documents

The Project Design Document (PDD) submitted by 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 20/02/2012 and following a set of revisions resubmitted it as Version 05 dated 10/04/2012.



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The first deliverable of the document review was the Determination Protocol Revision 01 dated 01/03/2012 which contained 13 CARs and 3 CLs.

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

## 2.2 Follow-up Interviews

On 31/03, 03/04 and 12/04/2012, following the submission to PP of AIE conclusion on PP Responses 2, 3 and 4, the AIE Lead Verifier L. Yaskin performed interviews with the 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 NVGRES	<ul style="list-style-type: none"> <li>➤ Project history and Implementation schedule</li> <li>➤ Baseline scenario</li> <li>➤ Project activity</li> <li>➤ Input data for ER calculation</li> <li>➤ Input data for investment analysis</li> </ul>
CONSULTANT VEMA	<ul style="list-style-type: none"> <li>➤ Measured data on project and baseline parameters</li> <li>➤ Theoretical description of baseline scenario</li> <li>➤ Investment and common practice analyses</li> <li>➤ Additionality</li> <li>➤ Monitoring plan</li> <li>➤ Emission reduction calculation</li> </ul>
Stakeholders	<ul style="list-style-type: none"> <li>➤ N/A</li> </ul>

## 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.05)

*Situation existing prior to the starting date of the project*

The Nizhnevartovskaya GRES (Nizhnevartovsk State Regional Power Plant (SRPP)) is located 15 km away from Nizhnevartovsk city, on the banks of the Vakh River. It was built to supply power to the largest region of Khanty-Mansy Autonomous Okrug - Yugra, where the main oil and gas companies are located. The power plant was built for the purposes of these companies.

Nizhnevartovskaya GRES is the youngest of its kind in Europe. It is one of the most environmentally friendly plants. The plant is one of the largest suppliers of electrical power in the Ural Federal District.

Nizhnevartovskaya GRES runs on associated petroleum gas (APG). Its installed capacity in terms of electric energy before the project was 800 MW of electricity and 140 Gcal/h of heat energy. APG supply is provided by the Nizhnevartovsk and Belozernyi gas treatment plants. Due to the projected deficiency of power in the Ural region, the issue of the need for new generating capacity and a modern approach to achieving this target arose.

One of the measures aimed at addressing the shortage of electricity was the decision to commission the second power generating unit at





Nizhnevartovskaya GRES with the involvement of joint implementation mechanism.

*Project scenario*

The project aims to improve the reliability and quality of electrical and thermal energy supply to the different groups of consumers of the Ural Federal District by the use of modern technologies that reduce pollution, including greenhouse gas (GHG) emissions.

The project activities include construction of the second power generating unit at Nizhnevartovsk State Regional Power Plant with installed capacity of 800 MW of electricity and 140 Gcal/h of heat energy. Fuel for the new power generating unit will be dry stripped gas obtained from treatment of associated petroleum gas from oil fields in the Nizhnevartovsk region at Nizhnevartovsk and Belozernyi gas treatment plants. The quality of the APG supplied meets the requirements of OST 51.40-93 (Combustible natural gases supplied and transported by trunk pipelines). This APG composition is almost identical to natural gas. The methane content in this APG is about 94-95%.

After the project implementation the new power generating unit will supply electricity to the United Regional Power System (UPS) "Ural" grid. Electricity produced by the new power generating unit, will replace electricity that in case of the absence of the project would be generated by other existing power plants and other new power generating units of UPS "Ural".

Greenhouse gas emissions will be reduced due to the substitution of electricity from the grid produced by combusting fossil fuel with the electricity generated by Nizhnevartovskaya GRES that will produce electricity with lower GHG emissions in comparison with electricity from UPS "Ural".

*Baseline scenario*

The baseline scenario is based on the assumption that if the project is not implemented, i.e. additional electricity equivalent to capacity of the second power generating unit of Nizhnevartovskaya GRES is not supplied to the grid, other power generating companies will cover the energy demand. The power generating companies within the unified power system (UPS "Ural") can increase electricity generation at the existing capacities by delaying decommissioning of outdated equipment and/or installing new power generating units.



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A JI specific approach was used for the baseline setting. More detailed information is provided in Section B.

*Brief history of the project*

RAO "UPS of Russia" (Unified Power Systems of Russia) had started gearing up for implementation of the Kyoto mechanisms long before the Protocol was ratified by the Russian Federation. RAO "UPS of Russia" has made every effort to cooperate with the UNFCCC (United Nations Framework Convention on Climate Change). For those purposes, the Energy Carbon Fund was established in 2000.

The main results of the Fund's operation are as follows:

- Together with OJSC RAO "UPS of Russia" it took a comprehensive survey of greenhouse gas emissions from energy sector covering the period from 1990 in accordance with the world standards; an emission inventory was created;
- A greenhouse gas emission monitoring system, including an accounting and reporting system, is up and running; emission inventories are developed;
- A number of joint implementation (JI) projects were prepared for approval by government authorities, some of these projects already have positive determination by international auditors; foreign investors were involved in these projects;
- Together with regional energy generators, the Fund participated in international tenders for purchase of GHG emissions;
- "Greenhouse Gases", an information analysis system, was developed and introduced at a number of regional energy companies;
- Projected volumes of emissions of the Unified Power System of Russia have been estimated;
- Several regulatory and methodological guidelines were issued and are in effect in the energy sector, including the method for calculation of GHG emissions from thermal power plants.

On June 1 2000, a contract No. E/4 for the engineering services, equipment supply, construction and assembly operations, commissioning works and development and implementation of an automated technological process control system was signed. OJSC "IK Quartz" acts as general contractor under this contract.

On October 13, 2003, power generating unit № 2 was thrown on the load. On November, 14 a ceremony of commissioning of the second power generating unit of Nizhnevartovskaya GRES, which was attended by heads of Government of the Russian Federation, RAO UPS of



Russia, Presidential Plenipotentiary in the Ural Federal District, Governor of the Tyumen Region and KMAO.

#### **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 13 CARs and 3 CLs.

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

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

The issued requests concern:

- Incomplete name of the scope (CAR 01).
- Incorrect statement with regard to baseline scenario (CAR 02).

##### **4.1 Project approvals by Parties involved (19-20)**

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

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

##### **4.2 Authorization of project participants by Parties involved (21)**

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

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



### 4.3 Baseline setting (22-26)

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

The key information and data used to establish the baseline are provided in the required tabular forms.

#### Jl specific approach

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

/a/ By listing and describing future baseline scenarios available for the project participant and selecting the most likely scenario. Four alternative scenarios were AS1-AS4 as follows:

AS1: The proposed project is not implemented as a JI project.

AS2: Electricity to be generated by the project is supplied to the grid by other existing power plants of UPS —Ural;

AS3: Electricity to be generated by the project is supplied to the grid by other new power generating units of UPS —Ural;

AS4: Electricity to be generated by the project is supplied to the grid by other existing power plants and other new power generating units of UPS —Ural.

Based on alternatives analysis with taking into account the key factors in (b) below a conclusion is made in Section B.1 that the most likely baseline scenario is AS4.

/b/ By taking into account key factors that affect a baseline, such as (i) energy sector legislation; (ii) growth of electricity demand in the Ural region; (iii) availability of capital including investment barriers; (iv) local availability of technologies/techniques; (v) dry associated gas price and availability for the project unit of Nizhnevartovskaya GRES.

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

/d/ Taking into account of uncertainties and using conservative assumptions (at calculation of the emission factor for an electricity system in Annex 2).

/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 of the list of standard variables contained in appendix B to Guidance on criteria for baseline 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 04, CL 02, CL 03).

The issues requests concern:

- The absence of a detailed theoretical description of the (CAR 04).
- The benchmark data in Supporting Document 1 validated by the project participant (CL 02).
- Clarification if the project unit produces and supplies heat (CL 03).

#### **4.4 Additionality (27-31)**

##### **JI specific approach**

The PDD indicates that approach (c) is used, namely the most recent version of the Tool for the demonstration and assessment of additionality is applied.

Additionality proofs are provided through three steps: Step 1 Identification of alternatives to the project consistent with current laws and regulations, Step 2 Investment analysis and Step 3 Common practice analysis.

At Step 1, realistic and credible alternative scenarios to the project activity that are in compliance with mandatory legislation and regulations were identified.

At Step 2, a benchmark analysis is applied to calculate the project IRR at the defined discount rate 17,5%.The results demonstrate that IRR is less than the above benchmark and accordingly NPV is negative. This implies that the project without JI registration is unprofitable. The sensitivity analysis with variation of main parameters by  $\pm 10\%$  also confirms this conclusion.

At Step 3, common practice analysis leads to the conclusion that the implementing of the power unit 800 MW No 1 of Nizhnevartovskaya GRES and six power generating units 800 MW of Surgut SRPP-2 cannot be an example of a similar practice. The start of the construction of power unit № 2 in the new market conditions became possible only after the appearance of possibility to use the Joint Implementation Mechanism.

Outstanding issues related to Additionality (27-31), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 05, CAR 06, CAR 07).



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The issued requests concern:

- Provision of input data for and details of the investment analysis (CAR 05).
- Accounting in the common practice analysis of the first unit 800 MW of Nizhnevartovskaya GRES and six units 800 MW of Surgutskaya GRES-2 (CAR 06).
- Incorrect reference to the BAU scenario (CAR 07).

#### **4.5 Project boundary (32-33)**

##### **JI specific approach**

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

Project boundary is defined on the basis of case-by-case assessment of emission sources. The identified sources of the accountable CO<sub>2</sub> emissions are:

- Generation of electricity equivalent to electricity generated by the second power generating unit into the UPS "Ural" (baseline);
- Combustion of associated petroleum gas in the second power generating unit of Nizhnevartovskaya GRES for electricity production (project activity).

Project boundary is defined on the basis of case-by-case assessment of different emission sources. All exclusions are made with reference to AM0029.

Outstanding issue related to Project Boundary (32-33), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 08).

The issued CAR 08 concerns a delineation of the project boundary and the gases and sources included.

#### **4.6 Crediting period (34)**

The starting is determined to be June 1, 2000, when contract No.E/4 for engineering services, equipment supply, construction and assembly work, pre-commissioning and development and implementation of the automatic operation monitoring system was signed.

Operational lifetime is defined as 20 years or 240 months.



The length of crediting period is defined as 5 years and 0 months as from 01/01/2008 to 31/12/2012 with the startinh day being the date of the first emission reductions generated by the project.

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

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

#### **4.7 Monitoring plan (35-39)**

##### **JI specific approach**

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

The monitoring plan describes:

- (i) data to be monitored (refer to D.1.1.1 and D.1.1.3):
  - P2 – Consumption of associated petroleum gas by the project unit (measured);
  - P3 - Net calorific value of associated petroleum gas consumed (measured);
  - B2 – Electricity generation by the project unit (measured);
  - B3 – On-site electricity consumption by the project unit;
- (ii) the period in which these parameters will be monitored - continuously(P2), monthly (P3), annually (B2, B3);
- (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 of natural gas (IPCC incomplete reference, refer to CAR 09);
- grid emission factor for UPS "Ural" taken from the JI project JI-0422 "Installation of two CCGT-400 at Surgutskaya TPP- 2, OGK-4, Tyumen area, Russia", determined by Bureau Veritas Certification.



Accuracy and reasonableness are carefully balanced in their selection. The default values originate from the recognized sources and are presented in a transparent manner. There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.

The monitoring plan draws on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”.

Most of methods employed for data monitoring are described appropriately in the monitoring plan, including 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. There is basic consistency between the elaboration of the baseline scenario and the procedure for calculating the baseline emissions. The underlying rationale for the algorithms/formulae, implicit and explicit assumptions are specified and explained in a transparent manner.

Monitoring plan refers to pertinent Federal Laws No. 7-FZ On Environment Protection and No.96-FZ On Air Protection.

QC/QA procedures are specified in sufficient detail; uncertainty level of data is reasonably defined as low.

The monitoring plan outlines the responsibilities and the authority regarding the monitoring activities which are implemented as per the routine enterprise procedures. The person responsible for monitoring is the Chief Engineer of the Nizhnevartovskaya GRES. On the whole, the monitoring report reflects good monitoring practices applied in the Russian energy sector.

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

Outstanding issues related to Monitoring plan (35-39), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 09-CAR 11).

The issued requests concern:

- Provision of the precise reference to IPCC for the natural gas emission factor (CAR 09).





- Specification of the emergency procedures to be followed if expected data are not available (CAR 10).
- The term during which the data monitored and required for verification are to be kept (CAR 11).

#### **4.8 Leakage (40-41)**

##### **JI specific approach**

Leakage related to fugitive CH<sub>4</sub> emissions associated with fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of associated petroleum gas used in the project and fossil fuels of all types combusted at power plants in the absence of the project is conservatively neglected (refer to Section B.3).

#### **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 baseline emissions, project emissions, and emission reduction for 2008-2012 on the annual basis. The formulae used for calculating the estimates and the estimates themselves are consistent throughout the PDD. 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 appropriate. Data sources used for calculating the estimates are clearly identified, reliable and transparent.

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

#### **4.10 Environmental impacts (48)**

Excerpts from the design documentation on environmental impact regarding air emissions and water pollution are provided in the PDD Section F.1. Based on the analysis of environmental impacts conducted for the project documentation, it is concluded in Section F.2 that there is no significant negative impact on environment.

Outstanding issues related to Environmental impacts (48), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 12, CAR 13).

The issued requests concern:



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- Provision of complete references to the Construction Code, the Law on Amendments to the Construction Code, the conclusion of State Expertise No.61, and the report on environmental impact of the project; provision of the documented evidence of these documents (CAR 12).
- Incorrect statement as to applicability of Section F.2 (CAR 13).

**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 "Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES" project in Russia. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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



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

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 05 dated 10/04/2012 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 CJSC Nizhnevartovskaya GRES and Vema S.A. that relate directly to the GHG components of the project.

- /1/ "Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES"
  - PDD Version 01 dated 20/02/2012
  - PDD Version 02 dated 11/03/2012
  - PDD Version 03 dated 25/03/2012
  - PDD Version 04 dated 03/04/2012
  - PDD Version 05 dated 10/04/2012
  - Excel spreadsheets with calculation of emission reduction and investment analysis.



- /2/ Vema S.A. responses to AIE requests dated 01/03/2012, 12/03/2012, 31/03/2012, 03/04/2012, 12/04/2012, 18/04/2012.

**Category 2 Documents:**

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

- /3/ Contract No. E/4 for the engineering services, equipment supply, construction and assembly operations, commissioning works and development and implementation of an automated technological process control system dated 1/06/2000.
- /4/ Act of commissioning of the completed construction (including capital investments) dated 14/11/2003.
- /5/ Justification and formal confirmation by Nizhnevartovskaya GRES forecast data (concerning electricity production, O&M costs, electricity and APG tariffs) used in investment analysis.
- /6/ Data on actual electricity production and APG consumption with formal confirmation by Nizhnevartovskaya GRES.
- /7/ Protocols of calibrating electricity meters and gas flow meters.
- /8/ Gas supply contract confirming the APG price.
- /9/ Passports for associated petroleum gas consumed by second power generation unit of Nizhnevartovskaya GRES.
- /10/ Report on Environmental Impact Assessment dated 20/06/1991 issued by the Research and Production Enterprise "Sibneftekhim".
- /11/ Project Expertise Conclusion dated 26/07/1991 issued by Nizhnevartovsk Committee on nature protection.

**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/ Sas Daryna, Vema S.A. (PDD developer)
- /2/ Serpinskiy Anton Olegovich, Vema S.A. (PDD developer, financial analysis)
- /3/ Karchkov Aleksandr Mihaylovich, environmental protect expert, Moscow branch of CJSC Nizhnevartovskaya GRES



Determination Protocol on JI project

Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

## 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
<b>General description of the project</b>				
<b>Title of the project</b>				
-	Is the title of the project presented?	The indicated title of the project is «Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES» Sectoral scope 1: Energy industries PDD Version: 01 Date: 20/02/2012”.		OK
-	Is the sectoral scope to which the project pertains presented?	The indicated sectoral scope of the project is: (1) Energy industries  <b>CAR 01.</b> Please indicate the complete name of the scope.	CAR 01	OK
-	Is the current version number of the document presented?	The indicated Version is 01.		OK
-	Is the date when the document was completed presented?	The indicated PDD date is 20/02/2012.		OK
<b>Description of the project</b>				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2	The PDD formulates the purpose of the project as follows: “The project aims to improve the reliability and quality of	CAR 02	OK



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## Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	<p>electrical and thermal energy supply to the different groups of consumers of the Ural Federal District by the use of modern technologies that reduce pollution, including greenhouse gas (GHG) emissions. The project activities include construction of the second power generating unit at Nizhnevartovsk State Regional Power Plant with installed capacity of 800 MW. Fuel for the new power generating unit will be dry stripped gas obtained from treatment of associated petroleum gas from oil fields in the Nizhnevartovsk region at Nizhnevartovsk and Belozernyi gas treatment plants.</p> <p>Requirements a), b), c) to the content of Section A.2 are met.</p> <p><b>CAR 02.</b> It is incorrect to state "Electricity produced by the new power generating unit...will replace electricity that in case of the absence of the project would be generated using less efficient technologies that are common in the region. This statement is not in accordance with the definition of the baseline scenario in Section B.1.</p>		
-	Is the history of the project (incl. its JI component) briefly summarized?	<p>The history of the project (incl. its JI component) is summarized in sufficient detail on page 3.</p> <p>According to the PDD Section A.2, on June 1, 2000, a contract No. E/4 for the engineering services, equipment supply, construction and assembly operations, commissioning works and development and implementation of an automated technological process control system was signed. OJSC "IK Quartz" acts as general contractor under</p>	CL 01	OK



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## Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>this contract. On October 13, 2003, power generating unit № 2 was thrown on the load. On November, 14 a ceremony of commissioning of the second power generating unit of NV SRPP, which was attended by heads of Government of the Russian Federation, RAO UPS of Russia, Presidential Plenipotentiary in the Ural Federal District, Governor of the Tyumen Region and KMAO.</p> <p><b>CL 01.</b> Please provide the AIE a documented evidence of the above mentioned facts including the act of commissioning.</p>		
<b>Project participants</b>				
-	Are project participants and Party(ies) involved in the project listed?	The Party and project participant involved in the project are listed as follows: - Party A Russia and its legal entity CJSC "Nizhnevartovskaya GRES"; - Party B is Switzerland and its legal entity VEMA S.A.		OK
-	Is the data of the project participants presented in tabular format?	The data of the project participant are presented in due tabular format.		OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.		OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Russia is indicated as Host Party.		OK
<b>Technical description of the project</b>				
<b>Location of the project</b>				
-	Host Party	Russian Federation.		OK
-	Region/State/Province etc.	Khanty-Mansy Autonomous Okrug – Yugra.		OK
-	City/Town/Community etc.	Izluchinsk urban settlement.		OK
-	Detail of the physical location, including	Nizhnevartovsk State Regional Power Plant is located in the		OK



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## Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	information allowing the unique identification of the project. (This section should not exceed one page)	turn of the Vakh river in the east of the Khanty-Mansy Autonomous Okrug in the Nizhnevartovsk region near Izluchinsk urban settlement, the Russian Federation.		
<b>Technologies to be employed, or measures, operations or actions to be implemented by the project</b>				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	Section A.4.2 outlines main technologies to be employed including relevant technical data and the implementation period.		OK
<b>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</b>				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	It is explained in Section A.4.3 on page 10 that "the project implementation will lead to reduction of greenhouse gas emissions from fossil fuel combustion. The main greenhouse gas from fossil fuel combustion is CO <sub>2</sub> . Reduction of GHG emissions from the project will be achieved due to replacement of the electricity produced by the Ural UPS at, as a rule, less efficient thermal power plants than Nizhnevartovsk State Regional Power Plant". The AIE confirms this as a well-established argument.		OK
-	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 tCO <sub>2</sub> e?	The estimated annual reduction for the chosen credit period is provided in tCO <sub>2</sub> e.		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	Total as well as annual and average annual emission		OK





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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	average annual emission reductions in tonnes of CO2 equivalent provided?	reductions in tonnes of CO2 equivalent are provided.		
<b>Project approvals by Parties</b>				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	<b>CAR 03.</b> The project has no written approvals by the Parties involved. The project approval by Parties will be provided following the determination of the PDD at hand.	CAR 03	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is the Russian Federation.		OK
19	Has the DFP of the host Party issued a written project approval?	Conclusion is pending a response to CAR 03.	Pending	
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.		OK
<b>Authorization of project participants by Parties involved</b>				
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 CJSC "Nizhnevartovskaya GRES" is deemed to be authorized with the issue of the project approval by the Host Party. Conclusion is pending a response to CAR 03.		Pending
<b>Baseline setting</b>				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline?	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 3		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<ul style="list-style-type: none"> <li>- JI specific approach</li> <li>- Approved CDM methodology approach</li> </ul>	(hereafter referred Guidance). This approach employs some elements of the approved methodology AM0029.		
<b>JI specific approach only</b>				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	<p>The key information and data used to establish the baseline are provided in the required tabular forms.</p> <p><b>CAR 04.</b> Section B.1 does not provides a detailed theoretical description of the baseline in complete and transparent manner as required by Guidelines for users of JI PDD Form Version 04.</p> <p><b>CL 02.</b> Please provide the benchmark data in Supporting Document 1 validated by the project participant.</p> <p><b>CL 03.</b> Please clarify in the PDD if the project unit produces and supplies heat. If so please elaborate on this as appropriate; in particular make it clear in the PDD if the values of gas consumption in the Supporting Document 1 relate to the electricity generation only.</p>	CAR 04 CL 02 CL 03	OK OK OK
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?	<p>The baseline is established basically: /g/ By listing and describing future baseline scenarios available for the project participant and selecting the most likely scenario. Four alternative scenarios were AS1-AS4 as follows: AS1: The proposed project is not implemented as a JI project. AS2: Electricity to be generated by the project is supplied to the grid by other existing power plants of UPS —Ural; AS3: Electricity to be generated by the project is supplied to</p>		OK



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## Implementation of 800 MW power generating unit No.2 at Nizhnevartovskaya GRES

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</p> <p>(d) Taking into account of uncertainties and using conservative assumptions?</p> <p>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?</p> <p>(f) By drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”, as appropriate?</p>	<p>the grid by other new power generating units of UPS —Ural; AS4: Electricity to be generated by the project is supplied to the grid by other existing power plants and other new power generating units of UPS —Ural.</p> <p>Based on alternatives analysis with taking into account the key factors in (b) below a conclusion is made in Section B.1 that the most likely baseline scenario is AS4.</p> <p>/h/ By taking into account key factors that affect a baseline, such as (i) energy sector legislation; (ii) growth of electricity demand in the Ural region; (iii) availability of capital including investment barriers; (iv) local availability of technologies/techniques; (v) dry associated gas price and availability for the project unit of Nizhnevartovskaya GRES.</p> <p>/i/ Basically in a transparent manner with regard to the choice of approaches, assumptions (traced by a finder), methodologies, parameters, data sources and key factors.</p> <p>/j/ Taking into account of uncertainties and using conservative assumptions (at calculation of the emission factor for an electricity system in Annex 2).</p> <p>/k/ In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.</p> <p>/l/ By drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring.</p>		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are	N/A		OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	The grid emission factor for UPS "Ural" is taken from the JI project JI-0422 "Installation of two CCGT-400 at Surgutskaya TPP- 2, OGK-4, Tyumen area, Russia", determined by Bureau Veritas Certification.		OK
<b>Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable</b>				

<b>Additionality</b>				
<b>JI specific approach only</b>				
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	The PDD indicates that approach (c) is used, namely the most recent version of the Tool for the demonstration and assessment of additionality <sup>9</sup> (version 06.0.0) (hereinafter — Additionality Tool) is applied.		OK



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	assessment of additionality (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board”.			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The Additionality Tool is applicable to a wide range of project types.		OK
29 (b)	Are additionality proofs provided?	<p>Additionality proofs are provided through three steps: Step 1 Identification of alternatives to the project consistent with current laws and regulations, Step 2 Investment analysis and Step 3 Common practice analysis.</p> <p>At Step 1, realistic and credible alternative scenarios to the project activity that are in compliance with mandatory legislation and regulations were identified.</p> <p>At Step 2, a benchmark analysis is applied to calculate the project IRR at the defined discount rate 13,5%.The results demonstrate that IRR is less than the above benchmark and NPV is accordingly negative. This implies that the project without JI registration is unprofitable. The sensitivity analysis with variation of main parameters by <math>\pm 10\%</math> also confirms this conclusion.</p> <p>At Step 3, common practice analysis is limited to the statement “Analysis of other activity similar to the one proposed in the Project demonstrated the absence of similar projects in the territory of Khanty-Mansy Autonomous Area of the Russian Federation”.</p> <p><b>CAR 05.</b> Areas of concern as to the investment analysis are</p>	CAR 05 CAR 06 CAR 07	OK OK OK



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		<p>as follows:</p> <ul style="list-style-type: none"> <li>(i) To define the discount rate an approach recommended in paragraph 6 (a) of the Guidelines for additionality is applied. Please justify the applicability of this approach to the project conditions and provide reference to the Guidelines.</li> <li>(ii) Please prove that the input values used in the investment analysis are valid and applicable at the time of the investment decision taken by the project participant.</li> <li>(iii) Please clarify the sources of benchmark data in Supporting Document 2 for electricity tariff and natural gas (why not APG?) price and for the variations of these data in time.</li> <li>(iv) Please justify the rationale for the applied variation of the electricity generation in time taking into account the issue (ii) above.</li> <li>(v) Please provide formal confirmation by the project participant of the input data for investment cost and maintenance cost.</li> <li>(vi) Please include depreciation in the investment analysis.</li> <li>(vii) Please provide the AIE the volume of the project design documentation related to the investment effectiveness.</li> </ul> <p><b>CAR 06.</b> Please implement the common practice analysis as prescribed in paragraphs 43-47 of the Additionality Tool taking into account the first unit 800 MW of Nizhnevartovskaya GRES and six units 800 MW of Surgutskaya GRES-2.</p> <p><b>CAR 07.</b> Reference to one of the alternatives namely</p>		
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## Determination Protocol on JI project

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		continuation of the current practice "business as usual" is inadequate since the list of the alternative scenarios in Sections B.1 and B.2 does not include the BAU alternative.		
29 (c)	Is the additionality demonstrated appropriately as a result?	With pending CAR 05 and CAR 06 the additionality is not demonstrated.	Pending	
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
<b>Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_ Not applicable</b>				
<b>Project boundary (applicable except for JI LULUCF projects)</b>				
<b>JI specific approach only</b>				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses main anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant.  The identified sources of the accountable CO2 emissions are: - Generation of electricity equivalent to electricity generated by the second power generating unit into the UPS "Ural" (baseline); - Combustion of associated petroleum gas in the second power generating unit of Nizhnevartovskaya GRES for electricity production (project activity).		OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the	Project boundary is defined on the basis of case-by-case assessment of different emission sources.		OK



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	criteria referred to in 32 (a) above?			
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?	<b>CAR 08.</b> Please include in Section B.3 a delineation of the project boundary and the gases and sources included by using a figure or flow chart as appropriate.	CAR 08	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 are made with reference to AM0029.		OK
<b>Approved CDM methodology approach only Paragraph 33_ Not applicable</b>				
<b>Crediting period</b>				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting is determined to be June 1, 2000, when contract No.E/4 for engineering services, equipment supply, construction and assembly work, pre-commissioning and development and implementation of the automatic operation monitoring system was signed.  Conclusion is pending a response to CL 01.	Pending	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes.		OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	Operational lifetime is defined as 20 years or 240 months.		OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is defined as 5 years and 0 months.		OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Starting day is 01/01/2008 being the date of the first emission reductions generated by the project.		OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond	The crediting period is defined as from 01/01/2008 to 31/12/2012.		OK





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	the operational lifetime of the project?			
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
<b>Monitoring plan</b>				
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
<b>JI specific approach only</b>				
36 (a)	Does the monitoring plan describe: - All relevant factors and key characteristics that will be monitored? - The period in which they will be monitored? - All decisive factors for the control and reporting of project performance?	The monitoring plan describes: (iv) data to be monitored (refer to D.1.1.1 and D.1.1.3): P2 – Consumption of associated petroleum gas by the project unit (measured); P3 - Net calorific value of associated petroleum gas consumed (measured); B2 – Electricity generation by the project unit (measured); B3 – On-site electricity consumption by the project unit; (v) the period in which these parameters will be monitored - continuously(P2), monthly (P3), annually (B2, B3) (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.		OK
36 (b)	Does the monitoring plan specify the indicators,	The monitoring plan generally specifies indicators, constants		OK



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	constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	and variables used that are basically reliable, valid and provide transparent picture of the emission reductions to be monitored.  For data to be monitored, please refer to 36(a) above.  For constants please refer to the next paragraph.		
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 of natural gas (IPCC incomplete reference, refer to CAR 09); - grid emission factor for UPS "Ural" taken from the JI project JI-0422 "Installation of two CCGT-400 at Surgutskaya TPP- 2, OGG-4, Tyumen area, Russia", determined by Bureau Veritas Certification.  Accuracy and reasonableness are carefully balanced in their selection. The default values originate from the recognized sources (see above) and are presented in a transparent manner.		OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	N/A		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?	<b>CAR 09.</b> Please provide the precise reference to IPCC for the natural gas emission factor.	CAR 09	OK
36 (b) (iii)	For all data sources, does the monitoring plan	<b>CAR 10.</b> Please specify the emergency procedures to be	CAR 10	OK



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	specify the procedures to be followed if expected data are unavailable?	followed if expected data are not available.		
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 but are obtained through monitoring?	N/A		OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is 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	Most of methods employed for data monitoring are described appropriately in the monitoring plan, including recording		OK



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	frequency) and recording?	frequency, proportion of data to be monitored, and how will the data be archived.		
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions. Please refer to Sections D.1.1.4 and D.1.1.2 respectively.		OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the algorithms/formulae is well explained.		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 is basic consistency between the elaboration of the baseline scenario and the procedure for calculating the baseline emissions.  Conclusion is pending a response to CAR 04 and CL 03.	Pending	OK
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?	Yes.		OK



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36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Implicit and explicit assumptions are explained in a transparent manner. The assumptions in the monitoring plan are specified and explained in Section D.1.		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 defined in Section D.2 as low.		OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	Monitoring plan refers to the Federal Laws No.7-FZ and No.96-FZ.		OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	QC/QA procedures are specified in sufficient detail in PDD Section D.2. These are routine enterprise procedures.		OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The monitoring plan outlines the responsibilities and the authority regarding the monitoring activities. The person responsible for monitoring is the Chief Engineer of the		OK



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		Nizhnevartovskaya GRES.		
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines at Russian power sector.		OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Sections D.1, D.1.1.1 and D.1.1.3 provide in a tabular form 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?	<b>CAR 11.</b> The monitoring plan does not 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.		OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/A		OK
<b>Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable</b>				
<b>Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable</b>				
<b>Leakage</b>				
<b>JI specific approach only</b>				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources	Leakage related to fugitive CH <sub>4</sub> emissions associated with fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of associated petroleum gas	Inadequacy 1	OK



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	of leakage are to be calculated and which can be neglected?	used in the project and fossil fuels of all types combusted at power plants in the absence of the project is conservatively neglected (refer to Section B.3).  Conclusion is pending the change of the term “natural gas” by “associated petroleum gas” throughout the PDD where appropriate. Refer to <b>Inadequacy</b> 1 in Table 2.		
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A.		OK
<b>Approved CDM methodology approach only Paragraph 41 Not applicable</b>				
<b>Estimation of emission reductions or enhancements of net removals</b>				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Approach (a) is clearly indicated by the scope of Section 6.		OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	Yes, ex ante estimates of project emissions, baseline emissions and emission reduction are provided in Section E. Calculations are made on the excel spreadsheet.		OK
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?	N/A		OK



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	(c) Emission reductions or enhancements of net removals adjusted by leakage?			
45	<p>For both approaches in 42</p> <p>(a) Are the estimates in 43 or 44 given:</p> <p>(i) On a periodic basis?</p> <p>(ii) At least from the beginning until the end of the crediting period?</p> <p>(iii) On a source-by-source/sink-by-sink basis?</p> <p>(iv) For each GHG?</p> <p>(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?</p> <p>(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?</p> <p>(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?</p> <p>(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</p>	<p>(a) Estimates in 42 are given:</p> <p>(i) For 20008-2012;</p> <p>(ii) Yes;</p> <p>(iii) On a source-by-source basis;</p> <p>(iv) For the only GHG CO2;</p> <p>(v) In tones of CO2 equivalent;</p> <p>(b) The formulae used for calculating the estimates in 43 are consistent throughout the PDD;</p> <p>(c) For calculating estimates in 43, key factors influencing the baseline emissions and the activity level of the project and the emissions associated with the project are taken into account, as appropriate;</p> <p>(d) Data sources used for calculating the estimates in 43 are clearly identified, reliable and transparent;</p> <p>(e) Yes as regards natural gas emission factor and grid emission factor.</p> <p>(f) Yes;</p> <p>(g) The estimates in 43 are consistent throughout the PDD;</p> <p>(h) Yes.</p>		OK





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	<p>appropriately justified of the choice?</p> <p>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?</p> <p>(g) Are the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(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?</p>			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE.		OK
<b>Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable</b>				
<b>Environmental impacts</b>				
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?	<p>Excerpts from the design documentation report on environmental impact regarding air emissions and water pollution are provided in Section F.1.</p> <p><b>CAR 12.</b> Please provide complete references to the Construction Code, the Law on Amendments to the Construction Code, the conclusion of State Expertise No.61, and the report on environmental impact of the project of construction of power generating unit No.2 at Nizhnevartovskaya GRES prepared by the Research and Production Enterprise "Sibneftekhim". Please provide documented evidence of these documents to the AIE.</p>	CAR 12	OK



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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?	<b>CAR 13.</b> It is incorrect to say that Section F.2 is not applicable. Please refer to the statement in Section F.1: "The necessity of an Environmental Impact Assessment (EIA) in Russia is regulated by the Federal Law "On the Environmental Expertise".	CAR 13	OK
<b>Stakeholder consultation</b>				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	This type of project is not liable to arrangement of stakeholders' consultation in form of public hearing.		OK
<b>Determination regarding small-scale projects (additional elements for assessment) Paragraphs 50 - 57 Not applicable</b>				
<b>Determination regarding land use, land-use change and forestry projects Paragraphs 58 – 64(d) Not applicable</b>				
<b>Determination regarding programmes of activities Paragraphs 66 – 73 Not applicable</b>				



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**Table 2 Resolution of Requests for Corrective Action (CAR) and Clarification (CL)**

Draft report clarifications and corrective action requests by validation team	Ref. to check list question in table 1	Summary of project participant response	Determination team conclusion
<b>CAR 01.</b> Please indicate the complete name of the scope.	-	<u>Response 1 dated 11 March</u> Corrected in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 02.</b> It is incorrect to state "Electricity produced by the new power generating unit...will replace electricity that in case of the absence of the project would be generated using less efficient technologies that are common in the region. This statement is not in accordance with the definition of the baseline scenario in Section B.1.		<u>Response 1 dated 11 March</u> Corrected in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 04.</b> Section B.1 does not provides a detailed theoretical description of the baseline in complete and transparent manner as required by Guidelines for users of JI	23	<u>Response 1 dated 11 March</u>  Detailed theoretical description of baseline is now provided in PDD version 02.	<u>Conclusion on Response 1</u> Response is not accepted. (i) A detailed theoretical description of the baseline in complete and transparent manner is not provided (it



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<p>PDD Form Version 04.</p>		<p><u>Response 2 dated 26 March</u></p> <p>/i/ Please see corrected PDD version 03. The formulae which describe the baseline are added. Also please see recalculated emission reductions. Recalculation was made due to the fact that it became possible to obtain from CJSC "Nizhnevartovskaya GRES" the data about electricity amount which was consumed to meet own needs derived by generation units (see documents handed over with PDD version 03). Initially this data were not available and calculation were made using the conservative assumption that all volume of electricity consumed for own needs were produced by generating unit #2 (share of generating unit #1 was assumed to be 0).</p> <p>/ii/ Please see corrected PDD version 03. The data about installed capacity of 400 Gcal/h was wrong. The installed capacity of heating-water converter plant of generating unit #2 is 140 Gcal/h. Please see detailed theoretical description of baseline in B.1. The issue about heat generation is considered there.</p> <p><u>Response 3 dated 03April</u></p> <p>/i/ Please see PDD version 04. The mentioned statement is corrected.</p>	<p>should include formulae which describe the baseline).</p> <p>(ii) Please elaborate on the heat issue in more detail since it questions the completeness of the baseline. The statement that the capacity 400 Gcal/h will cover the unit own needs shall be justified. CAR is not closed</p> <p><u>Conclusion on Response 2</u></p> <p>/i/ Response will be accepted when the statement below is made correct as regards heat generated into the UPS "Ural". Baseline emissions from generation of heat energy equivalent to the volume of heat energy generated by the second power generating unit into the UPS "Ural"...</p> <p>/ii/ Response is accepted. CAR is not closed.</p> <p><u>Conclusion on Response 3</u> Response is accepted. CAR is closed based on due amendment made to the PDD.</p>
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<p><b>CAR 05.</b> Areas of concern as to the investment analysis are as follows:</p> <p>(i) To define the discount rate by an approach recommended in paragraph 6 (a) of the Guidelines for additionality is applied. Please justify the applicability of this approach to the project conditions and provide reference to the Guidelines.</p> <p>(ii) Please prove that the input values used in the investment analysis are valid and applicable at the time of the investment decision taken by the project participant.</p> <p>(iii) Please clarify the sources of benchmark data in Supporting Document 2 for electricity tariff and natural gas (why not APG?) price and for the variations of these data in time.</p> <p>(iv) Please justify the rationale for the applied variation of the electricity generation in time taking into account the issue (ii) above.</p> <p>(v) Please provide formal confirmation by the project</p>	<p>29 (b)</p>	<p>(i)According to the “Tool for the demonstration and assessment of additionality” version 06.0.0 and“Guidelines on the assessment of investment analysis” version 05 the approach chosen for determining discount rate is acceptable for JI/CDM projects. Since it is hard to determine the real discount rate for this company and activity, the approach recommended by methodological tools mentioned above was chosen. All references are provided in PDD version 02.</p> <p>(ii) All input values used for investment analysis including discount rate in foreign currency of Central Bank of Russia, currency exchange rate, electricity and APG prices are valid and applicable at the time of investment decision and are confirmed by appropriate documents certified by project participant or references to public available recourses.</p> <p>(iii) The APG price and electricity price were obtained from CJSC “Nizhnevertovskaya GRES”</p> <p>(iv) The data concerning power generation connected with implementing the project activity was obtained from CJSC “Nizhnevertovskaya GRES”</p> <p>(v) Investment and maintenance costs of Nizhnevertovskaya GRES are confirmed by documents handed over to determination team</p> <p>(vi) According to the p.5 “Guidelines on the assessment of investment analysis” version 05, depreciation is not an actual expense incurred by the company and as such does not directly affect the financial viability of the project.To treat both the capital cost of the assets and their depreciation as an expense to the project would be a double counting of this cost.</p> <p>(vii)All documents related with the demonstration of project investment effectiveness are handed over to determination</p>	<p><u>Conclusion on Response 1</u></p> <p>(i) Response is not accepted.</p> <p>A. The argument “According to the Tool... is incorrect. A correct reference is in JI Guidance paragraph 44 (c).</p> <p>B. PDD page 17 declares: “In this PDD, the most recent version of the Tool for the demonstration and assessment of additionality (version 06.0.0) is applied”.</p> <p>C. Application of WACC shall be justified as per Tool paragraph 30 (c)</p> <p>D. Reference to paragraph 18 is incorrect: it does not say how cost of own capital shall be calculated.</p> <p>E. The method of benchmark estimation is not transparent. PDD states: the cost of own capital shall be calculated as the total of a risk free rate of return (3%), risk free rate of return (6.5%) and a risk premium for the host country (5.5 %). Thus, the cost of capital is 15%. It is</p>
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<p>participant of the input data for investment cost and maintenance cost.</p> <p>(vi) Please include depreciation in the investment analysis.</p> <p>(vii) Please provide the AIE the volume of the project design documentation related to the investment effectiveness.</p>		<p>team.</p> <p><u>Response 2 dated 26 March</u></p> <p>/i/</p> <p>A Please see PDD version 03. Some references were corrected.</p> <p>B and C The WACC is used as the discount rate basing on recommendations of the GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS (version 05). <b>Quote:</b> 12. <b>Guidance:</b> In cases where a benchmark approach is used the applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or <u>weighted average costs of capital (WACC) are appropriate benchmarks</u> for a project IRR.</p> <p>Taking into account that IRR is simply specific case of the discount rate at which NPV is equal 0, the same benchmark value derived from WACC may be applied in calculation of the NPV as the discount rate. In case if the resulting NPV is below 0, it means that the project IRR is lower than benchmark (WACC), therefore the project is additional.</p> <p>D Please see PDD version 03. As for justification of accepted assumption: Please find below the following quote from GUIDELINES ON</p>	<p>unclear why risk free rate of return is mentioned twice with different values and what is the year of footnote 15 for country risk premium. It should be 2000.</p> <p>(ii) Response is not accepted as to electricity tariff, APG price, investment cost, O&amp;M.</p> <p>(iii) Response is not accepted. Please provide the AIE the data validated by GRES. Anyway please provide evidence of the data validity: for instance reference to the reliable source of data.</p> <p>(iv) Response is not accepted. Please provide the AIE the data validated by GRES.and explain the variations of data.</p> <p>(v) Response is not accepted. Documents were not received.</p> <p>(vi) Response is accepted.</p> <p>(vii) Response is not accepted. Documents were not received. CAR is not closed</p>
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		<p>THE ASSESSMENT OF INVESTMENT ANALYSIS (version 5).  <b>Quote:</b>  <b>18. Guidance:</b> If the benchmark is based on parameters that are standard in the market, then the typical debt/equity finance structure observed in the sector of the country should be used. If such information is not readily available, 50% debt and 50% equity financing may be assumed as a default.</p> <p>The above mentioned paragraph provides the reference how WACC in our case has been calculated. In turn cost of equity was calculated basing on Appendix to GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS (version 5). See below.</p> <p>E:                  Please see PDD version 03. The misprint was corrected. As for calculating methodology:                  The cost of equity was calculated basing on Appendix to GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS (version 05) (hereinafter referred as Appendix). It suggests the following methodology: "The expected return on equity is composed of four elements: (a) a risk free rate of return; (b) an equity risk premium; (c) a risk premium for the host country; and(d) an adjustment factor to reflect the risk of projects in different sectoral scopes." Basing on conservative approach we used only factors a, b and c, ignoring component d.                  (a) risk-free rate is determined as 3% basing on Appendix: "2. The risk free rate of return is calculated based on the long-term average returns of US treasurybonds. The US stock market is used as a proxy because it has the longest well</p>	<p><u>Conclusion on Response 2</u></p> <p>Correction of references is accepted.</p> <p>(i) Response is not accepted. No evidence is presented as to the appropriateness of WACC for the project. Para 30 (c) of the Tool reads:                  "A company internal benchmark</p>
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		<p>recorded data for government bonds as well as stocks. A value of 3.0% is used.”</p> <p>(b) Equity risk premium is estimated as 6.5% as per Appendix: “3. The equity risk premium is derived from the long-term historical returns on equity in the US market relative to the return of bonds. Arithmetic means are used because they are more appropriate for estimating forward looking equity risk premiums than geometric means. A value of 6.5% is used.”</p> <p>(c) Risk premium for the host country (Russian Federation) is 5.5% as of 2000. Please note that correct reference is provided in PDD:  <a href="http://pages.stern.nyu.edu/~adamodar/pc/archives/ctrypre_m00.xls">http://pages.stern.nyu.edu/~adamodar/pc/archives/ctrypre_m00.xls</a> You can verify the year by entering from page <a href="http://pages.stern.nyu.edu/~adamodar/">http://pages.stern.nyu.edu/~adamodar/</a> selecting “Updated Data” and finding Risk Premiums for Other Markets</p> <p>Thereby total for return of equity is <math>3 + 6.5 + 5.5 = 15\%</math></p> <p>/ii/ The data about investment costs were initially handed over but were not seen due to technical problems. The documents which prove other mentioned values were handed over with corrected PDD version 03.</p> <p>/iii/ Please see corrected PDD version 03. The investment analysis was revised. The document which confirm assumptions used are handed over to determination team</p>	<p>weighted average capital cost of the company), only in the particular case referred to above in paragraph 5. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark”.</p> <p>The project participants did not demonstrate that this benchmark has been consistently used in the past.</p> <p>(ii) Response is accepted as to investment cost, electricity cost and APG price. Values of O&amp;M costs used in investment analysis (rows 18-20 in Document 2) do not match the vales in the document “operational costs”. Please ensure consistency.</p> <p>(iii) Response is accepted. The sources of data for electricity tariff and APG price are provided. Constant values are taken instead if varying in years.</p> <p>(iv) Response is accepted. A constant electricity generation from the year 2006 is taken (installed capacity utilisation factor is 77%).</p> <p>(v) Response is accepted. Validated</p>
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	<p>/iv/Please see corrected PDD version 03. The data on electricity generation were revised.</p> <p>/v/The documents related to O&amp;M costs are handed over to determination team with corrected PDD version 03</p> <p>/vii/ The documents related with the demonstration of project investment effectiveness are handed over to determination team with corrected PDD version 03</p> <p><u>Response 3 dated 03 April</u></p> <p>/i/ Please see PDD version 04. The investment analysis was revised. The benchmark value is now identified according to the Decree of the Government of the Russian Federation No.1470 dated 22/11/1997 “On approval of the procedure of granting the state guarantee on the basis of competitive bidding at the expense of the Development Budget of the Russian Federation and the resolution on assessment of investment project efficiency with placement through competitive bidding of centralized investment resources of the Development Budget of the Russian Federation”</p> <p>/ii/ After receiving conclusion of determination team concerning our first response all input values for investment analysis were revised, taking into account received comments. For O&amp;M costs please refer to the document <u>Input values and production data.pdf</u> handed over the determination team with PDD version 03 on 26 March. The file <u>operational costs.pdf</u> handed over with previous</p>	<p>data are provided.</p> <p>(vi) Response was accepted earlier.</p> <p>(vii) Response is not accepted. Please provide the AIE the volume of the project design documentation related to the investment effectiveness (not excel files of unknown origin).</p> <p><u>Conclusion on Response 3</u></p> <p>(i) Response is basically accepted.However, please provide electronic reference to Decree of the Government of the Russian Federation No.1470 dated 22/11/1997.</p> <p>(ii) Response is basically accepted. However, /1/ please clarify the status of the document <u>Input values and production data.pdf</u>. Does it belong to the technical report or design volume? The AIE cannot accept just signed (though undated) sheet of paper without understanding the origin of the document. Also please /2/ ensure correspondence of values of electricity generation on the excel</p>
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		<p>version PDD should be neglected.</p> <p>/vii/As for reference on risk premium for the host country. Please note that correct reference is provided in PDD: <a href="http://pages.stern.nyu.edu/~adamodar/pc/archives/ctryprem00.xls">http://pages.stern.nyu.edu/~adamodar/pc/archives/ctryprem00.xls</a> You can verify the year by entering from page <a href="http://pages.stern.nyu.edu/~adamodar/">http://pages.stern.nyu.edu/~adamodar/</a> selecting “Updated Data” and finding Risk Premiums for Other Markets.</p> <p><u>Response 4 dated 10 April</u></p> <p>/i/ Please see PDD version 05. The reference is added.</p> <p>/ii/ The documents clarifying the origin of input values and data used in investment analysis is handed over to determination team with PDD version 05.</p> <p>/vii/ Please see corrected PDD version 05.</p> <p><b><u>Response 5 dated 18 April</u></b></p> <p>/vii/ Please take into account the document handed over to determination team with Response 5. This document clarifies the issue concerning design documentation under contract # E/4.</p>	<p>sheet with the data on Опросный Лист of the document <u><a href="#">Input values and production data.pdf</a></u></p> <p>(vii) The response is not accepted as irrelevant to the request.</p> <p><u>Conclusion on Response 4</u></p> <p>/i/ Response is accepted.</p> <p>/ii/ Response is accepted.</p> <p>/vii/ Response is not accepted as it is not clear what to “see in the corrected PDD version 05”. Please note that the request CAR 05 /vii/ reads <b><i>Please provide the AIE the volume of the project design documentation related to the investment effectiveness.</i></b> The requested document is not provided to the AIE. It may be a part of design documentation under the contract No. E/4 with Quartz clause 7.1.4.</p> <p>CAR is not closed.</p> <p><u>Conclusion on Response 5</u></p> <p>Response is accepted.</p>
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			CAR is closed based on due amendment made to the PDD.
<b>CAR 06.</b> Please implement the common practice analysis as prescribed in paragraphs 43-47 of the Additionality Tool taking into account the first unit 800 MW of Nizhnevartovskaya GRES and six units 800 MW of Surgutskaya GRES-2.	29 (b)	<p><u>Response 1 dated 11 March</u></p> <p>Please see PDD version 02 for corrected common practice analysis</p> <p><u>Response 2 dated 26 March</u></p> <p>Please, see PDD version 03. The irrelevant paragraphs are deleted.</p>	<p><u>Conclusion on Response 1</u></p> <p>Response is accepted. CAR will be closed when first two paragraphs will be deleted as irrelevant to the project</p> <p><u>Conclusion on Response 2</u></p> <p>Response is accepted. CAR is closed based on due amendment made to the PDD.</p>
<b>CAR 07.</b> Reference to one of the alternatives namely continuation of the current practice "business as usual" is inadequate since the list of the alternative scenarios in Sections B.1 and B.2 does not include the BAU alternative.	29 (b)	<p><u>Response 1 dated 11 March</u></p> <p>Corrected in PDD version 02</p> <p><u>Response 2 dated 26 March</u></p> <p>Please see PDD version 03.</p>	<p><u>Conclusion on Response 1</u></p> <p>Response is not accepted. Please refer to the PDD page 21 "However, one of the alternatives is continuation of the current practice "business as usual". CAR is not closed.</p> <p><u>Conclusion on Response 2</u></p> <p>Response is accepted. CAR is closed based on due amendment made to the PDD.</p>
<b>CAR 08.</b> Please include in Section B.3 a delineation of the project boundary and the gases and sources included by using a figure or flow chart as appropriate.	32 (c)	<p><u>Response 1 dated 11 March</u></p> <p>Figure representing project boundaries is added in PDD version 02</p>	<p><u>Conclusion on Response 1</u></p> <p>Response is accepted. CAR is closed based on due amendment made to the PDD.</p>



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<b>CAR 09.</b> Please provide the precise reference to IPCC for the natural gas emission factor.	36 (b) (ii)	<u>Response 1 dated 11 March</u> Precise reference for IPCC natural gas emission factor is provided in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 10.</b> Please specify the emergency procedures to be followed if expected data are not available.	36 (b) (iii)	<u>Response 1 dated 11 March</u> Emergency procedures is specified in PDD version 02 <u>Response 2 dated 26 March</u> Please see PDD version 03.	<u>Conclusion on Response 1</u> Response is not accepted. Please specify the procedures as per Guidance on criteria Appendix A Paragraph 1 (c). CAR is not closed.  <u>Conclusion on Response 2</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 11.</b> The monitoring plan does not 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.	36 (m)	<u>Response 1 dated 11 March</u> Corrected in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 12.</b> Please provide complete references to the Construction Code, the Law on Amendments to the Construction Code, the conclusion of State Expertise No.61, and the report on environmental impact of the project of construction of power generating unit No.2 at Nizhnevartovskaya GRES prepared by the Research and Production Enterprise "Sibneftekhim". Please	48 (a)	<u>Response 1 dated 11 March</u> Complete references is added in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.



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provide documented evidence of these documents to the AIE.			
<b>CAR 13.</b> It is incorrect to say that Section F.2 is not applicable. Please refer to the statement in Section F.1: "The necessity of an Environmental Impact Assessment (EIA) in Russia is regulated by the Federal Law "On the Environmental Expertise".	48 (b)	<u>Response 1 dated 11 March</u> Corrected in PDD version 02	<u>Conclusion on Response 1</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CAR 14.</b> Inclusion of baseline emissions from generation of heat energy in the baseline description followed by its unjustified neglect (refer to the PDD Section D.1.1.4) puts under question the identification of the baseline in Section B.1. As the heat capacity of the unit No. 2 is high enough (4000 Gcal/h = 469 MW thermal) the heat issue shall be elaborated in more detail. The mentioned in PDD conservativeness related to the overestimation of fuel consumption for electricity generation seems reasonable but should be transparently proven with assessment of heat supply alternatives under the baseline.	-	<u>Response 2 dated 26 March</u>  Please see corrected PDD version 03. The data about installed capacity of 400 Gcal/h was wrong. The installed capacity of heating-water converter plant of generating unit #2 is 140 Gcal/h. Please see detailed theoretical description of baseline in B.1. The issue about heat generation is considered there.	<u>Conclusion on Response 2</u> Response is accepted. CAR is closed based on due amendment made to the PDD.
<b>CL 01.</b> Please provide the AIE a documented evidence of the above mentioned facts including the act of commissioning.	-	<u>Response 1 dated 11 March</u>  These documents were handed over to determination team	<u>Conclusion on Response 1</u> Response is not accepted. Documents were not received. CL is not closed.



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		<p><u>Response 2 dated 26 March</u></p> <p>These documents were initially handed over to determination team but due to technical problems were not seen. Now this issue is clarified with determination team.</p> <p><u>Response 3 dated 03 April</u></p> <p>/i/ The contract E/4 dated 01 June 2000 is handed over to determination team with PDD version 04.</p> <p>/ii/ The act of commissioning was signed after putting unit #2 into operation and confirms the fact that putting into operation took place. 13 October the first launch took place and some time unit #2 was working in the test mode before signing act of commissioning. So the act of commissioning can be considered as documented evidence of putting unit #2 into operation.</p> <p>/iii/ Please take into account references on public available sources, in which the ceremony of commissioning is described:  <a href="http://www.nr2.ru/16_39155.html/print/">http://www.nr2.ru/16_39155.html/print/</a>  <a href="http://finmarket.ru/z/nws/news.asp?rid=23&amp;fid=61971&amp;l=39&amp;id=262344&amp;ref=AnketaOrg">http://finmarket.ru/z/nws/news.asp?rid=23&amp;fid=61971&amp;l=39&amp;id=262344&amp;ref=AnketaOrg</a>  <a href="http://columbus.russianamerica.com/common/humor/story.php/78193?id_cr=">http://columbus.russianamerica.com/common/humor/story.php/78193?id_cr=</a></p>	<p><u>Conclusion on Response 2</u> The act of commissioning dated 14 November 2003 is received.</p> <p>Response is not accepted as appending documented evidence of:</p> <p>(i) a contract No. E/4 dated 01 June 2000,  (ii) putting the unit #2 into operation on 13 October 2003  (iii) aceremony of commissioning of the unit #2 on 14 November 2003.</p> <p>CL is not closed.</p> <p><u>Conclusion on Response 3</u>  /i/ Response is accepted.  /ii/ Response is accepted.  /iii/ Response is accepted.</p> <p>CL is closed based on the provided information.</p>
<b>CL 02.</b> Please provide the benchmark data in Supporting Document 1 validated by the project participant.	23	<p><u>Response 1 dated 11 March</u></p> <p>This data signed by project participant were handed over to determination team</p>	<p><u>Conclusion on Response 1</u> Response is accepted. CL is closed based on data provided to the AIE.</p>
<b>CL 03.</b> Please clarify in the PDD if	23	<p><u>Response 1 dated 11 March</u></p>	<p><u>Conclusion on Response 1</u></p>



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<p>the project unit produces and supplies heat. If so please elaborate on this as appropriate; in particular make it clear in the PDD if the values of gas consumption in the Supporting Document 1 relate to the electricity generation only</p>		<p>The question about heat production is clarified in PDD version 02. The data which confirm volumes of heat energy production validated by project participant is handed over to determination team.</p>	<p>CL is closed since discussion is moved to CAR 04 and CAR 14.</p>
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