



JI DETERMINATION PDD REPORT

CARBONTRUST LIMITED

“CONSTRUCTION OF NEW ENERGY UNIT AT
NOVOSIBIRSK HPS 5”

Report No: 8000408214 / 2012-262

Date: 2012-05-10

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Final Approval by: Rainer Winter	Organisational unit: TÜV NORD JI/CDM Certification Program
Client: CARBONTRUST LIMITED	Client ref.: Jolanta Narmontaite
Summary:	<input checked="" type="checkbox"/> positive determination opinion <input type="checkbox"/> negative determination opinion
<p>TÜV NORD JI/CDM Certification Program (CP) was commissioned to carry out determination PDD of the project: "Construction of new energy unit at Novosibirsk HPS 5" with regard to the relevant requirements of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.</p> <p>In the course of the pre-determination 4 Corrective Action Requests (CARs) and 0 Clarification Requests (CLs) were raised and successfully closed except for CAR A1. As the approval of the Host country will only be issued upon a positive determination opinion, this CAR will automatically be closed upon issuance of host country approval.</p> <p>The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.</p> <p>In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> - The project is in line with all relevant host country criteria Russian Federation and all relevant UNFCCC requirements for JI. Project activity approval from DFP of Russian Federation will only be issued after final determination opinion. Therefore CAR A1 cannot be closed at this stage. - The project additionality is sufficiently justified in the PDD. - The monitoring plan is transparent and adequate. - The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 1,374,357 tCO₂e are most likely to be achieved in the period from 2008-01-01 to 2012-12-31. <p>The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the determination PDD.</p>	

Report No.: 8000408214	Subject Group: Climate Protection
Report title: "Construction of new energy unit at Novosibirsk HPS 5"	
Work carried out by: Mr. Evgeni Sud Mr. Ulrich Walter Mr. Anton Yarushin	
Final technical review by: Sergej Friesen Rainer Winter	Local technical review by:
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Indexing terms

Kyoto Protocol
JI Determination PDD

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Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
ERU	Emission Reduction Unit
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CL	Clarification Request
DFP	Designated Focal Point
FAR	Forward Action Request
EIA	Environmental Impact Assessment
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NCV	Net Calorific Value of Fuel
PDD	Project Design Document
PP	Project participant
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change

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1 OBJECTIVE / SCOPE

TÜV NORD JI/CDM Certification Program (CP) has carried out a determination PDD of the project

"Construction of new energy unit at Novosibirsk HPS 5"

with regard to the relevant requirements for JI project activities.

The determination is a requirement for all JI projects. The purpose is to have an independent third party assessment of the project design and in particular, the project's baseline, the monitoring plan (MP), the project's compliance with relevant UNFCCC JI Track 1 and host country criteria are validated 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 emission reduction units (ERUs).

UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	<i>"Construction of new energy unit at Novosibirsk HPS 5"</i>
Project size	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale
JI Procedure	<input checked="" type="checkbox"/> Track 1 <input type="checkbox"/> Track 2 <input type="checkbox"/> PoA
Project Scope	<input checked="" type="checkbox"/> 1 Energy Industries (renewable- /non-renewable sources)
	<input type="checkbox"/> 2 Energy distribution
	<input type="checkbox"/> 3 Energy demand
	<input type="checkbox"/> 4 Manufacturing industries
	<input type="checkbox"/> 5 Chemical industry
	<input type="checkbox"/> 6 Construction
	<input type="checkbox"/> 7 Transport
	<input type="checkbox"/> 8 Mining/Mineral production
	<input type="checkbox"/> 9 Metal production
	<input type="checkbox"/> 10 Fugitive emissions from fuels (solid, oil and gas)
	<input type="checkbox"/> 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	<input type="checkbox"/> 12 Solvents use
	<input type="checkbox"/> 13 Waste handling and disposal
	<input type="checkbox"/> 14 Land –use, land-use change and forestry
	<input type="checkbox"/> 15 Agriculture
Applied Methodology	<i>JI Specific</i>
Technical Area(s)	H (Energy Industries)

Item	Data
Crediting period	5 years
Start of crediting period	2008-01-01

2.2 Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-2).

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	Russian Federation	"OJSC «Novosibirskenergo"
Other involved party	-	-

2.3 Project Location

The details of the project location are given in table 2-3:

Table 2-3: Project Location

No.	Project Location
Host Country	Russian Federation
District	Octyabr'skiy district of the city of Novosibirsk, Vibornaya str. - 201
Region:	Novosibirsk region
Latitude	55° 0' 20" N,
Longitude	83° 3' 38" E

2.4 Technical Project Description

The project involves a construction of new energy unit № 6 at Novosibirsk HPS-5, which includes a steam-dust coal boiler type TPE-214 Taganrog factory "Krasniy kotel'shik," LMZ turbine T-180/210-130, generator type TGV-200-2 Municipal Kharkov plant "Electrotyazhmash" and a full set of auxiliary equipment.

The composition of the main equipment of unit №6 of Novosibirsk HPS 5:

- Turbine T-180/200 130 of the Leningrad Metal Works;
- Generator type TGV-200-2MUZ Kharkov plant "Electrotyazhmash";
- Boiler E-670-13,8-545 QD (model TPE-214B), 670 t steam / h Taganrog Boiler Plant.

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The detailed technical specification of the planned equipment is provided in the PDD section A.4.2.

3 METHODOLOGY AND DETERMINATION PDD SEQUENCE

3.1 Determination PDD Steps

The determination of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the project design document (PDD)
- A desk review of the PDD^{/PDD/} submitted by the client and additional supporting documents
- Determination planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft determination reporting
- Resolution of corrective actions (if any)
- Final determination reporting
- Technical review
- Final approval of the determination.

The sequence of the determination is given in the table 3.1 below:

Table 3.1: Determination PDD sequence

Topic	Time
Assignment of determination	2012-04-06
Submission of PDD for global stakeholder commenting process	N/A ¹
On-site visit	2012-05-04
Draft reporting finalised	2012-05-07
Final reporting finalised	2012-05-10
Technical review on final reporting finalised	2012-05-08

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,

¹ Not required according to the Track 1 procedure of the Host Country

- the necessary competences to carry out the determination PDD can be provided,
 - Impartiality issues are clear and in line with the JI accreditation requirements
- a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a determination team, consistent of one team leader and 2 additional team members, were appointed. Furthermore also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Evgeni Sud	TÜV Nord Germany	TL ^{A)}	LA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Anton Yarushin	ETE (Anton Yarushin)	-	ETE	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ulrich Walter	TÜV Nord Germany	TM ^{A)}	LA	<input checked="" type="checkbox"/>	G/H	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Sergej Friesen	TÜV Nord Germany	TR ^{B)}	LA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Rainer Winter	TÜV Nord Germany	TR ^{B)} FA ^{B)}	SA	<input checked="" type="checkbox"/>	G/H	<input type="checkbox"/>	<input type="checkbox"/>

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; E: Expert; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ No team member

⁴⁾ As per S01-MU03 or S01-VA070 A2 (such as A, B, C.....)

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PDD, as received from the project participants, has been made publicly available on the dedicated UNFCCC JI website prior to the determination activity commenced. Stakeholders have been invited to comment on the PDD within the 30 days public commenting period.

In case comments were received, they are taken into account during the determination process. The comments and the discussion of the same are documented in annex 5 of this report.

3.5 Determination PDD Protocol

In order to ensure consideration of all relevant assessment criteria, a determination protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of determination and the results of the pre-determination the identified criteria. The determination protocol reflects the generic JI requirements each JI project has to meet as well as project specific issues as applicable. The determination protocol serves the following purposes:

- It organises, details and clarifies the requirements that a JI project is expected to meet;
- It ensures a transparent determination PDD process where the independent entity will document how a particular requirement has been validated and the result of the determination.

The determination protocol as described in Figure 1.

Determination Protocol Table A-1: Requirement checklist						
No.	DVM2 paragraph / Checklist Item <i>(incl. guidance for the determination team)</i>	Initial Finding <i>(Means and results of assessment)</i>	Ref.	Action requested to project participant <i>(CAR, CL, FAR)</i>	Review of PP's action	Conclusion
<i>Number of the checklist item</i>	<i>The section gives a reference to the relevant paragraph of the DVM. The checklist items are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further subdivided as per the requirements of the topic and the individual project</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the initial assessment of the determination team and how the assessment was carried out.</i>	<i>Gives reference to the information source on which the assessment is based on.</i>	<i>Assessment based on evidence provided if the criterion is not fulfilled a CAR, CL or FAR (details of each finding are elaborated in chapter 4) is raised otherwise no action is requested. The assessment refers to the draft determination stage.</i>	<i>Assessment based on the project participant action in response to the raised CAR, CL or FAR (details of each finding are elaborated in chapter 4). The assessment refers to the final determination stage.</i>	<i>Final assessment at the final determination stage is given.</i>

² JISC 19 Annex 4



	<i>activity.</i>				
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Figure 1: Determination protocol tables

The completed determination protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PDD (version 1) and supporting background documents related to the project design and baseline were reviewed.

Furthermore, the determination team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Follow-up Interviews

The determination team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for JI.

The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project proponent 1. Projects & Operations Personnel of PP 2. Consultant, CJSC "National Carbon Sequestration Foundation"	<ul style="list-style-type: none"> - Chronological description of the project activity with documents of key steps of the implementation. - Current status of plant design - Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project - Host Country Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Project activity starting date - ERU allocation / ownership - Baseline study assumptions - Additionality - Monitoring - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PDD

A comprehensive list of all interviewed persons is part of section: 7 References.

3.8 Project comparison

The determination team has compared the proposed JI project activity with similar projects or technology that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Project technology
- Additionality issues
- Methodological issues
- Reasons for reviews, requests for reviews and rejections within the JI registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence on the project results,
- the requirements deemed relevant for determination PDD of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC JISC or that emission reductions would not be able to be verified during determination ERU.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first determination ERU.

3.9.2 Draft Determination PDD

After reviewing all relevant documents and taken all other relevant information into account, the determination team issues all findings in the course of a draft determination report and hands this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

3.9.3 Final Determination PDD

The final determination starts after issuance of the proposed corrective action (CA) of the CARs CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are "closed out" by the determination team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first determination ERU. The determination team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive determination opinion can be issued by the determination team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final determination report a technical review of the whole determination procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the determination team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the determination opinion and the topic specific assessments as prepared by the determination team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete determination will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for the Host Country Approval and/or registration can be started (in case of a positive determination opinion).

4 DETERMINATION FINDINGS

In the following table the findings from the desk review of the published PDD, visits, interviews and supporting documents are summarised:

Table 4-1: Summary of CARs, CLs and FARs issued

Determination topic ¹⁾	No. of CAR	No. of CL	No. of FAR
General description of project activity (A) - Project boundaries - Participation requirements - Technology to be employed - Contribution to sustainable development	2	-	-
Project baseline (B) - Baseline Methodology - Baseline scenario determination - Additionality determination - Calculation of GHG emission reductions Project emissions Baseline emissions - Leakage	1	-	-
Duration of the Project / Crediting Period (C)	-	-	-
Monitoring Methodology (D) - Monitoring of Project emissions Baseline emissions Leakage Sustainable development indicators / environmental impacts Project management planning	1	-	-
Estimation of greenhouse gas emission reductions (E)	-	-	-
Environnemental impacts (F)	-	-	-
Stakeholder Comments (G)	-	-	-
SUM	4	-	-

¹⁾ The letters in brackets refer to the determination protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all determination items it should be referred to the determination protocols (see Annex 1).

Finding:		A1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Approvals of all Parties involved are pending.			
Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	<p>The written project approval will be received from the Parties involved after the project determination by accredited independent entity (AIE).</p> <p>According to the Regulations "On Realization of Article 6 of Kyoto Protocol to United Nations Framework Convention on Climate Change" approved by the Government Decree № 780 dated on 15.09.2011 the project shall be approved following the positive determination of the project by an AIE.</p> <p>The corresponding information is provided in the section A.3 and A.5 of the PDD.</p>			
AIE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.</i>	This is correct because a positive determination opinion is prerequisite for applying Host Country Approval.			
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic determination ERU <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The CAR / CL is closed, <input checked="" type="checkbox"/> The CAR / CL could not be closed.			

Finding:		A2		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR	
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<ol style="list-style-type: none"> 1. The schedule of project realization is incorrect in respect of equipment commissioning. 2. A justification of the fact of continuous and real actions was taken to secure JI status was not provided. 3. The PDD version contains Russian wording, it shall be assured that all words are presented in English as request by the JI guidelines. 			



Finding:	A2
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<ol style="list-style-type: none"> 1. The schedule of project realization (Table A.2) is corrected based on the attached Act of commissioning. 2. The attached Protocols for the period 2003-2011 confirms that continuous action were taken to secure JI status. The corresponding information was added to the section A.2 of PDD 3. Corrected. See PDD.
<p>AIE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.</i></p>	<ol style="list-style-type: none"> 1. The schedule of project realization was duly corrected in the revised PDD and is in line with Act of commissioning. 2. The information on justification of the fact of continuous action were taken to secure JI status is provided in the Summary table in the PDD. The appropriate revision was introduced in section A.2 of PDD. Please see the subsection "Kyoto history component". 3. PDD was duly corrected.
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<p> <input type="checkbox"/> To be checked during the first periodic determination ERU <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The CAR / CL is closed, <input type="checkbox"/> The CAR / CL could not be closed. </p>

Finding:	B1		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<ol style="list-style-type: none"> 1. The baseline was established without taking into account relevant national and/or sectoral policies and circumstances. 2. As the project includes installation of a number of equipment with various operational lifetimes, please clarify how the expected operational lifetime of the project was defined.. 		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<ol style="list-style-type: none"> 1. Corresponding information was added to the section B 3 of PDD (p.20) 2. Expected operational lifetime of the project was chosen on the base of minimal lifetime of the equipment of the energy unit №6. Turbine has the minimal lifetime – 220 000 hours. So, if turbine will be in operation 8760 hours per year, the operational lifetime of the turbine will amount 25 years. 		



Finding:	B1
<p>AIE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.</i></p>	<ol style="list-style-type: none"> The specific circumstances of the energy industry in Russia and the development of the energy sector were considered within the baseline identification. PDD was duly corrected. Given clarification is found appropriate.
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<input type="checkbox"/> To be checked during the first periodic determination ERU <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The CAR / CL is closed, <input type="checkbox"/> The CAR / CL could not be closed.

Finding:	D1		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<ol style="list-style-type: none"> Please clarify why the oxidation factor for calculating the emissions from burning of coal is not taken into account. Please clarify procedures used in case of malfunction of the relevant measurement devices. There is no information in PDD about measurements of new/additional parameters. 		
<p>Corrective Action #1 <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<ol style="list-style-type: none"> Oxidation factor from burning of coal is taken equal to 1 according with IPCC 2006 "Guidelines for National Greenhouse Gas Inventories", Volume 1, Chapter 1, Table 1.4." All measure devices have duplicate analogue on the case of malfunction of relevant measurement devices. The project monitoring is a part of the Novosibirsk HPS-5 entire monitoring system, i.e. all parameters are monitored by the plant due to relevant laws or other obligations. Therefore the project monitoring does not require measurements of new/additional parameters. The PDD was revised accordingly. 		
<p>AIE Assessment #1 <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and AIE assessments (#2, #3, etc.) shall be added.</i></p>	<ol style="list-style-type: none"> Given clarification is found appropriate. Given clarification is found appropriate. It is duly evidenced from the models 15506 that project monitoring is a part of the Novosibirsk HPS-5 entire monitoring system, i.e. all parameters are monitored by the plant due to relevant laws or other obligations. 		



Finding:	D1
<p>Conclusion <i>Tick the appropriate checkbox</i></p>	<ul style="list-style-type: none"><input type="checkbox"/> To be checked during the first periodic determination ERU<input type="checkbox"/> Appropriate action was taken<input type="checkbox"/> Project documentation was corrected correspondingly<input type="checkbox"/> Additional action should be taken<input checked="" type="checkbox"/> The CAR / CL is closed,<input type="checkbox"/> The CAR / CL could not be closed.

5 DETERMINATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

Letter of Approval (LoA) from all Parties involved are pending. As the LoA of the Host country will only be issued upon a positive determination opinion, this CAR will automatically be closed upon issuance of host country approval.

Project Participants

Party involved is Russian Federation acting as a Host Party. Project Participant of the Host Country is OJSC «Novosibirskenergo».

5.1.2 PDD editorial Aspects

Project Design Document Form Version 01 – in effect as of 15 June 2006 – has been used. This is the latest version of the PDD form. Guidelines for users of the JI PDD form Version 04 have been used for completing the PDD. These Guidelines should be taken into account for all PDDs to be published from 1 January 2009.

5.1.3 Technology to be employed

The project involves a construction of new energy unit № 6 at Novosibirsk HPS-5, which includes a steam-dust coal boiler type TPE-214 Taganrog factory "Krasniy kotel'shik," LMZ turbine T-180/210-130, generator type TGV-200-2 Municipal Kharkov plant "Electrotyazhmash" and a full set of auxiliary equipment.

The composition of the main equipment of unit №6 of Novosibirsk HPS 5:

- Turbine T-180/200 130 of the Leningrad Metal Works;
- Generator type TGV-200-2MUZ Kharkov plant "Electrotyazhmash";
- Boiler E-670-13,8-545 QD (model TPE-214B), 670 t steam / h Taganrog Boiler Plant.

The detailed technical specification of the planned equipment is provided in the PDD section A.4.2.

The description of the project activity is considered to be accurate, complete, presented in a detailed manner and in line with provided evidences.

The implementation of the project activity could be evidenced by various protocols and acts that traced particular stages of the project implementation and recorded milestones of the project implementation. The determination team has checked all provided evidences^{/CR1/} Based on this the description of the project implementation as described in the PDD could be verified.

5.1.4 Small Scale Projects

No applicable because it is a large scale project

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The PDD explicitly indicates that the JI specific approach was used to identify the baseline and justify the additionality.

The PDD provides a detailed theoretical description in a complete and transparent manner. In particular it indicates that JI specific approach is based on the Guidance on criteria for baseline setting and monitoring" (Version 03) and Appendix B to Decision 9/CMP.1. The version 03 of the Guidance on criteria for baseline setting and monitoring" is the latest version that was issued within the JISC 26 meeting.

The applied approach was used in numerous JI projects in Russia³, which involve construction of the power plants. The proposed JI specific approach was positively determined by other accredited independent entities (AIEs) and approved by the Russian DFP within similar JI projects.

5.2.2 Project Boundary

All equipment used within the project activity has been listed in the PDD including the information about its purpose and the technical specification. The project boundary is clearly described in words and a visualisation of the physical project boundary as well as a table defining all significant GHG gases has been included in the PDD.

Within the on-site assessment the determination team was able to confirm that project was implemented as described in the PDD. The relevant equipment was installed. The technical data of the installed equipment correspond to the information provided in the PDD.

5.2.3 Baseline Identification

The procedure to arrive at the baseline scenario is in line with the applied methodology. All plausible alternatives have been identified.

Alternatives

The PDD includes an analysis of all realistic alternatives to the project scenario. The project activity without JI consideration and the continuation of the pre-project practice have been identified as plausible and realistic alternatives. As per the PDD the following alternatives were considered:

- **Alternative scenario 1.** The electricity to be generated by project is provided by the other existing plants and the other new energy units of UPS Siberia.

³ Please refer to the information about the JI projects published on the official website of Sberbank <http://www.sbrf.ru/moscow/ru/legal/cfinans/sozip/>

The heat to be generated by project is provided by newly constructed boilers and by increasing the load on the existing boiler equipment of power-suppliers of the Novosibirsk region.

- **Alternative scenario 2.** Realization of the project without being registered as a joint implementation project - Construction of new energy unit at Novosibirsk HPS 5 to generate additional power on coal.
- **Alternative scenario 3** The construction of new energy unit at Novosibirsk HPS 5 to generate additional power on natural gas, fuel oil, biomass e.t.c – on the fuel other than coal" was considered as a possible alternative.

Key factor analysis (Barrier analysis)

In order to identify the most plausible alternative the PP performed key factor analysis, which is similar to the barrier analysis as per the approved CDM tools^{/TA/CT/}.

In the course of the key factor analysis the PP demonstrated that project activity faces different barriers related to the

- Local availability of technologies, equipment, experience and know-how
- Economic situation and availability of funds (including investment barrier)
- Price and availability of fuel

In essence it was demonstrated that all key factors favour alternative 1. In contrast to this, the project activity faces the financial barrier (low financial attractiveness).

All project measures were included and assessed within the investment analysis. It was duly demonstrated that project is financially not attractive, i.e. the financial indicator is below the benchmark valid at time of investment decision.

Taking this into account it was reasonably concluded that the project activity is less attractive as compared to the alternative 1.

Investment analysis

Investment analysis that was performed as a part of additionality justification also demonstrates that the project scenario is not the most attractive alternative or economically feasible without benefits from ERU sales. All parameters applied within the investment analysis have been assessed as plausible. Applied benchmark has been supported by evidences chosen and has been assessed as appropriate. (Please refer to annex 3).

5.2.4 Additionality Determination

Consideration of JI in decision making (if project start before determination)

The starting date is in line with JI glossary of terms. Based on provided evidences it could be concluded that JI was considered at the time of the decision making. The corresponding evidences demonstrate that without benefits out of JI the project would be not financial viable. Furthermore the impact of JI has been calculated and it



could be demonstrated that benefits out of JI would make the project financial attractive. The consideration of JI has been assessed as serious.

The description of actions and the corresponding assessment of the determination team for the considered project activity is presented in the table below:

Year	Description of action provided by Project participant	Assessment by the determination team
2003 (investment decision)	<p>Action: Decision to go ahead with the project activity within the framework of JI mechanism of Kyoto protocol (Article 6 of the Kyoto Protocol).</p> <p>Evidence: Business Plan "Construction of 6-th energy unit at the Novosibirsk HPS 5", 2002 JSC "Novosibirskenergo"^{/PTS-03/},</p> <p>Justification of the evidence: That was a management decision to start the project as a JI activity.</p>	<p>Decision to go ahead with project measures was made in 2003. The decision to go ahead with the project is evident from the Business Plan "Construction of 6-th energy unit at the Novosibirsk HPS 5", 2002 JSC "Novosibirskenergo"^{/PTS-03/}, which is approved and signed by the responsible manager.</p> <p>The business plan (feasibility study)^{/PTS-03/} clearly states that project measures should be implemented as JI project. Based on this it could be confirmed that project participant was aware of the JI prior to the project activity start date. Provided evidence^{/PTS-03/} clearly shows that JI was considered within the decision making process.</p> <p>As explained in the section B of the PDD the project activity does not result in sufficient economic or financial benefits. The same is evident from business plan (feasibility study)^{/PTS-03/}. Therefore the determination team agrees that the benefits from ERUs were a decisive factor in the decision to proceed with the project.</p> <p>The results of the investment analysis were presented to the management and became the basis for the investment decision.</p> <p>The business plan^{/PTS-03/} is prepared in a detailed manner and refers to the particular measures and technologies to be applied as well as the main</p>



		<p>technical, organizational and economic aspects of the considered project.</p> <p>The business plan^{/PTS-03/} including the decision to go ahead with the project is signed by responsible manager. Therefore the provided evidence was assessed to be a reliable source. The provided evidence is in line with requirements of the "Guidelines on the demonstration and assessment of prior consideration of the CDM" as per EB 62 annex 13.</p> <p>As a result the determination team is of the opinion that it could be duly demonstrated that the JI was seriously considered in the decision to implement the project activity.</p> <p>It was concluded that justification of prior consideration is in line with the requirements of the "Guidelines on the demonstration and assessment of prior consideration of the CDM" as per EB 62 annex 13.</p>
<p>2005</p>	<p>Action: The decision to develop a project idea (PIN) for the proposed project activity related to the 6th unit at the Novosibirsk HPS-5</p> <p>Evidence: Protocol of the meeting about realization of JI project in the frame of Kyoto protocol from 08.02.2005 № 2K^{/PTS-05/}.</p> <p>Justification of the evidences: Keeping adherence to commitment to develop the project under JI-mechanism after KP ratification and establishment of JI approval procedure the PP proceeded with the monitoring of status of laws on adoption of these</p>	<p>Action Provided <i>Protocol of meeting</i>^{/PTS-05/} was assessed as appropriate evidence to demonstrate that continuing and real actions were taken to secure JI status in accordance with EB 62 annex 13. because</p> <ul style="list-style-type: none"> • The document clearly indicates that PP has analyzed the development of the carbon market and progress of the Kyoto protocol ratification, • The document clearly states that although the PP saw a slowdown of the Kyoto protocol ratification it decided to take further steps i.e. PIN development. <p>Provided <i>protocol</i>^{/PTS-05/} was assessed as reliable evidence because it is prepared in a detail</p>



	<p>documents and decided to develop project idea note..</p>	<p>manner, contains the topics of discussion, the decision made and is signed by responsible personnel.</p> <p>It should be borne in mind that in this year the Kyoto process was still in the very early stage. Many details related to the preparation of the relevant documents as well as to the preparation of the application by the local authorities were not defined.</p> <p>Therefore actions (i.e. PIN development) indicated by PP were assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>
<p>2006</p>	<p>Action: The development of a project idea (PIN) for the proposed project activity related to the 6th unit at the Novosibirsk HPS-5</p> <p>Evidence: Protocol of the meeting about realization of JI project in the frame of Kyoto protocol from 05.04.2006 № 3K /PTS-06/</p> <p>Justification of the evidences: Keeping adherence to commitment to develop the project under JI-mechanism after KP ratification and establishment of JI approval procedure the PP proceeded with the monitoring of status of laws on adoption of these documents: However it was decided not to further develop JI relevant project documentation.</p>	<p>Action Provided <i>Protocol of meeting</i>^{PTS-06/} was assessed as appropriate evidence to demonstrate that continuing and real actions were taken to secure JI status in accordance with EB 62 annex 13. because</p> <ul style="list-style-type: none"> • The document clearly indicates that PP has analyzed the development of the carbon market and progress of the Kyoto protocol ratification, • The document clearly states that although the PP saw a slowdown of the Kyoto protocol ratification it decided to take further steps i.e. to monitor the status of relevant laws and regulation in Russia. <p>Provided <i>protocol</i>^{PTS-06/} was assessed as reliable evidence because it is prepared in a detail manner, contains the topics of discussion, the decision made and is signed by responsible personnel.</p> <p>It should be borne in mind that in this year the Kyoto process was still in the very early stage. Many details related to the preparation of the relevant</p>

		<p>documents as well as to the preparation of the application by the local authorities were not defined.</p> <p>Therefore actions indicated by PP were assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>
<p>2008</p>	<p>Action: Decision of continuation of project implementation under the joint implementation mechanism. Monitoring of the project steps.</p> <p>Evidence: Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 16.01.2008 №4K^{/PTS-07/}.</p> <p>Justification of the evidences: Keeping adherence to commitment to develop the project under JI-mechanism after KP ratification and establishment of JI approval procedure the PP proceeded with the monitoring of status of laws on adoption of these documents.</p>	<p>Provided <i>Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 16.01.2008 №4K^{/PTS-07/}</i> was assessed as appropriate evidence to demonstrate that continuing and real actions were taken to secure JI status in accordance with EB 62 annex 13. because</p> <ul style="list-style-type: none"> • The document clearly indicates that PP has analyzed the development of the carbon market and progress of the Kyoto protocol ratification, • The document clearly states that although the PP saw a slowdown of the Kyoto protocol ratification it decided to take further steps. <p>Provided <i>protocol^{/PTS-07/}</i> was assessed as reliable evidence because it is prepared in a detail manner, contains the topics of discussion, the decision made and is signed by responsible personnel.</p> <p>Many details related to the preparation of the relevant documents as well as to the preparation of the application by the local authorities were not defined. Therefore actions indicated by PP were assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>



		<p>Therefore actions indicated by PP were assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>
<p>2009</p>	<p>Action: The decision to start work on the development of joint implementation project for the construction of a 6-th unit at the Novosibirsk HPS-5.</p> <p>Evidence: Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 10.12.2009 №5K^{/PTS-09/}.</p> <p>Justification of the evidences: Keeping adherence to commitment to develop the project under JI-mechanism after KP ratification and establishment of JI approval procedure the PP proceeded with the monitoring of status of laws on adoption of these documents and to develop PDD (project design document) of the considered project activity.</p>	<p>Provided <i>Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 10.12.2009 №5K^{/PTS-09/}</i> was assessed as appropriate evidence to demonstrate that continuing and real actions were taken to secure JI status in accordance with EB 62 annex 13. because</p> <ul style="list-style-type: none"> • The document clearly indicates that PP has analyzed the development of the carbon market and progress of the Kyoto protocol ratification, • The document clearly states that the PP decided to develop PDD. <p>Provided <i>protocol^{/PTS-09/}</i> was assessed as reliable evidence because it is prepared in a detail manner, contains the topics of discussion, the decision made and is signed by responsible personnel.</p> <p>The decision to develop PDD was assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>
<p>2011</p>	<p>Action: The decision to resume the PDD development for the project "Construction of a new unit" within the framework of the Kyoto Protocol.</p> <p>Evidence: Protocol of the</p>	<p>Provided <i>Protocol of the meeting about realization of Kyoto protocol in RF from 21.04.2011 №6K^{/PTS-11/}</i> was assessed as appropriate evidence to demonstrate that continuing and real actions were taken to secure JI status in accordance with EB 62 annex 13. because</p>

	<p>meeting about realization of Kyoto protocol in RF from 21.04.2011 №6K^{/PTS-11/}.</p> <p>Justification of the evidences: Keeping adherence to commitment to develop the project under JI-mechanism after KP ratification and establishment of JI approval procedure the PP proceeded with the monitoring of status of laws on adoption of these documents and developed PDD (project design document) of the considered project activity.</p>	<ul style="list-style-type: none"> • The document clearly indicates that PP has analyzed the development of the carbon market and progress of the Kyoto protocol ratification, • The document clearly states that the PP decided to develop PDD. <p>Provided <i>protocol</i>^{/PTS-11/} was assessed as reliable evidence because it is prepared in a detail manner, contains the topics of discussion, the decision made and is signed by responsible personnel.</p> <p>The decision to development of the PDD was assessed as plausible with regards to the circumstances and sufficient to demonstrate that real actions were taken to secure JI status.</p>
2011	<p>Action: The consulting company informed TNK-BP about the completion of PDD development. It was decided to check data provided in PDD and to organize a determination process.</p> <p>Evidence: Official note^{/PTS-11/} from the general director, dated 29.11.2011 and project PDD dated 20.11.2011.</p> <p>Justification of the evidences: This is a direct real action to provide JI status of the projects as the monitoring for the project emissions was provided.</p>	<p>In 2011 the development of the project PDD was completed. This could be evidenced by means of the PDD dated November 2011 and documented communication^{/PTS-11/} between the PP and JI consultant.</p> <p>This PDD was submitted to the responsible department of the company for further review and approval.</p> <p>Therefore it was concluded that real actions were taken to secure JI status of the project.</p>
2012		<p>In 2012 TÜV Nord was requested to submit a commercial offer for determination services for this project activity.</p>

As a result it could be concluded that project participant was able to demonstrate that continuing and real actions were taken to secure JI status for the project in parallel with its implementation in accordance with provisions of EB 62 annex 13. The explanation of each action was supported by corresponding documented evidence. All explanations and justifications given to explain each particular action were found plausible, in line with the information given in the corresponding evidence and in line with the development of JI approval process in Russia.

As per the EB 62 annex 13 *"In validating proposed CDM project activities where there is less than 2 years of a gap between the documented evidence the DOE shall conclude that continuing and real actions were taken to secure CDM status for the project activity"*. As evident from the table above, documented evidences were provided for every two year after the management decision. Therefore the determination team concluded that continuing and real actions were taken to secure JI status for the project activity.

Application of methodology / methodological tools

The additionality was justified following the JI specific approach elaborated in the PDD.

Alternatives

The PDD provides an analysis of all realistic alternatives to the project scenario as required by the JI specific approach. The project activity without JI consideration and the alternative 1 and alternative 3 have been identified as plausible and realistic alternatives.

Investment analysis

Investment analysis was carried out within the baseline identification as a part of the Key factor analysis. The project scenario is not the most attractive alternative or economically feasible option without benefits from ERU sales. The latest version of the Guidance on the Assessment of Investment Analysis was applied in the assessment. The calculation approach is correct. All parameters are assessed as plausible. The benchmark chosen is appropriate. Please refer to annex 3 of this report.

Barrier analysis

Please refer to the comment under baseline identification.

Common practice analysis

Finally, the PP performed common practice analysis. The geographical region (Russia) is appropriate. The technology excluding JI projects is not widely observed in the region.

Summary

In the course of the determination it could be concluded that the baseline scenario has been appropriately elaborated and additionality has been appropriately justified.

5.2.5 Monitoring Methodology

The monitoring plan is elaborated in detail in section D of the PDD. The PDD clearly states that JI specific approach was used to elaborate the monitoring plan. The applied approach is based on the requirements of the "Guidance on criteria for baseline and monitoring" version 03. This is the most recent version and hence appropriate.

The determination team has crosschecked the applied approach and found it appropriate. Also the fixed parameters and variables were found consistent with the IPCC data and further third party sources. The applied approach was elaborated in several similar JI projects and approved by another independent entity.

5.2.6 Monitoring Plan

The monitoring plan covers all monitoring parameters given in the elaborated JI specific monitoring methodology. The monitoring plan was already successfully implemented.

5.2.7 Project Management Planning

The project management planning is appropriate for the purpose of the projects monitoring. As already noted the monitoring plan was already successfully implemented and is duly performed by PP.

It is important to note that PP established a special metrological department, which is responsible for proper operation of all measurement devices. All measurement devices are under control of this metrological division. The calibration will be performed by the independent accredited laboratories. Therefore it was concluded that PP quality control measures are duly implemented at the plant.

5.2.8 Calculation of GHG Emission Reductions

The calculation done is as per elaborated algorithm. All data not to be monitored is correct. The values for the monitoring parameters are plausible. The estimated emission reductions are plausible and conservative. It should be noted that for the years 2008-2011 the actual figures were used. For the year 2012 the estimation is based on the historical figures.

5.2.9 Crediting Period

The choice of the crediting period is unambiguously given in entire PDD. The crediting period starting date 2008-01-01 is appropriate.

5.2.10 Environmental Impacts

The project documentation contains an analysis of environmental impacts. An EIA is required from host country. Therefore the EIA was carried out in accordance with the requirement of host country.

5.2.11 Comments by Local Stakeholders

All relevant local stakeholders have been invited to comment on the project. The stakeholder consultation process was assessed as appropriate and in line with the Host country regulation.

6 DETERMINATION OPINION

TÜV NORD JI/CDM Certification Program (CP) was commissioned to carry out determination PDD of the project: "Construction of new energy unit at Novosibirsk HPS 5" with regard to the relevant requirements of the UNFCCC for JI project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

In the course of the pre-determination 4 Corrective Action Requests (CARs) and 0 Clarification Requests (CLs) were raised and successfully closed except for CAR A1. As the approval of the Host country will only be issued upon a positive determination opinion, this CAR will automatically be closed upon issuance of host country approval.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria Russian Federation and all relevant UNFCCC requirements for JI. Project activity approval from DFP of Russian Federation will only be issued after final determination opinion. Therefore CAR A1 cannot be closed at this stage.
- The project additionality is sufficiently justified in the PDD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 1,374,357 tCO₂e are most likely to be achieved in the period from 2008-01-01 to 2012-12-31.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the determination PDD.

Essen 2012-05-10



Evgeni Sud
TÜV NORD JI/CDM CP
Determination Team Leader

Essen 2012-05-10



Rainer Winter
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
PU6	The Project "Start-up complex of unit №6 at Novosibirsk HPS 5." Novosibirsk, 2004. JSC "SibCOTES"
/PTS-03/	Business Plan "Construction of 6-th energy unit at the Novosibirsk HPS 5", 2002 JSC "Novosibirskenergo"
	Protocol of the meeting about resuming the project of energy unit №6 commissioning at Novosibirsk HPS-5 from 15.02.2003 № 1K
/PTS-05/	Protocol of the meeting about realization of JI project in the frame of Kyoto protocol from 08.02.2005 № 2K
/PTS-06/	Protocol of the meeting about realization of JI project in the frame of Kyoto protocol from 05.04.2006 № 3K
/PTS-08/	Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 16.01.2008 №4K
/PTS-09/	Protocol of the meeting about actualization of the information on procedures for implementing the Kyoto Protocol in RF from 10.12.2009 №5K
/PTS-11/	Protocol of the meeting about realization of Kyoto protocol in RF from 21.04.2011 №6K
/CR1/	The act of the state acceptance commission about acceptance of the completed project into operation from 24.01.2005
AP	Act of choosing the site for placement of the Novosibirsk HPS 5
PST	Passport on steam turbine T 180/210-130-1 st. №6
PSB	Passport on steam boiler TPE/214B st.№6

Reference	Document
PT	Passport on transformer, type TDC-250000/110-Y1
PTG	Passport on turbogenerator, type TGV 220 – 2PUZ
FL102	Federal law 26.6.2008 N 102-FZ "On ensuring the uniformity of measurements"
CD20	The concept of long-term development of the Russian Federation until 2020
ES20	Energy Strategy of Russia until 2020.
ES30	Energy Strategy of Russia until 2020.
AM	Approved baseline and monitoring methodology AM0058
TDD	Technical decisions and directive documents. Novosibirsk HPS 5
ENR	Explanatory note to the technical act of remarking steam turbines T-180/210-130 -1 PO LMZ st. № 1 - 6.
EL-EF	Research conducted by Lahmeyer International: "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia"
R780	Resolution of the Government of the Russian Federation №780 from 15 September 2011 "Concerning the measures on the implementation of Article 6 of the Kyoto protocol to the UN FCCC concerning climate changes"
M15506	Models 15506 for 2008-2011
R197	Resolution of the Novosibirsk Oblast Council of Deputies from 21.11.2001, № 197-OSD "On Approval of medium-term program of

Reference	Document
	socio-economic development of the Novosibirsk region for the period until 2003."
R2000	Resolution of the City Council of the Novosibirsk from 20.10.2000, № 2000 "On approval of the concept of housing construction in Novosibirsk for 2000 - 2005 years"
R2221	Resolution of the the City Council of Novosibirsk from 27.11.2000 № 2221 "On approval of the program of reconstruction and modernization of housing stock for 2000-2005."
R651	Resolution of the Head of Administration of the Novosibirsk from 18.07.2001 № 651 "About measures on development of individual housing construction in rural areas of the Novosibirsk Region for 2001-2004."
F03	Forecast of socio-economic development of the Russian Federation until 2003 (Ministry of Economic Development and Trade of the Russian Federation, Moscow, December 2000)
PSED	Program of socio-economic Development of the Russian Federation for the medium term (2002-2004) (Approved by Decree of the RF Government dated July 10, 2001 № 910-p)
TCB	Telegram of the Central Bank of 06.08.2002 № 1185-I
IMS	Investment management, Sheremet V.V., 1998, Volume 2, p.151, Table 13.5.1
ACP	"The experience of the introduction of three-stage combustion systems for dust coal boilers with gas-fired stage of recovery," N. Zykov, V. Ostapenko, EE Ruskih, FA Serant, JSC "SibCOTES", Novosibirsk
F7	Forms 7Mt
EIA	Conclusion of General administration of Natural Resources and Environment of Ministry of Natural Resources of Russia in Novosibirsk

Reference	Document
	Region № 482 on the project "start-up complex of the power unit 6 of the Novosibirsk HPS 5"
EIA1	Resolution on the pollutant emission into the atmosphere by the Novosibirsk HPS 5 of JSC "Novosibirskenergo"
ERU	Emission reduction calculation in the the Excel calculation spreadsheet
CE	Planned cost estimates of "Novosibirskenergo" for 2003
PDD	Project Design Document Version 1 (Published version) Project Design Document Final Version
XLS	Investment analysis within the Excel calculation spreadsheet

Table 7-2: Background investigation and assessment documents

Reference	Document
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/DVM/	Joint Implementation determination and verification manual (Version 01), issued by the Joint Implementation Supervisory Committee
/GBM/	Guidance on Criteria for baseline setting and monitoring
/GCP/	Guidelines for users of the Joint Implementation project design document form (version 04)
/GJI/	Guidelines for the implementation of Article 6 of the Kyoto Protocol as per 9/CMP.1
/IPCC-GP/	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
/IPCC-RM/	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/KP/	Kyoto Protocol (1997)

Reference	Document
/MA/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/Meth/	
/TA/	Tool for the demonstration and assessment of additionality (Ver. 5.2).

Table 7-3: Websites used

Reference	Link	Organisation
/cbr/	www.cbr.ru	Information about the Central bank discount rate
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/ie/	www.iea.org	International Energy Agency
/r-2/	http://sberbank.ru/moscow/ru/legal/cfinans/sozip/	JSC "Sberbank RF"
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Lamirev Andrey	Sibeco/Technical director
/IM02/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Podteterin Yuri	Sibeco/Head of New technologies department
/IM03/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Brazhnik Dmitriy	Sibeco/Head of Innovation department
/IM04/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Belozarov Oleg	Sibeco/Deputy head of Innovation department

Reference	Mol ¹		Name	Organisation / Function
/IM05/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Ivanov Vladimir	Sibeco/Lead expert of Innovation department
/IM06/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Skorohod Andrey	Sibeco/Head of Industrial development department
/IM07/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Skryabin Veniamin	Sibeco/ Head of production and technical department
/IM08/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Osovskiy Alfred	Sibeco/ Deputy head of production and technical management of system-wide issues and environmental activities
/IM09/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Starodubov Alexandr	Novosibirsk HPS 5/Director
/IM10/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Efremov Fedor	Novosibirsk HPS 5/Chief engineer
/IM11/	V	<input type="checkbox"/> Mr. <input type="checkbox"/> Ms	Baydakova Evgeniya	NCSF/JI consultant

¹⁾ Means of Interview: (Telephone, E-Mail, Visit)

ANNEX

- A1:** Determination Protocol
- A2:** Assessment of Baseline Identification
- A3:** Assessment of Financial Parameters
- A4:** Assessment of Barrier analysis
- A5:** Outcome of the GSCP

ANNEX 1: DETERMINATION PROTOCOL

Table A-1: Requirements Checklist

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
A	Project approvals by Parties involved					
A.1	DVM § 19 Have the DFPs of all Parties listed as Parties involved in the PDD provided written project approvals?	<i>Description:</i> The Party involved is Russia as the Host Country. No other Party is involved at this stage. The Host Country Approval is pending. <i>Means of determination:</i> The approval of the Host Party is pending. <i>Conclusion:</i> CAR A1 was raised on this context.				
A.2	DVM § 19 Does the PDD identify at least the host Party as a Party involved?	<i>Description:</i> As per the section A.3 of the PDD Russia has been identified as the Host Country. No Investor Party was identified at this stage. <i>Means of determination:</i> This is indicated in the section A.3 of the PDD. <i>Conclusion:</i> The requirement is fulfilled.				
A.3	DVM § 19 Has the DFP of the host Party issued a written project approval?	<i>Description:</i> No written approval has been provided so far (see A.1). <i>Means of determination:</i> N/A <i>Conclusion:</i> See A.1.				

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No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
A.4	<p><i>DVM § 20</i></p> <p>Are all the written project approvals by Parties involved unconditional?</p>	<p><i>Description:</i> No written approval has been provided so far (see A.1).</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> See A.1.</p>				
A.5	<p><i>DVM § 21</i></p> <p>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:</p> <ul style="list-style-type: none"> ▪ 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? 	<p><i>Description:</i> No written approval has been provided so far (see A.1).</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> See A.1.</p>				
B	Baseline Setting					
B.1	<i>DVM § 22</i>	The PDD explicitly indicates that the JI specific approach				

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	<p>Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline?</p> <ul style="list-style-type: none"> ▪ JI specific approach ▪ Approved CDM methodology approach 	<p>was used to identify the baseline.</p>				
	<p><i>JI specific approach only</i></p>					
<p>B.2</p>	<p><i>DVM § 23</i></p> <p>Does the PDD provide a detailed theoretical description in a complete and transparent manner?</p>	<p><i>Description:</i></p> <p>The PDD explicitly indicates that the JI specific approach was used to identify the baseline and justify the additionality. The PDD provide a detailed theoretical description in a complete and transparent manner. In particular it indicates that JI specific approach is based on the Guidelines for users of the JI PDD Form (Version 04). The version 04 of the Guidelines for users of the JI PDD Form is the latest version that was issued within the JISC 18 meeting.</p> <p><i>Means of determination:</i></p> <p>The applied approach was accepted because it follows the step-wise concept of the "Combined tool to identify the baseline scenario and demonstrate additionality".</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>In particular it provides a step-wise method to identify the baseline scenario. The applied approach is applicable in the specific context of the considered project because the potential alternatives to the proposed project activity are available to project participant (PP) and cannot be implemented in parallel to the proposed project activity. In other words the PP can either introduce measures or not. The applied JI specific approach is similar to the approaches suggested by the approved CDM tools^{TA/CT/}</p> <p>The PP took into account the specific circumstances and technologies of the considered project activity. For example, the specific operation modes and historical data were taken into account in the context of the identification of the baseline. In doing so some conservative assumptions were used with regards to the EF_{grid} for UPS Siberia and coefficient of efficiency of coal boilers in the baseline scenario.</p> <p>The applied approach was clearly explained in the PDD and afterwards, carried out in order to determine the baseline scenario.</p> <p><i>Conclusion:</i></p> <p>Therefore the elaborated approach was assessed to be applicable for the purpose of the baseline identification. The requirement is fulfilled.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
B.3	<p><i>DVM § 23</i></p> <p>Does the PDD provide justification that the baseline is established:</p> <p>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?</p>	<p><i>Description:</i></p> <p>The PDD identifies and justifies the baseline scenario by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.</p> <p>The following possible technical options were identified and considered in the PDD.</p> <p><i>Alternative scenario 1. The electricity to be generated by project is provided by the other existing plants and the other new energy units of UPS Siberia. The heat to be generated by project is provided by newly constructed boilers and by increasing the load on the existing boiler equipment of power-supplyers of the Novosibirsk region.</i></p> <p><i>Alternative scenario 2. Realization of the project without it being registered as a joint implementation project - Construction of new energy unit at Novosibirsk HPS 5 to generate additional power.</i></p> <p><i>Means of determination:</i></p> <p>The PP has duly identified the project activity itself as well as the continuation of pre-project situation without project activity as possible and plausible options. Furthermore, the PP has explained why there are no further plausible options by taking into account the specific circumstances of the considered plant.</p>				



No.	DVM⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>All considered scenarios were explained in a detailed manner. The determination team has checked the listed scenarios and was able to conclude that no scenario was omitted. Please refer to the assessment in annex 2 of this report.</p> <p>Following the elaborated JI specific approach all identified scenarios were checked against compliance with the relevant regulation, and afterwards the so called "key factor review" was performed in order to identify the most plausible option</p> <p>The comparison with the internal benchmark was assessed as an appropriate analysis method because scenario 2 does not require any additional investments. Due to this a financial indicators (Internal Rate of Return (IRR), Net present value (NPV) and discount payback period (DPBP) can be calculated only for the alternative 1 (project scenario).</p> <p>The PP provided a clear, viewable and unprotected Excel spreadsheet that presents the investment calculation. All the input values used in the investment analysis were valid and applicable at the time of the investment decision of particular measure.</p> <p><i>Conclusion:</i> As evident from the mentioned above the particular requirements of the DVM §23 (a) are fulfilled.</p>				
B.4	(b) Taking into account relevant	<i>Description:</i> As per the PDD the continuation of pre-project				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<p>national and/or sectoral policies and circumstance?</p> <p>– Are key factors that affect a baseline taken into account?</p>	<p>situation without project activity is not prohibited by any law or regulation.</p> <p><i>Means of determination:</i> This could be confirmed through analysis of the relevant laws and regulation. Please refer to annex 2 of this report.</p> <p>In addition the PP has explained the key factors (that affect the baseline) and how these factors were taken into account. In particular, it is explained that the project activity faces low financial attractiveness as compared to the continuation of the pre-project situation.</p> <p>Furthermore the specific circumstances of the energy industry in Russia and the development of the energy sector were considered within the baseline identification.</p> <p>In particular, different official and governmental documents with regards to the energy industry like</p> <ul style="list-style-type: none"> - The concept of long-term social and economic development of the Russian Federation until 2020 - Energy strategy of Russia until the 2020,2030. <p>were taken into account.</p> <p>Novosibirsk HPS 5 experts are well-experienced and competent with regards to the issues related to the energy sector and applied technologies. Novosibirsk HPS 5 experts' competence and experience was used within the baseline identification.</p> <p><i>Conclusion:</i> As evident from the mentioned above the particular requirements of the DVM §23 (b) are fulfilled.</p>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
B.5	(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	<p><i>Description:</i> PDD provides justification that the baseline is established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors.</p> <p><i>Means of determination:</i> The applied approach of the baseline identification involves the step-wise concept of the "Combined tool to identify the baseline scenario and demonstrate additionality". Within the justification all stations internal data was transparently presented in the PDD. The same could be verified within the determination. All applied data sources could be verified. Therefore it was assessed as transparent. Please also refer to the comment under B.1</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
B.6	(d) Taking into account of uncertainties and using conservative assumptions?	<p><i>Description:</i> Uncertainties and using conservative assumptions were taken into account within the baseline identification.</p> <p><i>Means of determination:</i> On the one hand PDD demonstrates that continuation of the pre-project situation is not prohibited by any law or regulation and reflects also the common practice. On the other hand there are uncertainties with regard to the energy savings that might be achieved only theoretically through the project measures. As a result the PDD</p>				



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		<p>concludes that continuation of the pre-project practice is the most plausible scenario. For detailed assessment please refer to annex 2.</p> <p>For detailed assessment please refer to annex 2.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
B.7	(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project activity or due to force majeure?	<p><i>Description:</i> The amount of ERU depends inter alia on the operation of the energy unit №6 of Novosibirsk HPS 5 and the corresponding energy production.</p> <p><i>Means of determination:</i> As evident from the PDD the power capacity and power generation of Novosibirsk HPS 5 was assumed to remain on a normal level. The baseline emissions are determined in a manner that that ERUs cannot be earned for decreases in activity levels outside the project activity or due to force majeure. Please refer to the assessment of the monitoring plan.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
B.8	(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><i>Description:</i> The requirements of the appendix B to Guidance on criteria for baseline setting and monitoring were taken into account within the development of the monitoring plan. The standard variables were duly elaborated in line with IPCC data.</p> <p><i>Means of determination:</i> Please refer to the assessment of the monitoring plan in this annex below.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
B.9	<p><i>DVM § 24</i></p> <p>If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?</p>	<p><i>Description:</i> Not applicable because a JI specific approach was elaborated and applied.</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>				
B.10	<p><i>DVM § 25</i></p> <p>If a multi-project emission factor is used, does the PDD provide appropriate justification?</p>	<p><i>Description:</i> N/A</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>				
B.11	<p><i>DVM § 25</i></p> <p>Does the PDD provide the title, reference number and version of the approved CDM methodology used?</p>	<p><i>Description:</i> N/A</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<i>Approved CDM methodology approach only</i>	<i>DVM §26 are not applicable because an approved CDM methodology was no used.</i>				
C	Additionality					
	<i>JI specific approach only</i>					
C.1	<p><i>DVM § 28</i></p> <p>Does the PDD indicate which of the following approaches for demonstrating additionality is used?</p> <p>(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;</p>	<p><i>Description:</i> The PDD explicitly indicates that the JI specific approach was used to justify the additionality. In doing so, the "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" was used.</p> <p><i>Means of determination:</i> This is evident from the PDD.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<p>(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;</p> <p>(c) Application of the most recent version of the .Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board.</p>					
C.2	<p><i>DVM § 29</i></p> <p>(a) Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?</p>	<p><i>Description:</i> The PDD explicitly indicates that the JI specific approach was used to identify the baseline and justify the additionality. The PDD provide a detailed theoretical description in a complete and transparent manner. In particular it indicates that JI specific approach is based on the Guidance on criteria for baseline setting and monitoring" (Version 03) and Appendix B to Decision 9/CMP.1. Version 03 of the</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>Guidance on criteria for baseline setting and monitoring" is the latest version that was issued within the JISC 26 meeting.</p> <p><i>Means of determination:</i></p> <p>The applied approach was accepted because it follows the step-wise concept of the "Combined tool to identify the baseline scenario and demonstrate additionality".</p> <p>In particular it provides a step-wise method to identify the baseline scenario and justify the additionality. The applied approach involves the major steps like the identification of the most plausible alternative by means of investment analysis and, finally, the common practice analysis. The applied JI specific approach which is similar to the approaches suggested by the approved CDM tools^{/CT/TA/}.</p> <p>The applied approach is applicable in the specific context of the considered project because the potential alternatives to the proposed project activity are available to project participant (PP) and cannot be implemented in parallel to the proposed project activity. In other words the PP can either introduce measures or not. Furthermore it allows selection of the most plausible alternative and justification of the additionality by using conservative assumptions. The applied approach ensures that alternative, which has the lowest financial attractiveness is excluded as possible baseline option. In essence, the applied approach demonstrates that the project activity is not economically</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>attractive for the PP.</p> <p>Finally, the PDD performs common practice analysis and shows that considered project has not already diffused in the relevant sector and geographical area.</p> <p>The justification of the additionality could be verified as follows.</p> <p>Step 1. Investment analysis of alternative scenario 2.</p> <p>The PP makes use of the results of the baseline identification. Investment analysis is made for an alternative scenario 2 because it's the only alternative that required investment.</p> <p>The economic benefits from additional production of electric and heat energy are of insignificant size as compared to the investments required to implement the project activity. The amount of benefits from additional production of electric and heat energy have been assessed as appropriate. Please refer to annex 2.</p> <p>From the results presented in the PDD it is quite obvious that potential benefit from additional production of electric and heat energy is disproportional low as compared to the required investment. Please refer to annex 2.</p> <p>Finally, the PP performed common practice analysis. In doing so, aluminium industry was defined as the relevant sector and Russian Federation as the geographical area.</p> <p>This deemed to be appropriate.</p> <p>The considered project uses a system of three-stage combustion for the first time.</p>				

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		<p>The boiler of unit № 6 is equipped with an experimental system of fuel combustion: in the boiler furnace there are three combustion zone, gradually reducing the concentration of harmful products of combustion. The project also has a unique developed and implemented Automated measuring and information system for heat power (AMISHP). The first time in Russia power unit with a boiler with coal combusting is equipped with a full-scale AMISHP. The results of the common practice analysis could be further supported by the information provided by independent data sources</p> <p><i>Conclusion:</i> Therefore the elaborated approach was assessed to be applicable for the purpose of the baseline identification. The additionality deemed to be duly justified.</p>				
C.3	<p><i>DVM § 29</i> (b) Are additionality proofs provided?</p>	<p><i>Description:</i> All additionality proofs referred to in the PDD and used within the addtionality justification were provided and could be verified by the determination team.</p> <p><i>Means of determination:</i> PDD and corresponding documented evidences.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
C.4	<p><i>DVM § 29</i> (c) Is the additionality demonstrated appropriately as a result?</p>	<p><i>Description:</i> Please refer to the comment under B.1 and B.2.</p> <p><i>Means of determination:</i> PDD</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
C.5	<p><i>DVM § 30</i></p> <p><i>If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?</i></p>	<p><i>Description:</i> Please refer to the comment under B.1 and B.2.</p> <p><i>Means of determination:</i> PDD</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
	<p><i>Approved CDM methodology approach only</i></p>	<p><i>Description:</i> Not applicable because approach 28 (c) was not chosen.</p> <p><i>Means of determination:</i> N/A</p> <p><i>Conclusion:</i> N/A</p>				
D	<i>Project boundary (applicable except for JI LULUCF projects)</i>					
	<i>JI specific approach only</i>					
D.1	<p><i>DVM § 32</i></p> <p>Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are</p>	<p><i>Description:</i> The PDD describes the project boundary, including the physical delineation of the proposed JI project activity.</p> <p><i>Means of determination:</i> Based on provided evidences it could be determined that the delineation of the project boundary is correct and meets the requirements of the relevant JI rules – DVM and</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>Guidance on criteria for baseline setting and monitoring. As evident from the PDD the project boundary includes GHG emission sources attributed to the project activity. In particular, the project boundary includes the new energy unit №6 of the Novosibirsk HPS 5.</p> <p>As per the PDD "It is only those sources are taken into account emissions from which are above (1%) in the overall quantity of GHG emissions." This is in line with the requirements of the Guidance on criteria for baseline setting and monitoring version 03. The PDD summarizes the emission sources and GHG types in a table format.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
D.2	(i) Under the control of the project participants?	<p><i>Description:</i> All emissions and corresponding sources are under control of project participant (PP).</p> <p><i>Means of determination:</i> The project boundary includes CO₂ emissions from fuel combustion. The CO₂ emissions in the project and in the baseline scenario depend on the power production, which is under control of PP.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
D.3	(ii) Reasonably attributable to the project?	<p><i>Description:</i> The project boundary includes CO₂ emissions resulted from electric and heat power production.</p> <p><i>Means of determination:</i> It is obvious that these emission sources are attributable to the project activity.</p>				

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		<i>Conclusion:</i> The requirement is fulfilled.				
D.4	(iii) Significant?	<p><i>Description:</i> Only those sources are taken into account emissions from which are above (1%) in the overall quantity of GHG emissions.</p> <p><i>Means of determination:</i> This is in line with the requirements of the Guidance on criteria for baseline setting and monitoring version 03.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
D.5	<p><i>DVM § 32</i></p> <p><i>(b) Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?</i></p>	<p><i>Description:</i> The project boundary is defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above</p> <p><i>Means of determination:</i> Please refer to the assessments under D.1 – D.4 above.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
D.6	<p><i>DVM § 32</i></p> <p><i>(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?</i></p>	<p><i>Description:</i> The PDD describes the project boundary by using a figure that shows the physical delineation of the proposed JI project activity.</p> <p><i>Means of determination:</i> Based on provided evidences it could be determined that the delineation of the project boundary is correct and meets the requirements of the relevant JI rules – DVM and Guidance on criteria for baseline setting and monitoring.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
D.7	<p><i>DVM § 32</i></p> <p>(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?</p>	<p><i>Description:</i> All gases and sources included are explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified.</p> <p><i>Means of determination:</i> The CO₂ emissions are the main emission source. The PDD provide a detailed explanation of the emission and the corresponding emissions sources. This explanation was checked and found correct and in line with the real situation.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
	<p><i>Approved CDM methodology approach only</i></p>	<p>DVM §33 is not applicable because JI specific approach was used.</p>				
E	<i>Crediting period</i>					
E.1	<p><i>DVM § 34 (a)</i></p> <p>- 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?</p> <p>- Is the starting date after the</p>	<p><i>Description:</i> The project starting date is 09.01.2004 – this is the date when new energy unit №6 of Novosibirsk HPS 5 was put into operation.</p> <p><i>Means of determination:</i> The starting date of the project is determined as date when new energy unit №6 of Novosibirsk HPS 5 was put into operation. The commissioning certificate has been provided and the date could be verified. To apply the date of the commissioning certificate is applicable to determine the project starting date.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	beginning of 2000?					
E.2	<p><i>DVM § 34 (b)</i></p> <p>Does the PDD state the expected operational lifetime of the project in years and months?</p>	<p><i>Description:</i> As per the PDD the expected operational lifetime is 25 years.</p> <p><i>Means of determination:</i> The expected operational lifetime of the project is determined as shortest lifetime of the main projects equipment in accordance with passport of the turbine №6 T-200/210-130-1.</p> <p>Therefore the assumed lifetime was accepted.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
E.3	<p><i>DVM § 34</i></p> <p>(c) Does the PDD state the length of the crediting period in years and months?</p>	<p><i>Description:</i> Please refer to section C.3 of the PDD. As per the PDD the length of the first crediting period is 5 years, i.e.60 months.</p> <p>In addition the PDD states that in case the second commitment period will be established under Kyoto Protocol, and further to recent Russian government recognition, emission reductions for the subsequent period will be applied.</p> <p><i>Means of determination:</i> The choice of the crediting period between 2008 and 2012 is appropriate because the project was operational in 2008.</p> <p>In addition the PDD states that in case the second commitment period will be established under Kyoto Protocol, and further to recent Russian government recognition, emission reductions for the subsequent period will be applied.</p> <p>The crediting period will not exceed the project operational</p>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		lifetime. This is in line with Glossary of Joint Implementation Terms (Version 2).				
E.4	<p><i>DVM § 34 (c)</i></p> <p>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?</p>	<p>The starting date of the crediting period will be on or after the date the first emission reductions.</p> <p>This is in line with §34 DVM.</p>				
E.5	<p><i>DVM § 34 (d)</i></p> <p>Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?</p>	Please refer to E.3.				
E.6	<p><i>DVM § 34</i></p> <p>(d) <i>If the crediting period extends beyond 2012, does the</i></p>	Yes, the PDD states that the extension is subject to the host Party approval. Please refer to E.3.				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	PDD state that the extension is subject to the host Party approval?					
E.7	Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	<p><i>Description:</i> The PDD provides estimates of emission reductions presented separately for those until 2012 and those after 2012.</p> <p><i>Means of determination:</i> This is evident from the separate tables in PDD section A.4.3.1 and section E.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F	Monitoring plan					
F.1	<p><i>DVM § 35</i></p> <p>Does the PDD explicitly indicate which of the following approaches is used?</p> <ul style="list-style-type: none"> – JI specific approach – Approved CDM methodology approach 	<p><i>Description:</i> The PDD explicitly indicates that a JI specific approach was used.</p> <p><i>Means of determination:</i> This is evident from the PDD section D.1. As per the PDD the applied approach is based on the requirements of the "Guidance on criteria for baseline and monitoring" version 03. This is the most recent version and hence appropriate.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
	<i>JI specific approach only</i>					
F.2	<i>DVM § 36</i>	<p><i>Description:</i> The monitoring plan is elaborated in detail in section D of the PDD.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	(a) Does the monitoring plan describe	<p><i>Means of determination:</i> As per the PDD the applied approach is based on the requirements of the "Guidance on criteria for baseline and monitoring" version 03. This is the most recent version and hence appropriate.</p> <p>The chosen JI specific approach is based on paragraph 30 of Guidance on criteria for baseline setting and monitoring (Version 03). The approach chosen was reviewed and it could be confirmed that it includes the following procedures:</p> <ul style="list-style-type: none"> - The collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources of GHGs occurring within the project boundary during the crediting period; - The collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources of GHGs within the project boundary during the crediting period; - The identification of all potential sources of, and the collection and archiving of data on increased anthropogenic emissions by sources of GHGs outside the project boundary that are significant and reasonably attributable to the project during the crediting period; - The collection and archiving of information on environmental impacts, in accordance with procedures as required by the host Party; - Quality assurance and control procedures for the monitoring process; 				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>– Procedures for the periodic calculation of the reductions of anthropogenic emissions by sources by the proposed JI project, and for leakage effects.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.2.1	<p>– All relevant factors and key characteristics that will be monitored?</p>	<p><i>Description:</i> The monitoring plan describes all relevant factors and key characteristics that will be monitored.</p> <p><i>Means of determination:</i> The main factors are the electricity generation at new energy unit №6 of Novosibirsk HPS 5 , Electricity consumption for the unit №6 of Novosibirsk HPS 5 auxiliaries, heat output from the unit №6 of Novosibirsk HPS 5, fuel consumption by the unit №6 of Novosibirsk HPS 5, NCV of coal, Emission factor for electric power plant of the UPS Siberia. All these factors are included in the monitoring plan.</p> <p>The key factor are emission factor for electric power plant of the UPS Siberia and efficiency of coal boiler houses. For the parameter emission factor for electric power plant of the UPS Siberia the data from Research conducted by Lahmeyer International: "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia" will be used. The research passed the validation procedure of the independent expert company - TUV SUD.</p> <p>For the parameter efficiency of coal boiler houses the data on efficiency new coal boiler from approved CDM methodology AM 0058 will be used.</p>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<i>Conclusion:</i> The requirement is fulfilled.				
F.2.2	– The period in which they will be monitored?	<i>Description:</i> The monitoring period depends on the monitoring parameter and is either constantly, monthly or default values. <i>Means of determination:</i> The period in which the parameters will be monitored was assessed as appropriate. <i>Conclusion:</i> The requirement is fulfilled.				
F.2.3	– All decisive factors for the control and reporting of project performance?	<i>Description:</i> The monitoring plan describes the monitoring procedures including all decisive factors for the control and reporting of the project performance. <i>Means of determination:</i> It could be verified that all parameters are monitored by the plant according to its internal reporting procedures and would have been monitored also in absence of the project activity. The project activity does not require monitoring of new or additional parameters. <i>Conclusion:</i> The requirement is fulfilled.				
F.3	DVM § 36 (b) Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or	<i>Description:</i> The monitoring plan specifies the indicators, constants and variables. <i>Means of determination:</i> The use of IPCC data and data from CDM methodology AM0058 were assessed as appropriate because it is an internationally accepted source. The use of Emission factor for electric power plant of the UPS Siberia from Research conducted by Lahmeyer International: "Dynamics of the development of the carbon				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	enhancements of net removals to be monitored?	<p>emission factor during the generation of electric energy in Russia" as appropriate because it is passed the validation procedure of the independent expert company - TUV SUD.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.4	<p><i>DVM § 36</i></p> <p><i>(b) If default values are used</i></p>	<p><i>Description:</i> The monitoring plan specifies the following default values: Parameters which are determined once and are taken as constants for the whole monitoring period. They are available at the stage of determination:</p> <ul style="list-style-type: none"> - Emission factor for electric power plant of the UPS Siberia: 2008-1.003, 2009-1.003, 2010-1.006, 2011-0.993, 2012-0.949. <p>These values were taken from the Research conducted by Lahmeyer International: "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia".The values indicated in the PDD were crosschecked against "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia" and found consistent.</p> <ul style="list-style-type: none"> - Efficiency of coal boiler houses - 85% <p>This value was taken from the approved CDM methodology AM0058. The value indicated in the PDD were crosschecked against IPCC guidelines and found consistent.</p> <ul style="list-style-type: none"> - Emission factor from the combustion of fuel - 94.6 t 				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<p>CO2/TJ (coal)</p> <ul style="list-style-type: none"> - Conversion factor of calorie into joule taken as 4,1868 J/cal is in line with provided data source; <p>These values were taken from the IPCC Guidelines. The values indicated in the PDD were crosschecked against IPCC guidelines and found consistent.</p> <p>All above mentioned parameters are elaborated in the PDD in clear and detailed manner.</p> <p><i>Means of determination:</i> The applied values are in line with the IPCC values, approved CDM methodology AM0058 and verified research "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia" Therefore the default values were accepted.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.4.1	- Are accuracy and reasonableness carefully balanced in their selection?	The accuracy and reasonableness is carefully balanced in the selection of the default values. Please refer to the comment under F.4.				
F.4.2	- Do the default values originate from recognized sources?	The default values are in line with the referred data sources. Please refer to the comment under F.4.				
F.4.3	- Are the default values	The default values are reasonable because they were				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<i>supported by statistical analyses providing reasonable confidence levels?</i>	sources from well-reputed internationally accepted independent sources. Please refer to the comment under F.4.				
F.4.4	– Are the default values presented in a transparent manner?	The PDD clearly indicate the values and the applied data source. Please refer to the comment under F.4.				
F.5	DVM § 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?	<p><i>Description:</i> Values that are included in the monitoring plan and that will be monitored by PP the monitoring plan clearly indicates how these values will be selected and justified.</p> <p><i>Means of determination:</i> The parameters which are continuously monitored according to the requirements of the monitoring plan are summarized below :</p> <ul style="list-style-type: none"> - Coal consumption at unit №6 of Novosibirsk HPS 5 - NCV of coal - Heat output from unit №6 of Novosibirsk HPS 5 - Electricity generation at unit №6 of Novosibirsk HPS 5 - Electricity consumption for the unit №6 of Novosibirsk HPS 5 auxiliaries <p>For all monitoring parameters the PDD provides a clear and well elaborated information about</p> <ul style="list-style-type: none"> – The name of variable 				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<ul style="list-style-type: none"> -The data source, which should be applied - Data unit - Information whether the particular parameter is measured, calculated or estimated -The information about the recording frequency - Proportion of data to be monitored is always 100%. This is appropriate. - Archiving provisions - Responsibility for data collection and recording - Measurement devices and the responsibility for timely calibration <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.6	<p><i>DVM § 36</i></p> <p>(b) (ii) For other values,</p>	<p>For other values IPCC data will be applied. Please refer to the comments above.</p>				
F.6.1	<p>- <i>Does the monitoring plan clearly indicate the precise references from which these values are taken?</i></p>	<p>Yes the reference to the IPCC data specifies the chapter and page.</p>				
F.6.2	<p>- <i>Is the conservativeness of the values provided justified?</i></p>	<p>IPCC data was assessed to be the most reliable and suitable data.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.7	<p><i>DVM § 36</i></p> <p>(b) (iii) For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?</p>	<p>CL D4 was raised in this context.</p>				
F.8	<p><i>DVM § 36</i></p> <p>(b) (iv) Are International System Unit (SI units) used?</p>	<p><i>Description:</i> Within the measurements the international system units are used.</p> <p><i>Means of determination:</i> The PDD was crosschecked against the Guidance on criteria for baseline setting and monitoring and it could be confirmed that international system units are used.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.9	<p><i>DVM § 36</i></p> <p>(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?</p>	<p><i>Please refer to comments under F.1.-F.8.</i></p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.10	DVM § 36 (b) (v) Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The monitoring plan was checked and it could be confirmed that parameters, coefficients, variables, etc. Are consistent between the baseline and monitoring plan.				
F.11	DVM § 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.?	Please refer to the comments above.				
F.12	DVM § 36 (d) Does the monitoring plan explicitly and clearly distinguish:					
F.12.1	(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the	<i>Description: The monitoring plan explicitly and clearly distinguish between: (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?</i> <i>Means of determination: This is evident from the section D</i>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<i>crediting period), and that are available already at the stage of determination?</i>	of the PDD <i>Conclusion:</i> The requirement is fulfilled.				
F.12.2	<i>(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?</i>	As per the PDD there are no 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				
F.12.3	<i>(iii) Data and parameters that are monitored throughout the crediting period?</i>	<i>Description:</i> Data and parameters that are monitored throughout the crediting period are clearly listed and elaborated in the PDD <i>Means of determination:</i> Evident from section D of the PDD <i>Conclusion:</i> The requirement is fulfilled.				
F.13	DVM § 36 <i>(e) Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?</i>	<i>Description:</i> The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording. <i>Means of determination:</i> Evident from section D of the PDD <i>Conclusion:</i> The requirement is fulfilled.				

No.	DVM⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.14	<p><i>DVM § 36</i></p> <p>(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?</p>	Please refer to F.2.				
F.15	<p><i>DVM § 36</i></p> <p>(f) (i) Is the underlying rationale for the algorithms/formulae explained?</p>	Please refer to F.2.				
F.16	<p><i>DVM § 36</i></p> <p>(f) (ii) Are consistent variables, equation formats, subscripts etc. used?</p>	The determination team has checked the monitoring plan and was able to confirm that variables, equation formats, subscripts were consistently used.				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.17	DVM § 36 (f) (iii) Are all equations numbered?	As evident from the PDD all equations numbered.				
F.18	DVM § 36 (f) (iv) Are all variables, with units indicated defined?	As evident from the PDD all variables are clearly defined. The units are specified for all variables.				
F.19	DVM § 36 (f) (v) Is the conservativeness of the algorithms/procedures justified?	Please refer to the comment under F 14				
F.20	DVM § 36 (f) (v) To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Please refer to the comment under F 14				
F.21	DVM § 36	<i>Description:</i> Yes, the consistency between the elaboration of the baseline scenario and the procedure for calculating the				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	(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?	emissions of the baseline is ensured. <i>Means of determination:</i> The procedure for calculating the emissions from the baseline scenario reflects the baseline scenario elaborated in the section B of the PDD. <i>Conclusion:</i> The requirement is fulfilled				
F.22	<i>DVM § 36</i> (f) (vii) Are any parts of the algorithms or formulae that are not self-evident explained?	All formulae are explained. Further explanation can be found in the IPCC guidelines.				
F.23	<i>DVM § 36</i> Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	As already noted the formulae and algorithm are based on the internationally accepted IPCC guidelines.				
F.24	<i>DVM § 36</i> (f) (vii) Are references provided as necessary?	As evident from the PDD all references are provided.				



No.	DVM⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.25	<p><i>DVM § 36</i></p> <p>(f) (vii) Are implicit and explicit key assumptions explained in a transparent manner?</p>	<p>All key assumptions are explained in a transparent manner and are in line with IPCC guidelines.</p>				
F.26	<p><i>DVM § 36</i></p> <p>(f) (vii) Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?</p>	<p>Please refer to the comments above.</p>				
F.27	<p><i>DVM § 36</i></p> <p>(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</p>	<p>N/A</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	net removals provided?					
F.28	<p><i>DVM § 36</i></p> <p>(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?</p>	<p>As already noted the monitoring of particular parameters will take into account the relevant international monitoring norms from the Research conducted by Lahmeyer International: "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia".</p>				
F.29	<p><i>Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?</i></p>	<p>The names of the relevant international norms are clearly provided in the PDD.</p>				
F.30	<p><i>DVM § 36</i></p> <p>(h) Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?</p>	<p>N/A</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.31	<p><i>DVM § 36</i></p> <p>(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?</p>	<p><i>Description:</i> The section D of the PDD defines the quality assurance and control procedures for all monitoring parameters. Also the monitoring process is described in the PDD.</p> <p><i>Means of determination:</i> The determination team has checked the procedures for quality assurance and control for all monitoring parameters and found them appropriate.</p> <p><i>Conclusion:</i> The requirement is fulfilled</p>				
F.32	<p><i>DVM § 36</i></p> <p>(j) Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?</p>	<p><i>Description:</i> The monitoring plan clearly specifies the responsibilities for the monitoring activities.</p> <p><i>Means of determination:</i> The operation and management structure is described in the section D.3 of the PDD. The described structure could be confirmed in the course of the determination based on the interviews with responsible personnel. The correctness of the described structure could be further verified by the names of departments and responsible personnel evident from the internal reports/approvals.</p> <p>It is important to note that project monitoring is a part of the Novosibirsk HPS-5 entire monitoring system, i.e. all parameters are monitored by the plant due to relevant laws or other obligations.</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		Therefore the project monitoring does not require measurements of new/additional parameters. <i>Conclusion:</i> The requirement is fulfilled.				
F.33	<i>DVM § 36</i> (k) Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?	Yes, the monitoring plan, on the whole, reflects good monitoring practices appropriate to the project type because the monitoring methods are based on the official norms of the Host country.				
F.34	<i>If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?</i>	N/A				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
F.35	<p><i>DVM § 36</i></p> <p>(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?</p>	<p><i>Description:</i> The monitoring plan provides in tabular form, a complete compilation of the data that has to be collected and measured.</p> <p><i>Means of determination:</i> This is evident from the PDD. The table has been checked against the elaborated formulae and monitoring concept. It could be concluded that all required information is summarized in the relevant tables.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
F.36	<p><i>DVM § 36</i></p> <p>(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?</p>	<p>As per the PDD "All data required for determination will be stored for two years after the last transfer of the Emission Reduction Units under the project". Therefore this requirement is fulfilled.</p>				
F.37	<p><i>DVM § 37</i></p> <p>If selected elements or</p>	N/A				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	<i>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?</i>					
	<i>Approved CDM methodology approach only</i>	DVM § 38 is not applicable because a JI specific approach was used.				
	<i>Applicable to both JI specific approach and approved CDM methodology approach</i>					
F.43	DVM § 39 <i>If the monitoring plan indicates overlapping monitoring periods during the crediting period,</i>	<i>N/A because an overlapping of monitoring periods is not indicated.</i>				
G	Leakage					
	<i>JI specific approach only</i>					



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
G.1	<p><i>DVM § 40</i></p> <p>(a) Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?</p>	<p><i>Description:</i> As per the PDD the project activity will not result in leakage emissions.</p> <p><i>Means of determination:</i> The CH₄ emissions related to the extraction, processing, transportation and distribution of additional volume of coal under the baseline were not considered. This conservative and, hence, was accepted.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
G.2	<p><i>DVM § 40</i></p> <p>(b) Does the PDD provide a procedure for an ex ante estimate of leakage?</p>	N/A				
	<i>Approved CDM methodology approach only</i>					
G.3	<p><i>DVM § 41</i></p> <p>Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?</p>	N/A				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
H						
H.1	<p><i>DVM § 42</i></p> <p>Does the PDD indicate which of the following approaches it chooses?</p> <p>(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario</p> <p>(b) Direct assessment of emission reductions</p>	<p><i>Description:</i> The PDD indicates that estimates are based on the assessment of emissions or net removals in the baseline scenario and in the project scenario</p> <p><i>Means of determination:</i> This is evident from the PDD</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
H.2	<p><i>DVM § 43</i></p> <p>If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of:</p>					
H.2.1	<p>(a) Emissions or net removals for the project scenario (within the project boundary)?</p>	<p><i>Description:</i> PDD provide ex ante estimates of emissions for the project (within the project boundary).</p> <p><i>Means of determination:</i> The estimation of the project emissions is based on the formulae specified in the monitoring plan. This could be verified by reproducing the calculation of the estimated emission reductions.</p> <p>The monitoring parameters are listed below:</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		<ul style="list-style-type: none"> - Coal consumption at unit №6 of Novosibirsk HPS 5; - NCV of coal; - Heat output from unit №6 of Novosibirsk HPS 5 - Electricity generation at unit №6 of Novosibirsk HPS 5 - Electricity consumption for the unit №6 of Novosibirsk HPS 5 auxiliaries. - Emission factor for electric power plant of the UPS Siberia - Efficiency of coal boiler houses - Emission factor from the combustion of coal <p>The estimation of the monitoring parameters is based on the actual figures for the years 2008-2011. The values for the year 2012 are based on the historical values. Bearing in mind that the final version of the PDD was developed in 2012 the use of actual figures was accepted. The determination team has crosschecked the actual figures for the years 2008-2011 as indicated in various internal reports and recordings^{AE/} against the values in the (Excel) calculation spreadsheet and found them consistent.</p> <p><i>Conclusion:</i> The requirement is fulfilled.</p>				
H.2.2	(b) Leakage, as applicable?	<i>No leakage emissions are claimed.</i>				
H.2.3	(c) Emissions or net removals for the baseline scenario	<i>Description:</i> PDD provide ex ante estimates of emissions for the baseline scenario (within the project boundary).				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	(within the project boundary)?	<p><i>Means of determination:</i> The estimation of the baseline emissions is based on the formulae specified in the monitoring plan. This could be verified by reproducing the calculation of the estimated emission reductions.</p> <p>The monitoring parameters are listed below:</p> <ul style="list-style-type: none"> - Coal consumption at unit №6 of Novosibirsk HPS 5; - NCV of coal; - Heat output from unit №6 of Novosibirsk HPS 5 - Electricity generation at unit №6 of Novosibirsk HPS 5 - Electricity consumption for the unit №6 of Novosibirsk HPS 5 auxiliaries. - Emission factor for electric power plant of the UPS Siberia - Efficiency of coal boiler houses - Emission factor from the combustion of coal <p>The estimation of the monitoring parameters is based on the actual figures for the years 2008-2011. The values for the year 2012 are based on the historical values. Bearing in mind that the final version of the PDD was developed in 2012 the use of actual figures was accepted. The determination team has crosschecked the actual figures for the years 2008-2011 as indicated in various internal reports and recordings against the values in the (Excel) calculation spreadsheet and found them consistent.</p> <p>The determination team has checked the calculation as</p>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
		given in the Excel spreadsheet and found it correct. <i>Conclusion:</i> The requirement is fulfilled.				
H.2.4	(d) Emission reductions or enhancements of net removals adjusted by leakage?	<i>n/a:</i>				
H.3	<i>DVM § 44</i> <i>If the approach (b) in §42 is chosen, does the PDD provide ex ante estimates of:</i>	<i>n/a:</i>				
H.3.1	(a) Emission reductions or enhancements of net removals (within the project boundary)?	<i>n/a:</i>				
H.3.2	(b) Leakage, as applicable?	<i>n/a:</i>				
H.3.3	(c) Emission reductions or enhancements of net	<i>n/a:</i>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	removals adjusted by leakage?					
H.4	<i>DVM § 45</i> <i>For both approaches in 42</i> (a) Are the estimates in 43 or 44 given:					
H.4.1	(i) On a periodic basis?	As evident from the PDD the estimates are presented on annual basis. This is appropriate.				
H.4.2	(ii) At least from the beginning until the end of the crediting period?	As evident from the PDD the estimates are from 01.01.2008 until 31.12.2012 - from the beginning until the end of the crediting period. This is correct.				
H.4.3	(iii) On a source-by-source/sink-by-sink basis?	Yes, for each source.				
H.4.4	(iv) For each GHG?	As evident from the PDD the estimates are for each GHG.				
H.4.5	(v) In tons of CO ₂ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in	Yes, the final emission reductions are presented in tonnes of CO ₂ equivalent.				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	accordance with Article 5 of the Kyoto Protocol?					
H.4.6	(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?	The determination team has checked the estimates by reproducing the calculation and was able to confirm that formula used for calculating the estimates in 43 or 44 are consistent throughout the PDD.				
H.4.7	(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?	Yes, please refer to H.2.1 and H.2.3.				
H.4.8	(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and	Yes, please refer to H.2.1 and H.2.3.				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	transparent?					
H.4.9	(e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	Yes, please refer to H.2.1 and H.2.3.				
H.4.10	(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?	Yes, please refer to H.2.1 and H.2.3.				
H.4.11	(g) Are the estimates in 43 or 44 consistent throughout the PDD?	Yes, please refer to H.2.1 and H.2.3.				
H.4.12	(h) Is the annual average of	ok				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	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?					
H.5	<i>DVM § 46</i> <i>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?</i>	The estimation of the baseline emissions is based on the actual figures for the years 2008-2011 and estimates for the year 2012.				
	<i>Approved CDM methodology approach only</i>	Not applicable because a JI specific approach is used.				
H.6	<i>DVM § 47 (a)</i>	<i>Description:</i>				



No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?	<i>Means of determination:</i> <i>Conclusion:</i>				
I	Environmental impacts					
I.1	<i>DVM § 48</i> (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?	<i>Description:</i> As per the PDD an Environment Impact assessment (EIA) is required by the Host Party. <i>Means of determination:</i> The conducting of the EIA was duly evidenced by following document: Conclusion № 482 of the State Environmental Expertise Committee issued by General administration of Natural Resources and Environment of Ministry of Natural Resources of Russia in Novosibirsk Region. <i>Conclusion:</i> The requirement is fulfilled.				
I.2	(b) <i>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</i>	The PP has duly evidenced that all required assessments of the environmental impacts were carried out and approved by the relevant authorities. Finally the PP has evidenced the compliance of the plant with the relevant environmental norms and regulation.				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
	supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?					
J	Stakeholder consultations					
J.1	<i>DVM § 49</i> <i>If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide:</i>	<i>Description:</i> As explained in the PDD consultations with stakeholders on the project activity were carried. <i>Means of determination:</i> It is evidence from PDD that public hearings on the construction of construction on Novosibirsk HPS 5 consisting of the 6 power units with the development of heat system were held in the frame of approved scheme of heating supply in 1976 (Scheme was approved in Ministry of energy USSR 09.06.78 № 72 PS) <i>Conclusion:</i> The requirement is fulfilled.				
J.1.1	(a) A list of stakeholders from whom comments on the projects have been received, if any?	<i>Please refer to comment under J.1.</i>				
J.1.2	(b) The nature of the comments?	<i>Please refer to comment under J.1.</i>				

No.	DVM ⁴ paragraph / Checklist Item (incl. guidance for the determination team)	Initial Finding (Means and results of assessment)	Ref.	Action requested to PPs (CAR, CL, FAR)	Review of PP's action	Conclusion
J.1.3	(c) A description on whether and how the comments have been addressed?	<i>Please refer to comment under J.1.</i>				
K	<i>Determination regarding small-scale projects (additional elements for assessment)</i> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable					
L	<i>Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)</i> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable					
M	<i>Determination regarding programmes of activities (additional/alternative elements for assessment)</i> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> Not applicable					

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification

<input type="checkbox"/>	Baseline is not identified
<input checked="" type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	AIE Assessment	
					Appropriateness of elimination	Assessment of determination team (results and means of assessment)
<p>Alternative scenario 1. The electricity to be generated by project is provided by the other existing plants and the other new energy units of UPS Siberia. The heat to be generated by project is provided by newly constructed boilers and by increasing the load on the existing boiler equipment of power-suppliers of the Novosibirsk region (baseline scenario)</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Within the Step1 this alternative has been identified as a plausible scenario because it represents the current practice in the Host Country and is not prohibited by any national laws and/or regulation.</p>	<p>PDD JI-Pr EIA EIA1</p>	<input checked="" type="checkbox"/>	<p>Step 1 Identification of alternatives to the project activity consistent with current laws and regulations</p> <p>Within the Step 1 this alternative has been appropriately identified as a plausible scenario because it represents the current practice and the most probable development of the power sector in the region.</p> <p>Sub-step 1b) Compliance with current laws and regulations</p> <p>The considered alternative involves electricity generation by grid power plants. The heat will be generated by the existing and/or new boilers. The considered alternative complies with the relevant laws and regulations because it reflects the power and heat generation from the plants that receive appropriate operation approvals.</p>

			<p>Step 2 key factor review</p> <p>Key factor analysis shows that the continuation of the pre-project situation is not affected by the identified key factors.</p>		<p>Key factor analysis</p> <p>Within the key factor analysis the following key factors were identified and analysed:</p> <ul style="list-style-type: none"> • Local availability of technologies, equipment, experience and know-how; • Economic situation and availability of funds (including investment barrier); • Price and availability of fuel; <p>The identified key factors duly address the requirements of the DVM §23 (b) because they best reflect the relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, legislation, the economic situation in the project sector etc.</p> <p>As per the PDD the above listed key factors have only a insignificant impact on the alternative 1. This was assessed as correct because the alternative 1 involves power and heat generation power/heat plants implemented by other potential project developers.</p> <p>The conclusion regarding the compliance of the alternative 1 is plausible as compared to the information provided in similar cases (i.e. approved/positively determined JI projects^{JI-Pr/} in Russian power sector).</p>
<p>Alternative scenario 2. Realization of the project without being registered as a joint implementation project - Construction of new energy unit at Novosibirsk HPS 5 to generate additional power</p>	☒	☒	<p>Within the Step 1 this alternative was identified as a plausible scenario because it is the project activity and is not prohibited by any</p>	<p>PDD INV JI-Pr CT AT</p>	<p>Step 1 Identification of alternatives to the project activity consistent with current laws and regulations</p> <p>Within the Step1 this alternative has been appropriately identified as a plausible scenario because it represents the project activity itself. It could be verified that this alternative is not prohibited by any national laws and</p>



<p>on coal (project activity)</p>			<p>national laws and/or regulation.</p> <p>Step 2 key factor review</p> <p>In the context of the key factor analysis the PP explained that the implementation of this alternative faces investment and financial barriers.</p> <p>Most important is the insufficient financial attractiveness of the project activity.</p>	<p>B-1 EIA EIA1</p>	<p>regulations.</p> <p>Sub-step 1b) Compliance with current laws and regulations</p> <p>The project activity is in line with the relevant laws and regulation. The same was confirmed by provided approvals issued by the relevant authorities^{/EIA/EIA1/} ..</p> <p>Key factor analysis</p> <p>Within the key factor analysis the following key factors were identified and analysed:</p> <ul style="list-style-type: none"> • Local availability of technologies, equipment, experience and know-how; • Economic situation and availability of funds (including investment barrier); • Price and availability of fuel; <p>The identified key factors duly address the requirements of the DVM §23 (b) because they best reflect the relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, legislation, the economic situation in the project sector etc.</p> <p>As per the PDD all above mentioned key factors have a significant impact on the considered alternative.</p> <p>Most important in this context is the low economic attractiveness of the alternative. This was duly presented within the investment analysis performed as a part of additionality justification.</p> <p>As a result the determination team confirms that the project activity faces barriers that prevent the implementation of the project activity. Most importantly is</p>
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						the fact that project activity is economically unattractive as compared to the continuation of the pre-project situation. Therefore this alternative is not the most plausible one and can be excluded from further consideration.
<p>Alternative scenario 3 The construction of new energy unit at Novosibirsk HPS 5 to generate additional power on natural gas, fuel oil, biomass e.t.c – on the fuel other than coal” was considered as a possible alternative.</p>	☒	☒	<p>Within the Step 1 this alternative was identified as a plausible scenario because it is the project activity and is not prohibited by any national laws and/or regulation.</p> <p>Step 2 key factor review</p> <p>In the context of the key factor analysis the PP explained that due to the key factors the implementation of this alternative faces different barriers and is not the most plausible one.</p>	<p>PDD INV JI-Pr CT AT B-1 EIA EIA1 EL-EF</p>	☒	<p>Step 1 Identification of alternatives to the project activity consistent with current laws and regulations</p> <p>Within the Step1 this alternative has been appropriately identified as a plausible scenario because it represents the theoretically possible option.</p> <p>Sub-step 1b) Compliance with current laws and regulations</p> <p>The project activity is in line with the relevant laws and regulation.</p> <p>Key factor analysis</p> <p>Within the key factor analysis the following key factors were identified and analysed:</p> <ul style="list-style-type: none"> • Local availability of technologies, equipment, experience and know-how; • Economic situation and availability of funds (including investment barrier); • Price and availability of fuel; <p>The identified key factors duly address the requirements of the DVM §23 (b) because they best reflect the relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, legislation, the economic situation in the project sector etc.</p> <p>As per the PDD “Novosibirsk region is coal oriented region. There is no gas infrastructure to provide project</p>



					<p><i>capacities with natural gas. There are no such technologies in the region to provide the project capacities on biomass. There are no enough fuel oil infrastructures at Novosibirsk HPS 5 to provide such capacities with enough amount of fuel oil".</i></p> <p>The information provided in the PDD is in line with the information provided by the independent third party sources. In particular, the Research conducted by Lahmeyer International: "Dynamics of the development of the carbon emission factor during the generation of electric energy in Russia"^{EL-EF/} confirms that in the relevant region (IPS Siberia) the electricity is mainly produced by the coal and hydro power plants both approximately 40-45%. As evident from the data provided in this study^{EL-EF/} coal fired electricity made up a significant share of the entire electricity generation. This study^{EL-EF/} also assumes that the share of coal fired power will increase in the next years due to construction of the new additional power plants. This supports the PPs conclusion that coal fired plants are most plausible option.</p> <p>As per the study^{EL-EF/} the share of natural gas based electricity is only 15%. Also the annual financial statement of the company confirms that natural gas is used only a start-up fuel for heating up the boilers. Furthermore it should be borne in mind that the PP historically use coal for power generation. There are another large scale coal fired units operated by the company. Therefore it is plausible to assume that additional power generation to be constructed by the PP would be based on the same fuel as other existing units.</p> <p>Taking this into account the determination team agrees that natural based power plant can be excluded as a possible baseline option.</p>
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						<p>With regards to the biomass option the PP explained that <i>“There are lots of technological and supplying difficulties to provide such big capacities with biomass. Huge investment will be necessary to provide this alternative”</i>. Due to this biomass and other renewable energy sources are were excluded from further consideration. This deemed to be appropriate because the use of renewable sources for operating large-scale power plants with 180 MW capacity is highly implausible.</p> <p>Therefore this alternative is not the most plausible one and can be excluded from further consideration.</p>
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ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters

<input checked="" type="checkbox"/> No financial parameters are used for additionality justification						
<input type="checkbox"/> Assessment of all financial parameters see below						
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	AIE ASSESSMENT	
					Correctness of value applied	Comment
Investment costs of the project activity	1 241 360	Th.Rub	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 9		<input checked="" type="checkbox"/>	The applied investments costs were taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5" . This document was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC "Novosibirskenergo" in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced. In this context it is important to note that the baseline scenario does not require any additional costs.
Electricity output from energy unit №6 of Novosibirsk HPS 5	674 200 (average for period of calculation)	Th.kWh	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 4		<input checked="" type="checkbox"/>	The applied electricity output from energy unit №6 of Novosibirsk HPS 5 was taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5". The document provide the list of documents that were took into account for determine of this value. Business plan was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC

						“Novosibirskenergo” in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Heat output from energy unit №6 of Novosibirsk HPS 5	437 (average for period of calculation)	Th.Gkal	Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”.2002.Page 4		<input checked="" type="checkbox"/>	The applied heat output from energy unit №6 of Novosibirsk HPS 5 was taken from the Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”. The document provide the list of documents that were took into account for determine of this value. Business plan was issued by JSC “Novosibirskenergo” in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC “Novosibirskenergo” in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Fuel consumption by energy unit №6 of Novosibirsk HPS 5	260843 (average for period of calculation)	t.f.e	Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”.2002.Page 9		<input checked="" type="checkbox"/>	The applied fuel consumption by energy unit №6 of Novosibirsk HPS 5 was taken from the Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”. This document was issued by JSC “Novosibirskenergo” in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC “Novosibirskenergo” in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Tariff on electricity	0.749 (forecast of 2002 for 2003)	Rub/th.kWh	Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”.2002.Page 9		<input checked="" type="checkbox"/>	The applied tariff on electricity was taken from the Business plan of the project “Construction of energy unit №6 at Novosibirsk HPS 5”. This document was issued by JSC “Novosibirskenergo” in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC “Novosibirskenergo” in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.

Tariff on heat	287 (forecast of 2002 for 2003)	Rub/Gkal	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 9	<input checked="" type="checkbox"/>	The applied tariff on heat was taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5". This document was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC "Novosibirskenergo" in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Coal price	590 (forecast of 2002 for 2003)	Rub/t.f.e	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 9	<input checked="" type="checkbox"/>	The applied coal price was taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5". This document was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC "Novosibirskenergo" in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Fixed costs	517 285 (average for period of calculation)	Th.rub	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 9	<input checked="" type="checkbox"/>	The applied fix costs were taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5". This document was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC "Novosibirskenergo" in 2002. The documented evidences applied in this context were reviewed by the determination team. The applied value could be duly evidenced.
Benchmark	26	%	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 7	<input checked="" type="checkbox"/>	The applied benchmark was taken from the Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5". The document provides the clarification of the benchmark value. It is composed of the base rate of Central Bank of Russian Federation at the moment of project economic assessments - end of 2002 and risk premium for given type of project: - Base rate of Central Bank of Russian Federation in 2002 was 21%.It is evidenced from Telegram of Bank of Russia

						<p>from 06.08.2002 № 1185-Y</p> <ul style="list-style-type: none"> - Risk premium is amount to 5%. It is evidenced from Investment management, Sheremet V.V., 1998, Volume 2, p.151, Table 13.5.1, row "New investment-category 1". <p>Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5 was issued by JSC "Novosibirskenergo" in 2002 for decision making about project realization. The Business plan was developed by well experienced experts and approved by management of the JSC "Novosibirskenergo" in 2002. The documented evidences applied in this context were reviewed by the determination team.</p> <p>The applied value could be duly evidenced.</p>
NPV	- 460	Mln.Rub	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 8; Investment analysis		<input checked="" type="checkbox"/>	The NPV was duly calculated in Excel spreadsheet. The applied formulae were checked and the appropriateness of the calculation could be confirmed.
IRR	9.5	%	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 8; Investment analysis		<input checked="" type="checkbox"/>	The IRR was duly calculated in Excel spreadsheet. The applied formulae were checked and the appropriateness of the calculation could be confirmed.
DPBP	N/A	years	Business plan of the project "Construction of energy unit №6 at Novosibirsk HPS 5".2002.Page 8; Investment		<input checked="" type="checkbox"/>	The DPBP was duly calculated in Excel spreadsheet. The applied formulae were checked and the appropriateness of the calculation could be confirmed.

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			analysis			
					<input type="checkbox"/>	

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis

<input checked="" type="checkbox"/>		No barrier parameters are used for additionality justification		
<input type="checkbox"/>		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of determination team	
			Appropriateness of information source	Explanation of final result
			<input type="checkbox"/>	



ANNEX 5: OUTCOME OF THE GSCP

Table A-5: Outcome of the Global Stakeholder Consultation Process

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period					
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the determination team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment ^{*)}	Response determination team ^{*)}	Conclusion (incl. CARs CLs or FARs)

^{*)} In case clarifications have been requested by the determination team corresponding rows shall be added