JI DETERMINATION REPORT

ASSOCIATED PETROLEUM GAS FLARING REDUCTION AND ELECTRICITY GENERATION AT THE KHASYREY OIL FIELD.

Report No: 8000369890 – 09/48

Date: 06.08.2009

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Final Approval by: Mr. Eric Krupp	Organisational unit: TÜV NORD JI/CDM Certification Program
Client: Carbon Trade & Finance SICAR S.A.	Client ref.: Konstantin Myachin
Summary:	☒ positive determination opinion ☐ negative determination opinion

"TÜV NORD JI/CDM Certification Program (CP) has carried out a determination PDD of the project: "Associated petroleum gas flaring reduction and electricity generation at the Khasyrey oil field" 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 determination PDD 6 Corrective Action Requests (CARs) and 8 Clarification Requests (CLs) were raised and except for CAR A2 successfully closed. Only CAR A2 could not be closed at this stage. This is because a positive determination opinion is a prerequisite for applying Letter of Approval of all parties involved. Hence the CAR A2 can be closed after receipt of the Letter of Approval.

The review of the project design documentation (PDD Version 5 dated 05.08.2009) 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.
- 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 711,277 tCO2e are most likely to be achieved in the period from 01.01.2008 to 31.12.2012."

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.

Report No.: 8000369890 – 09/48	Subject Group: Climate Protection	
Report title: Associated petroleum gas flaring reduction and electricity generation at the Khasyrey oil field.		
Work carried out by: Mr. Rainer Winter Mr. Evgeni Sud		
Final technical review by: Mr. Eric Krupp	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
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CR	Clarification Request
DFP	Designated Focal Point
FAR	Forward Action Request
EB	CDM Executive Board
EIA	Environmental Impact Assessment
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Producer
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
kW	Kilowatt
kWh	Kilowatt hour
m	Meter
m^3	Cubic meter
MW	Megawatt
MWh	Megawatt hour
NCV	Net Calorific Value of Fuel
ODA	Official Development Assistance
PDD	Project Design Document
Rub	Rubel
Th	Thousand
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

"Associated petroleum gas flaring reduction and electricity generation at the Khasyrey oil field."

with regard to the relevant requirements for JI project activities

The purpose of a determination is to have an independent third party assess of the project design and is a requirement for all JI projects. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC 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	"Associated petroleum gas flaring reduction and electricity generation at the Khasyrey oil field."		
Project size	☒ Large Scale ☐ Small Scale		
JI Procedure	☒ Track 2 ☐ Track 1		
Project Scope	☒	1	Energy Industries (renewable- /non-renewable sources)
	☐	2	Energy distribution
	☐	3	Energy demand
	☐	4	Manufacturing industries
	☐	5	Chemical industry
	☐	6	Construction
	☐	7	Transport
	☐	8	Mining/Mineral production
	☐	9	Metal production
	☒	10	Fugitive emissions from fuels (solid, oil and gas)
	☐	11	Fugitive emissions from production and consumption of

			halocarbons and hexafluoride
	☐	12	Solvents use
	☐	13	Waste handling and disposal
	☐	14	Afforestation and Reforestation
	☐	15	Agriculture
Applied Methodology	*Project specific methodology*		
Crediting period	2008-2012		
Start of crediting period	01.01.2008		

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 — Oil Company Rosneft
Other involved party	Netherlands	Carbon Trade and Finance SICAR S.A.

Severnaya neft is a project operator and subsidiary of NK Rosneft.

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	Russia
Region:	Nenets Autonomous Okrug
Project location address	The oil fields are located approx 350 km. from Usinsk

2.4 Technical Project Description

The technical key data are provided in tables 2-4a and 2-4b below:

Table 2-4: Technical data of the project activity

Key parameters:	**Project Activity**				
Equipment	Gas Turbine Unit	Gas Turbine Unit	Gas Turbine Unit	Gas Turbine Unit	Gas Turbine Unit
Manufacturer:	Siemens	Siemens	Siemens	Siemens	Siemens
Type	TYPHOON	TYPHOON	TEMPEST	TEMPEST	TEMPEST
Manufacturing / Commissioning Date:	11.2005	11.2005	09.2006	06.2007	Yet not finally fixed[1]
capacity	4.7 MW	4.7 MW	7.9 MW	7.9 MW	7.9 MW
Fuel Type:	Dual fired: APG and diesel	Dual fired: APG and diesel	APG	APG	Dual fired: APG and diesel

[1] During the determination the GTU has been installed and in testing phase. The commissioning of the unit is expected to be in 2009.

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	21.01.2009
Submission of PDD for global stakeholder commenting process	01.02.2009 – 22.03.2009
On-site visit	31.03.- 03.04.2009
Draft reporting finalised	22.04.2009
Technical review on draft reporting finalised	27.04.2009
Final reporting finalised	06.08.2009
Technical review on final reporting finalised	06.08.2009

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- 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)]	Sectoral competence	Technical competence	Host country Competence	Controlling competence
☒ Mr. ☐ Ms.	Rainer Winter	TÜV NORD	TL	SA	x	x	-	x
☒ Mr. ☐ Ms.	Evgeni Sud	TÜV NORD	TM	E	x	x	x	-
☒ Mr. ☐ Ms.	Sergej Friesen	TÜV NORD	TM	T	-	-	x	-
☒ Mr. ☐ Ms.	Eric Krupp	TÜV NORD	TR, FA	SA	x	x	-	x

[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

3.4 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 from 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				
Checklist Item	***Determination PDD Team Comment***	***Reference***	***Draft Conclusion***	***Final Conclusion***
The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.	*The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the determination team and how the assessment was carried out.*	*Gives reference to the information source on which the assessment is based on*	*Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft determination stage.*	*In case a corrective action or a clarification the final assessment at the final determination stage is given.*

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.

During determination the determination team has performed interviews to confirm selected information and to resolve issues identified in the document review. 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 representatives Project consultant	- 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 Government 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 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	1	-	-
Project baseline (B) - Baseline Methodology - Baseline scenario determination - Additionality determination - Calculation of GHG emission reductions Project emissions Baseline emissions - Leakage	2	4	-
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	2	4	-
Estimation of greenhouse gas emission reductions (E)	-	-	
Environnemental impacts (F)	-	-	-
Stakeholder Comments (G)	-	-	-
SUM	**5**	**8**	**-**

[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).

The findings of determination process are summarized in the tables below.

	Finding A1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Please present the information in the in a more clear and transparent manner. For this purpose please include separately the explanation of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario In particular under the baseline scenario please indicate whether APG would be flared or vented into atmosphere?		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	a) In the year 2001 tender on development of Gamburtsev swell oil fields won JSC "Severnaya neft" and started construction of oil mining facilities. By the year 2003 three oil fields were put into operation. Oil mining was growing and demands on electricity supply were growing too. APG was flared. Firstly electricity was generated by diesel power plants (DPP) as it is easier to operate small units of DPPs. After the management team of the company decided to utilize APG and produce energy by its combustion in GTU. They hired engineering company ILF for technical project development and the Project emerged. b) According to baseline management team of the company wouldn't decide to utilize APG in GTUs. It would be burnt in flares as before. For the electricity production the company would use diesel power plants and their number would grow. So there would be need to implement more reservoirs for diesel fuel storage. And there would be need to transport more fuel to oil fields. And the company has this opportunity. c) According to project scenario management of the company decided to construct gas turbine power plant and utilize APG in it. Part of energy is produced in DPPs and another part is produced in GTUs fed by APG. Utilization of APG leads to reduction of greenhouse effect. So in the first quarter of 2005 construction and assembly works started and energy center was erected.		
AIE Assessment #1 *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.*	The revised PDD provides separately information about a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario The baseline scenario clearly indicates that the APG would be flared in the Baseline scenario.		

	Finding A1
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding A2		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Letter of Approval from all parties involved are pending.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Letter of Approval from all parties involved will be applied upon receipt of the positive determination opinion.		
AIE Assessment #1 *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.*	A positive determination opinion is a prerequisite for applying the relevant approvals. Project participant will apply for the relevant approval. The CAR can be closed after receipt of the Letter of Approval from all parties involved.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☐ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☐ The project complies with the requirements		

	Finding B1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. Please explicitly indicate which of the **approaches** regarding **baseline scenario**, defined in the JISC's guidance on criteria for baseline setting and monitoring has been chosen. 2. If a JI specific approach regarding baseline scenario setting is used, please provide a detailed **theoretical description** in a complete and transparent manner. Please include in the description all assumptions, formulae, parameters, data sources and key factors, and state how uncertainties are taken into account and conservativeness is safeguarded. 3. Please specify within the Step 3 – **Investment analysis** a procedure for justification of the baseline scenario, including the information on the financial indicators and sensitivity analysis.		

	Finding B1
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The corrections were made in introduction for the section B of PDD.
AIE Assessment #1 *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.*	The PDD has been revised in accordance with the raised CAR. 1. The developed methodology has been established on a project-specific basis in accordance with appendix B of the JI guidelines. This has been assessed as appropriate. 2. The detailed theoretical description of the applied methodology is presented in the section B of the PDD. The methodology specifies the algorithm to identify the baseline scenario including the specific assumptions to be applied in this regard. Assumptions, formulae, parameters, data sources and key factors, and statement how uncertainties have to be taken into account have been provided. [2] 3. Procedure for both the financial indicator and the benchmark has been appropriately specified in the context of the methodology description. As per the revised PDD the project activity is considered to be additional in case the financial indicator is below the hurdle rate of the company. This is appropriate. **Open issues:** Sensitivity analysis has been not included in the own methodology. However the sensitivity has been calculated within the feasibility study. Project participant is kindly requested to a) include the analysis of sensitivity in the own methodology and b) Present the results of the sensitivity analysis in the PDD.
Corrective Action #2	The sensitivity analysis is added in the B 2 section of the PDD accompanied with the excel project economics model.
AIE Assessment #2 *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.*	The sensitivity analysis has been appropriately carried out and the main results have been incorporated in the PDD.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

[2] (For details pl. refer to the assessment of the applied methodology in the checklist section B and assessment of the methodology)

	Finding B2		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Further clarification is required why following alternatives have not been included to the examination of plausible alternative scenarios. • Injection of the associated gas into an oil reservoir; • Recovery, transportation, processing and distribution of the associated gas and products thereof to end-users without being registered as a JI project activity; • Recovery, transportation and utilization of the associated gas as feedstock for manufacturing of a useful product.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	All these alternatives are aimed to utilize APG. In our project the main purpose was to supply Gamburtsev swell oil fields with electricity. That's why we consider alternatives aimed to supply the oil fields with electricity (we consider three).		
AIE Assessment #1 *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.*	Within the on-site-visit the determination team has interviewed the responsible personnel with respect to this issue. In particular it could be concluded that injection of the associated gas into an oil reservoir is not plausible due to the specific geological circumstances of the Gamburtsew oil swell (esp. of it s upper layer). Furthermore determination team agreed that due to the remoteness of the production site neither recovery, transportation, processing and distribution of the associated gas and products thereof to end-users, nor recovery, transportation and utilization of the associated gas as feedstock for manufacturing of a useful product can be considered as plausible scenarios. For this reason a sufficient confidence has been gained that the indicated three options have been appropriately identified as being not plausible. Also the exclusion of these scenarios from further consideration has been assessed as appropriate.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

	Finding B3		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. Please indicate which of the **approaches** regarding **additionality** justification has been chosen. 2. If a **JI specific approach** is chosen, please provide a reference and justify, with a clear and transparent description, its applicability, as appropriate.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	For the additionality justification was performed our own methodology described in the beginning of section B. According to the methodology financial indicator of the project with/without ERUs sales is compared with the hurdle rate of the company "RN-Severnaya Neft". For the company's hurdle rate is 15%, the project's IRR without ERUs sales is 11,79%. This is higher than discount rate of the company (10%), but the project has many risks (described in barrier analysis). So it scarcely can be implemented in "RN-Severnaya neft". From the other hand implementation of the project with ERUs sales increases its IRR up to 15,29%. It is higher than company's hurdle rate and Project can be made by the company.		
AIE Assessment #1 *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.*	1. Within the own methodology the additionality has been demonstrated by using the **approach b (iii)** as per the Annex 1, Additionality Guidance on criteria for baseline setting and monitoring: *Provision of traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources or enhancements of net anthropogenic removals by sinks of GHGs;* The applied approach has been assessed to be in line with requirements of JI Guidelines. (For details please refer to the Methodology checklist) The PDD has been revised in accordance with the raised CAR. 2. The revised PDD provides a detailed **theoretical description** of the applied methodology for justification of the baseline. Section B of the PDD specifies the algorithm to identify the baseline scenario including the specific assumptions to be applied in this regard. Assumptions, formulae, parameters, data sources and key factors, and statement how uncertainties has to be taken into account have been provided. [3]		

[3] (For details pl. refer to the assessment of the applied methodology in the checklist section B and assessment of the methodology)

	Finding B3
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding B4		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Combined tool to identify the baseline scenario and demonstrate additionality developed for CDM project activities requires (within the barrier analysis) assessment how the registration will alleviate the barriers that prevent the proposed project activity from occurring in the absence of the registration. It is unclear whether a similar provision is also required within the proposed project specific methodology?		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	As a matter of fact, the barrier analysis in our own methodology was used for justification of baseline. This analysis showed that scenarios #2 and #3 were not able to overcome the given barrier (technological), but #1 did not have this obstacle and can be considered as baseline. For choosing of baseline we used investment analysis either. And for additionality justification we used common practise analysis. All these steps were described in introduction for section B.		
AIE Assessment #1 *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.*	As per the revised PDD the impact of the benefits out of the registration of the project activity under JI is carried out in accordance with provisions of the developed methodology. For this reason the response and the revision of the PDD have been accepted.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

	Finding B5		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Further clarification is required regarding assumptions made within the investment analysis. In particular please justify the appropriateness of the applied values in particular for: **Project scenario:** • Electricity demand / Electricity generation • Investment costs GTU • Operating costs GTU **Baseline scenario:** • Investment costs diesel Units **Internal benchmark.** Pl. provide further justification regarding the suitability of the benchmark w.r.t. the selected financial indicator. Financial indicator (project IRR) and benchmark should be consistent. Please explain whether the benchmark was consistently used in the past for similar projects with similar risks? Please clarify whether the benchmark is post-tax?		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Justifications of the applied values for Project scenario and Baseline scenario are presented in attachments 2,3,4. Justification of the used 15% benchmark is presented in attachment 5. Similar projects (with similar risks) in LLC "RN-Severnaya neft" were not performed so this benchmark was not used before. All taxes were considered in investment analysis separately from the benchmark. Internal benchmark is parameter shows efficiency of the project and it doesn't contain any taxes in its structure.		
AIE Assessment #1 *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.*	Yet, not ok. 1. PP is kindly requested to explain the data source for the values applied within the feasibility study in particular for: - Investment cost for both GTU and Diesel units. - OPEX both GTU and Diesel units In this context please explain why the applied values are not overestimated / underestimated? 2. Please explain how the number of additional diesel units (24) has been derived based on the required capacity 26 MW and electricity generation. .		

	Finding B5
Corrective Action #2 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	1) Investment cost for both GTU and Diesel units. Investment costs for GTU were determined by calculation method. In order to estimate investment costs market of GTU producers was observed (equipment with similar capacity was considered, its price, construction and implementation works). Taking into account this factors investment costs were determined. By the start of the Project Diesel Power Units were used and specialists of "RN-Severnaya neft" LLC knew the investment costs of one Diesel unit (fact data). OPEX both GTU and Diesel units For Diesel units specialists of "RN-Severnaya neft" LLC had fact data on operational costs of one unit. Operational costs for GTU were determined by expert estimation. (They used standard documents for evaluation of: necessary staff for management and operation, fuel and other materials, etc.) 2) 11 diesel power plants (DPPs) of 9.5 MW total capacity had been on the Gamburtsev swell fields before the Project start. In the baseline scenario new 24 DPP of 24 MW total capacity would have been added. Thus total diesel generation capacity equals to 33.5 MW. Considering 20%-22% reservation the net output capacity equals to 26 MW.
AIE Assessment #2 *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.*	The provided explanation is appropriate and also in line provided supporting documents and explanation given within the on-site visit. CL is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding B6		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	According to the investment analysis investment cost for GTU arise annually within the time period between 2004 and 2012. However as per the PDD the last stage of the project implementation is 2009. Please clarify what has been taken into account under investment costs within the time period between 2004 and 2012.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	All these figures are presented in spread sheet of capital costs specification (attachement 1).		

	Finding B6
AIE Assessment #1 *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.*	A detailed implementation schedule of the project activity as per the feasibility study has been provided. The detailed implementation schedule clearly indicates particular steps of the project activity to be carried out in the period between 2004 and 2012. The investment cost of the GTUs in the time period between 2004 and 2012 is consistent with the scheduled implementation of particular steps of the project activity.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding D1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	During the on-site-visit it was observed that archiving of some recorded parameters (in particular net electricity generation) is less than 2 years. Please revise the archiving procedures.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The archiving period for net electricity generation is 2 years sharp (was approved by chef power engineer).		
AIE Assessment #1 *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.*	Yet, not ok. An appropriate archiving period should be included to the monitoring plan and indicated as a part of the monitoring plan in the PDD. Please note that data monitored and required for determination are to be kept for two years after the last transfer of ERUs for the project.		
Corrective Action #2 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	We included the necessary data in the monitoring plan (comments for the M-12, M-11, M-10).		
AIE Assessment #2 *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.*	The archiving period in the revised PDD is in line with §38 of the Guidance on the baseline setting and monitoring and clearly indicate that all data monitored and required for determination according to paragraph 37 of the JI guidelines will be kept for two years after the last transfer of ERUs for the project.		

	Finding D1
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding D2		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	CL D2 has been raised in order to clarify what is the exact numbering of the particular meters summarized under the overhead meter-points M-9, M-10, and M-11 as per the PDD.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	We described all meters in the comments for every meter-points. Moreover, we added additional meter-point M-12 (electricity generation for GPP's own needs). Comments for this meter-point include titles and numbers of the meters too.		
AIE Assessment #1 *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.*	The revised PDD lists the particular meter points as well as the corresponding function. Furthermore the monitoring equipment has been clearly allocated to the monitoring parameters in the PDD.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

	Finding D3		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. Please clarify how the developed project specific methodology regulates the justification of the conservative nature of the assumed efficiency values. What are the assumptions and data sources to be applied in this context? 2. Please justify and/or provide evidences for the conservative nature for the assumed efficiency (98%) of APG combustion in flares. 3. Please justify and/or provide evidences for the conservative nature for the assumed efficiency (100%) of APG combustion in GTU.		

	Finding D3
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Value of efficiency of APG combustion in flares based on data in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Chapter 4 Fugitive emissions, p. 4.49 Value of efficiency of APG combustion in GTU is based on data in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Chapter 2 Stationary combustion, p. 2.14 2006 IPCC Guidelines for National Greenhouse Gas Inventories is quite conservative and trustful source of efficiency factors.
AIE Assessment #1 *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.*	Yet, not ok. It is unclear how the efficiency of APG combustion in flares (98%) has been derived based on data as per the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Chapter 4 Fugitive emissions, p. 4.49. It is unclear how efficiency of APG combustion in GTU (100%) has been derived based on data as per 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Chapter 2 Stationary combustion, p. 2.14.

	Finding D3
Corrective Action #2 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	We used 98% efficiency factor for APG flaring provided in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories as this source gives a more conservative flare efficiency value that any other methodology. For example there is "Methodology for calculation hazardous emissions into the atmosphere during APG flaring" developed by the Saint-Petersburg Institute (SPI) for Atmosphere protection and approved by Government Committee of Environment Protection of Russian Federation (see attachment 1). The SPI methodology for calculating flare emissions is widely recognized as the standard for the Russian oil and gas industry, it relies centrally on the chemical composition of the APG being burned and on continued operation of the flare in black-firing mode. Black-firing mode refers to underfiring to a degree that flare emissions contain significant soot and underfired hydrocarbon emissions, including methane. The SPI methodology provides specific calculations based on stack geometry, APG composition and flue gas velocities to determine whether a given stack is operating in this mode. Emission factors are then tied to this finding. For example, if APG flaring will be proven as black-firing (subject to black firing test) then underfiring coefficient of 0.035 should be applied to find CH4 and CO2 emission factors. It means that the flare efficiency is 96.5% (vs 98% provided in IPCC guidelines). Initially we used the SPI methodology for determining CH4 and CO2 emission factors based on 96.5% flare efficiency as the test of the Khasyrey BPS flare showed black-firing mode. Besides the black-firing mode of the flare with intensive soot emissions was easily being observed during our joint on-site visit at Khasyrey BPS. However for being conservative and for the simplicity reason we used a 98% efficiency factor provided by 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For efficiency factor for flares we used Volume 2, Chapter 4. Fugitive emissions, p.4.45 "… **Flaring destruction efficiency**… typically a value 0.98 is assumed for those used at production and processing facilities". Combustion efficiency for the GTUs is based on the data from Volume 2, Chapter 2. Stationary combustion, p.2.14 "Emission factors for CO2 are in units of kg CO2/TJ on a net calorific value basis and reflect the carbon content of the fuel and the assumption that the **carbon oxidation factor is 1".**

	Finding D3
AIE Assessment #2 *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.*	For the efficiency of APG combustion in flares (98%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 4. Fugitive emissions, p.4.45 "… Flaring destruction efficiency… typically a value 0.98 is assumed for those used at production and processing facilities. The applied value could be proved. 2. For the combustion efficiency for the GTUs (100%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 2. Stationary combustion. The applied value could be proved.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

	Finding D4		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	During the on-site visit it was observed that the measurements of the chemical composition are not carried out monthly as indicated in the PDD. Please provide consistence.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Necessary corrections were made.		
AIE Assessment #1 *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.*	As per the revised PDD the measurements of the chemical composition are carried out quarterly. The determination team assessed the measurement interval as appropriate.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

	Finding D5		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Please clearly define provisions for monitoring of the APG combusted in GTUs including the description of the applied technology and procedures for determination of reserve fuel used and include this information in the PDD.		

	Finding D5
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Provisions for monitoring of the APG combusted in GTUs including the description of the applied technology and procedures for determination of reserve fuel used were included in Annex 3 Monitoring plan.
AIE Assessment #1 *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.*	Yet, not ok. Please provide additional information with regard to the applied metering system.
Corrective action #2	Equipment for monitoring of instant consumption is based on the temperature measurement with the use of the thermal couple. And Siemens program only calculate gas temperature before the turbine and rotation in power. Also the program consider possible deviations mentioned while test operation. According to the State standard for Gas turbine units #20440-75 for methods of test operation possible error for power is 0.5% and confidence interval is1%.http://www.rgost.ru/index.php?option=com_content&task=view&id=1983&Itemid=38 All the state standards must be followed. Improper realization is forbidden by the law. Every working shift level of diesel fuel is measured with the use of measuring gauge 3 times (in the beginning of a month in the middle and at the end of a month). All values are put into the machinist report. When the shift is over all values are calculated and the result is put into the special act that is the document for the diesel fuel consumption.
AIE Assessment #1 *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.*	In response to the raised clarification PP has requested the technology supplier to provide detailed information of the installed metering system. As per the specification given by the manufacturer the main metering system incorporates measurements of the fuel pressure in the fuel supply system and temperature measurements. Furthermore the inlet and outlet pressure of the compressor air as well as temperature of the exhaust gases will be measured and turbine rotation will be measured. The algorithm of the calculation and the detailed information of the metering system have been provided. Based on the provided information it could be concluded that this system enables an appropriate metering of the APG consumption and appropriate control of the gas turbine operation.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☒ Additional action should be taken ☐ The project complies with the requirements

	Finding D6		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The determination of the CH4 emission factor for incomplete burning of APG in flare has been carried out in section E of the PDD. However as this a monitoring parameter the provisions its determination should be also included in the monitoring plan (section D).		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The provisions of determination of CH4 emission factor for incomplete burning of APG in flare were described in Annex 3 Monitoring plan.		
AIE Assessment #1 *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.*	The determination of CH4 emission factor has been included in the Annex 3 of the PDD.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic determination ERU ☒ Appropriate action was taken ☐ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

5 DETERMINATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

A positive determination opinion as confirmed by an Independent Entity is a prerequisite for the Host Country Approval that can be issued on request by the Designated Focal Point of the Russian Federation - Ministry for Economic Development and Trade of the Russian Federation.

Project Participants

Project participant involved in the project activity are the OJSC — Oil Company Rosneft (Russian Federation) and Carbon Trade and Finance SICAR S.A. (Netherlands).

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 03 (JISC 13) have been used for completing the PDD. According to the JISC 13th meeting, these Guidelines should be taken into account for all PDDs to be published from 1 January 2009.

5.1.3 Technology to be employed.

Within the project activity electricity for own needs (esp. for the oil production facilities) will be generated through the utilization of the associated petroleum gas. The pre-project situation envisaged the generation of electricity through diesel-fired power generation equipment.

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

5.1.4 Small Scale Projects

Not applicable

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The developed project specific baseline methodology provides an algorithm for identification and justification of the baseline. This algorithm stipulates a step-wise approach which should be followed for elaboration of the baseline scenario and justification of the additionality.

Data sources and assumptions as provided within the developed methodology draw upon the main provisions of the "Combined tool to identify the baseline scenario and demonstrate additionality" ("Combined Tool"). The incorporation of the main steps of the Combined Tool is considered to be appropriate, because this tool also provides a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. Besides, a similar approach is required by methodologies developed for comparable project activities.

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. 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.

In the course of determination the determination team has inspected the whole process of APG utilization. The process encompasses APG production, transportation, separation, preparation (drying) as well as power generation and transportation to different consumer groups. It could be verified that all equipment mentioned has been physically installed and is in a good working condition. Furthermore the technical specification of the installed equipment is in line with provided documentation and is in line the indication in the PDD.

5.2.3 Baseline Identification

The description of baseline identification in the PDD is transparent and verifiable. The procedure to arrive to the baseline is in line with the applied project specific methodology. All plausible alternatives have been identified. Only alternatives were excluded which are assessed not to be plausible alternatives. Within the financial analysis it could be demonstrated that the identified most plausible alternative (i.e. baseline scenario) is financially more attractive than the project scenario.

Alternatives

The PDD contains a complete list of all realistic alternatives to the project scenario. Project activity and the continuation of the current practice have been identified as plausible and realistic alternatives.

Barrier analysis

A detailed barrier analysis has been carried out by PP: In most cases the identified barriers have been assessed as a serious difficulty w.r.t the project implementation. In the course of the determination sufficient confidence could be gained that an immense effort has been spent by the project participant to overcome the identified barriers. The justification of the barriers have been evidenced and substantiated. The determination team is of the opinion that argumentation as provided by the project participant is convincing.

However the identified barriers could not be assessed as sufficient to prevent the implementation of this alternative.

Investment analysis

Investment analysis shows 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.

5.2.4 Additionality Determination

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

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.

Application of methodology / methodological tools

The developed project specific baseline methodology provides an algorithm for identification and justification of the baseline. Data sources and assumptions as provided within the developed methodology draw upon the main provisions of the "Combined tool to identify the baseline scenario and demonstrate additionality" ("Combined Tool"). The incorporation of the main steps of the Combined Tool is considered to be appropriate, because this tool also provides a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. Besides, a similar approach is required by methodologies developed for comparable project activities.

For assessment of identification of plausible alternatives, Barrier analysis and Investment analysis please refer to the comments on the Baseline identification.

Common practice analysis

The common practice analysis provided in the PDD is accurate. The information and data sources used are appropriately references and could be proved in the course of determination.

A sufficient confidence could be gained that the proposed project type (i.e.. technology and/or practice) has not diffused in the relevant sector and geographical area and the time the project started.

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. All conclusions could be supported by the evidences.

5.2.5 Monitoring Methodology

A project specific methodology has been developed for the project activity.

5.2.6 Monitoring Plan

The monitoring plan covers all monitoring parameters given in the applied monitoring methodology. The monitoring plan can be implemented and all monitoring arrangements are feasible within the project design.

5.2.7 Project Management Planning

The project management planning is appropriate for the purpose of the projects monitoring.

5.2.8 Calculation of GHG Emission Reductions

The calculation has been done in accordance with the applied project specific methodology. All data not to be monitored have been assessed as correct. The values for the monitoring parameters assumed within the calculation are plausible. It could be concluded that the estimated emission reductions are plausible and conservative.

5.2.9 Crediting Period

The choice of the crediting period is appropriate. The crediting period starting date is appropriate.

5.2.10 Environmental Impacts

All relevant environmental impacts were identified during EIA. Necessary measures to minimise the environmental impacts are as per EIA and operating approval are taken by the operator of the plant.

5.2.11 Comments by Local Stakeholders

All relevant local stakeholders have been invited to comment on the project. No comments were received.

6 DETERMINATION OPINION

TÜV NORD JI/CDM Certification Program (CP) has carried out a determination PDD of the project: "Associated petroleum gas flaring reduction and electricity generation at the Khasyrey oil field" 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 determination PDD 6 Corrective Action Requests (CARs) and 8 Clarification Requests (CLs) were raised and except for CAR A2 successfully closed. Only CAR A2 could not be closed at this stage. This is because a positive determination opinion is a prerequisite for applying Letter of Approval of all parties involved. Hence the CAR A2 can be closed after receipt of the Letter of Approval.

The review of the project design documentation (PDD Version 5 dated 05.08.2009) 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.
- 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 711,277 tCO2e are most likely to be achieved within the crediting period.

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, 06.08.2009

Mr Rainer Winter,
Determination Team Leader
TÜV NORD JI/CDM CP

TÜV NORD CERT GmbH GERMANY JI/CDM CERTIFICATION PROGRAM

Essen, 06.08.2009

Eric Krupp
Final Approval
TÜV NORD JI/CDM CP

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/**CAPEX**/	A detail analysis of the particular cost components for the gas turbine units assumed within the Feasibility study.
/**D-1**/	Proof for specific consumption of diesel units (Historical data for the time period 2006-2008 on diesel consumption and the corresponding electricity output)
/**D-2**/	Chemical composition of APG as per the measurements carried out by an independent laboratory – Nauka II.
/**D-3**/	Balance of production and utilization APG at the Khasyrey oil field, including the information on the historical amounts of APG burning in GTUs and the forecast of the oil production carried out by experts of Rosneft.
/**D-4**/	Forecast of the electricity demand for the period 2008-2012
/**D-5**/	Diesel fuel consumption in 2008
/**D-6**/	Proof for Internal benchmark of 15% (as per the PDD, page 24)
/**EIA**/	Environmental Impact assessment (EIA)
/**EL**/	Electricity consumption in 2008
/**ER**/	Emission reduction calculation (excel file)
/**FS**/	Feasibility study Construction of gas turbine power station of Khasyrey BPS, "ILF Rusland" 2005
/**License**/	License issued to the project participant by the local authorities that regulates oil production and the oil fields of Gamburtsew swell where the project takes place.
/**Mt-APG**/	Technical specification for the metering equipment as per the manufacturer including the detailed information of the main system components and algorithm for calculation of APG consumption.
/**Mt-D**/	Technical specification for the diesel metering equipment

Reference	Document
/**Mt-E**/	Technical specification for the metering equipment: Electricity meter(s)
/**PDD**/	Project Design Document Version 1 (Published version) "Associated petroleum gas flaring reduction and electricity generation at the Khasyrey Oil Field". Project Design Document Version 5 " dated 05.08.2009 Associated petroleum gas flaring reduction and electricity generation at the Khasyrey Oil Field"
/**SC**/	Proof for the stakeholder consultation process
/**TS**/	Technical specification project activity - Two gas turbine units (GTU) of 4.7 MW each (already operational) and - Two GTU of 7.9 MW each (already operational) and 7.9 MW unit (under development)
/**TS-BL**/	Technical specification baseline scenario: Diesel power plants (DPPs)
/**XLS**/	Investment analysis within the Excel calculation spreadsheet

Table 7-2: Background investigation and assessment documents

Reference	Document
/**B-1**/	Emisssion reductions in the natural gas sector through project-based mechanisms, IEA Information paper, 2003
/**B-2**/	Using Russia's Associated Gas, Prepared for the Global Gas Flaring Reduction Partnership and the World Bank, By PFC Energy, December 10 2007
/**B-3**/	National Communication by Russian Federation
/**B-4**/	Progress report submitted by Russian Federation
/**B-5**/	Joint Implementation Handbook for Russian companies, German Energy-Agency (Deutsche Energie-Agentur GmbH (dena) 2008
/**B-6**/	Resolution of Ministry of Natural Resources of the Russian Federation No. 13

Reference	Document
	dated 27.03.2001 and Resolution of Administration of the Nenets Autonomous Okrug No. 03-20/1388 dated 02.04.2001
/**B-7**/	Federal Law No. 7-F3 "On Environmental Protection" dated 10.01.2009
/**B-8**/	Federal Law No. 96-F3 "On Atmospheric Air Protection" dated 04.05.1999
/**B-9**/	Resolution No. 410 of the Russian Government dated 01.07.2005
/**B-10**/	Regulations on environmental impact assessment of the planned economic and other activities in the Russian Federation (Order No. 372 of Department of Environmental Protection of the Russian Federation, approved on 16.05.2000)
/**CPM**/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/**GBM**/	Guidance on Criteria for baseline setting and monitoring
/**GCP**/	Guidelines for users of the Joint Implementation project design document form (version 03)
/**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
/**IPPC-RM**/	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
/**KP**/	Kyoto Protocol (1997)
/**MA**/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/**TA**/	Tool for the demonstration and assessment of additionality (Ver. 4 – Ver. 5.2).
/**VVM**/	Validation and Verification Manual (Version 1, Annex 3; EB 44)

Table 7-3: Websites used

Reference	Link	Organisation
/dfp/	http://www.economy.gov.ru/wps/wcm/connect/economylib/mert/welcome/economy/kiorealize/analiticmath/	Ministry of Economic Development of the Russian Federation
/gzdt/	http://www.gov.cn/gzdt/2005-12/30/content_142048.htm	Guiding List on Energy Industry Restructure
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/I-GTU/	http://energy.ihs.com/News/Press-Releases/2008/IHS-CERA-Power-Capital-Costs-Index.htm	IHS, Construction Costs for New Power Plants Continue to Escalate: IHS CERA Power Capital Costs Index
/nfg/	http://www.neftegaz.ru/	Oil gas news website
/ngv/	http://www.ngv.ru/	OIl and gas vertical
/mert/	http ://www.economy.gov.ru/wps/wcm/connect/economylib/mert/welcome/economy/kiorealize/analiticmath/	Ministry for economic Development of the Russian Federation
/unfccc/	http://cdm.unfccc.int	UNFCCC

Table 7-4: List of interviewed persons

Reference	MoI[1]		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	D. N. Isaenko	Severnaya Neft LLC
/IM01/	V	☒ Mr. ☐ Ms	G. A. Dertev	Severnaya Neft LLC
/IM01/	V	☒ Mr. ☐ Ms	A. W. Uljanow	Severnaya Neft LLC
/IM01/	V	☒ Mr. ☐ Ms	M. F. Latypov	National carbon sequestration foundation
/IM01/	V	☒ Mr. ☐ Ms	D. Ukhanov	National carbon sequestration foundation

[1)] Means of Interview: (**T**elephone, **E**-Mail, **V**isit)

ANNEX

A1: Determination Protocol

A2: Assessment of Baseline Identification

A3: Assessment of Financial Parameters

A4: Assessment of Barrier analysis

A5: Outcome of the GSCP

A6: JI Methodology Determination Checklist

ANNEX 1: DETERMINATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
A. General Description of Project Activity				
A.1. Participation Requirements *Referring to Part A and Annex 1 of the PDD as well as the JI glossary with respect to terms Party, Letter of Approval, Authorization and Project Participant.*				
A.1.1. Which Parties and project Participants are participating in the project?	Parties involved are Russian Federation acting as a Host Party and Netherlands. Legal Project Participant of the Host Country is the OJSC "Oil Company Rosneft". Legal Project Participant of Netherlands is Carbon Trade and Finance SICAR S.A.	PDD	OK	OK
A.1.2. Have the involved Parties provided a valid and complete letter of approval and have all private / public project participants been authorized by an involved Party? At this stage of the project at least the Host country approval is required.	Letter of Approval can be applied only after the issuance of the positive determination opinion.	PDD	LoA will be applied	

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
A.2. Approval *The written approval of the parties involved is a mandatory requirement*				
A.2.1. Has the project provided written approvals of all parties involved? *Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.* *Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA*	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	
A.2.2. Are the approvals issued from orgainsations listed as DNAs on the UNFCCC JI website? *Indicate the means of determination PDD employed to assess the authenticity*	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	
A.2.3. Do the written approvals confim that the corresponding party is a Party to the Kyoto Protocol?	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	
A.2.4. Do the written approvals refer to the precise project title in the PDD submitted for	Please refer to the comment under A.1.2.		CAR A2	

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
registration?			LoA will be applied	
A.2.5. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other?	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	
A.2.6. Are all project participants listed in the PDD approved at least by one Party involved? *Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.* *Describe the means of validation employed to draw this conclusion.*	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	
A.2.7. Are any other project participants approved but not listed in the PDD?	Please refer to the comment under A.1.2.		CAR A2 LoA will be applied	

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
A.3. PDD editorial aspects *The PDD used as a basis for determination PDD shall be prepared in accordance with the latest template and guidance from the JI Supervisory Committee available on the UNFCCC website.*				
A.3.1. Has the latest version of the PDD form been applied?	Yes, the 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.	PDD	OK	OK
A.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)?	Guidelines for users of the JI PDD form Version 03 (JISC 13) have been used for completing the PDD. According to the JISC 13th meeting, these Guidelines should be taken into account for all PDDs to be published from 1 January 2009. Hence the PDD is in line with the latest guidance. Nevertheless CAR A1 has been raised in this context and successfully closed.	PDD	~~CAR A1~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
A.4. Technology to be employed *Determination of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The AIE should ensure that environmentally safe and sound technology and know-how is used.*				
A.4.1. Does the PDD contain a clear, accurate and complete project description? *The PDD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.* *Pl. consider esp.* chapters *A.2, A.4.2 and A.4.3 (in case of LSC PDD) for assessment.* *Describe the process undertaken to validate the accuracy and completeness of the project description.* *Contain the AIE's opinion on the accuracy and completeness of the project description.*	Within the project activity associated petroleum gas (APG) will be utilized for power generation for the own needs of production facilities. In order to assess accuracy and completeness of the project description, determination team has proved whether the description of the technology as provided in the chapters A.2, A.4.2 and A.4.3. is in line with provided evidences and physical implementation of the project activity. The details including the technical specification of the technology for **separation and transportation of APG** to the power generation units have been provided in the PDD in a detailed and appropriate manner. During the on-site visit determination team has inspected the separation and transportation facilities and it could be verified that physical implementation of the project activity is in line with the information provided in the PDD. The technical specification of the **power generation** equipment has been provided including all relevant technical data and the implementation schedule. During the on-site	PDD	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	visit determination team has inspected power generation equipment and reviewed the technical specification of all 5 gas turbine units. It has been proved that technical specification of the power generation technology including the capacity figures as indicated in the PDD is in line with the physical implementation and provided technical documentation. Furthermore, the explanation how the generated electricity will be supplied to the different production facilities has been included in the PDD and is in line with the physical installation on site. The determination team is of the opinion that the main steps of the technological process of APG utilization and subsequent electricity generation have been appropriately identified and described in the corresponding sections. The process of APG utilization for energy generation purposes has been assessed by determination team which has come to the conclusion that the process reflects good current practices of APG utilization/B-1//B-2/. For this reason the description of the project activity is considered to be accurate, complete, presented in a detailed manner and in line with provided evidences and results of the on-site inspection.			
A.4.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented	During the site-visit it has been proved that the installed project technology is in line with description as provided in the PDD. Additionally, it has also been verified that	PDD /TS/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
acc to the project description	• **technology for separation and transport of APG,** • **power generation equipment,** • **transmission lines for electricity supply and** • **automatic control system** have been appropriately installed and are in operational/working condition. The technical specification of the equipment installed within the project activity has been duly provided. It has been verified that the technical specification including capacity figures as indicated in the PDD is in line with the provided technical specification. During the site-visit it could be proved that the GTU Nr.5 has already been installed and successfully passed the testing phase, so that a sufficient confidence has been gained proving that the last phase of the project implementation will be finished in 2009 as indicated in the PDD.	/TS-BL/ /license/		
A.4.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation? *Describe the steps taken to validate this issue.*	Within the project activity electricity for own needs (esp. for the oil production facilities) will be generated through the utilization of the associated petroleum gas. The pre-project situation envisaged the generation of electricity through diesel-fired power generation equipment. The electricity generation technology both of the project activity and of the pre-project situation is clearly and accurate provided in the PDD.	PDD /TS/ /TS-BL/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	In the course of determination, determination team has reviewed technical specification of the diesel-fired power generation units. It has been proved that the technology including capacity figures as indicated in the PDD is in line with provided evidences. During the on-site visit it has been confirmed that the diesel fired generation units are used as reserve for unforeseen situations.			
A.4.4. Does the project design engineering reflect current good practices? *Consider the equipment specifications, literature (e.g. EU BREF papers) and professional experiences. Describe the process undertaken to assess the engineering.*	Yes. The project activity involves the installation of the APG utilization and the subsequent power generation technology. The project activity intends to incorporate the latest/state-of-the-art power generation technology and technology required for an APG preparation. Technical specification of the equipment to be employed within the project activity has been reviewed in particular with regard to the quality standard applied by manufacturer of the considered equipment. Furthermore, information as provided by reputed external sources has been examined regarding the best practices of APG utilization. The power generation equipment is produced by a respectable and well-known manufacturer "Siemens". According to the technical specification and information provided by the manufacturer, latest/state-of-the-art power generation technology has been installed within the project activity. This information has been provided in the Annex 4 of the PDD. The APG production and transportation equipment is also	PDD /TS/ /TS-BL/ /B-1/ /B-2/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	produced by renowned manufactures and represents the latest/state-of-the-art technology. Further confidence that the entire design of the project activity is appropriate and reflects good current practice has been gained through examination of technological options and opportunities as provided by the IEA/B-1//B-2/.			
A.4.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country? *Describe the process undertaken to assess the state of the art technology.*	Technical specification of the equipment to be employed within the project activity has been reviewed in particular with regard to quality standard applied by a manufacturer of the considered equipment. The project activity intends to incorporate the latest/state-of-the-art associated petroleum gas based power generation technology. The project activity is expected to meet international standards for environmental quality and safety. Commonly used power generation technologies at the oil fields in Russia are diesel-based and/or do not make use of APG utilization. For this reason, the project activity would result in a less carbon intensive electricity generation in Russia.	PDD,I /TS/	OK	OK
A.4.6. Does the project make provisions for meeting training and maintenance needs? *Describe the process undertaken to assess the maintenance and training needs.*	As per the PDD, training and maintenance procedures related to this technology have been provided by the project owner and manufacturers before the power plant has become operational. This issue has been discussed during the site visit. Training and maintenance needs are continuously monitored by the project owner. It has been proved that procedures for training and maintenance are in	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	place and the corresponding evidences have been provided. Consequently, an adequate confidence has been gained proving that sufficient efforts have been made for this sake.			
A.5. Small scale project activity *It is assessed whether the project qualifies as small-scale JI project activity*				
A.5.1. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II? *Describe the steps taken to validate this issue.*	Not applicable, because the project activity is a large scale project.			OK
A.5.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein? *Describe the steps taken to validate this issue. Check, if applicable the expiry dates of the applied methodology.*	Not applicable, because the project activity is a large scale project.			OK
A.5.3. Is the small scale project activity not a debundled component of a larger project activity? *Describe the steps taken to validate this issue. Pl refer to the Compendium of guidance on debundling (EB 36, Annex 27).*	Not applicable, because the project activity is a large scale project.			OK
B. Project Baseline, Additionality and Monitoring Plan				

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.1. Application of the Methodology				
B.1.1. What kind of methodology has been used? .	Name: **Project specific Methodology** has been applied Version: Type: ☐ CDM Approved Methodology –latest version 6 ☐ CDM Approved Methodology –older version ☐ Combination of Approved Methodology ☒ Project specific Methodology	PDD, I	OK	OK
B.1.2. Has the methodology assessment been carried out?	☒ Yes ☐ N/A (only in case of latest version of approved CDM methodology)	PDD, I	OK	OK
B.1.3. Is the discussion and selection of the baseline methodology transparent? Can the applied methodology be assessed as appropriate?	☒ Yes ☐ No Comment: Yes, the applied methodology is the most suitable methodology for considered project type.	PDD, I	OK	OK
B.1.4. Is the chosen methodology applied correctly?	A project specific methodology has been developed for the considered project activity. **CAR B1** and **CAR B3** have been raised, because description of the approach chosen for baseline and additionality	PDD, I	~~CAR B1~~ ~~CAR B3~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	justification should have been more clearly demonstrated in the PDD. Both CARs have been closed.			
B.1.5. Does the baseline methodology specify data sources and assumptions?	Yes. The developed project specific baseline methodology provides an algorithm for identification and justification of the baseline. This algorithm stipulates a step-wise approach which should be followed for elaboration of the baseline scenario. As per the chosen methodology the baseline scenario should be identified either through the barrier and/or investment analysis. In case of the barrier analysis the proposed methodology assumes that if there is only one alternative scenario, which is not prevented by any barrier, and if this alternative is not the proposed project activity undertaken without being registered as a JI project activity, then this alternative scenario is the baseline scenario. In case the baseline cannot be identified via the barrier analysis the investment analysis has to be carried out. In this case the methodology assumes that the most economically or financially attractive alternative scenario is considered as baseline scenario. Moreover, the methodology requires comparing the financial indicator of the project activity with the hurdle rate of the project participant in order to demonstrate that the project activity would not be implemented without the benefits from JI registration. Furthermore, the methodology assumes that if similar activities cannot be observed or similar activities are observed but essential distinctions between the proposed	PDD, I /CPM/ /GBM/ /GCP/ /GJI/ /TA/	CL B4	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	project activity and similar activities can reasonably be explained, then the proposed project activity is additional. **CL B4** has been raised in this context and successfully closed. Data sources and assumptions as provided within the developed methodology draw upon the main provisions of the **"Combined tool to identify the baseline scenario and demonstrate additionality"** ("Combined Tool"). The incorporation of the main steps of the Combined Tool is considered to be appropriate, because this tool also provides a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. Besides, a similar approach is required by methodologies developed for comparable project activities.			
B.1.6. Does the baseline methodology sufficiently describe the underlying rationale for the algorithm/formulae used to determine baseline emissions (e.g. marginal vs. average, etc.)	Please refer to the comment above. CAR B1, B3 and CL B4 were raised in this context and successfully closed.	PDD, I	~~CAR B1, B3 and CL B4~~	OK
B.1.7. Does the baseline methodology specify types of variables used (e.g. fuels used, fuel consumption rates, etc)?	Yes, the baseline methodology specifies particular steps to be carried out as well as the determination of financial indicators required within evaluation of financial attractiveness of the project activity. Furthermore the baseline methodology has been developed for the specific circumstances of the project activity and hence specifies the types of variable used (e.g. fuels used, fuel consumption rates, etc.)	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.1.8. Does the baseline methodology specify the spatial level of data (local, regional, national)?	Yes, the methodology requires the application of local, regional and national data as demanded for justification of the baseline scenario and demonstration of the additionality. CAR B1, B3 and CL B4 were raised in this context and successfully closed.	PDD, I /CPM/ /GBM/ /GCP/ /GJI/ /TA/	~~CAR B1, B3 and CL B4~~	OK
B.1.9. Is the applied CDM methodology identical with the version available on the UNFCCC website? (Valid only projects where CDM Approved Methodology has been used) *Describe the steps taken to validate this issue.*	N/A CDM Approved Methodology has not been used	PDD, I	OK	OK
B.1.10. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? *Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess the information contained in the PDD.*	The determination team is of the opinion that the developed methodology has been appropriately elaborated. It provides an accurate and proper step-wise procedure for identification of the baseline and demonstration of the additionality. Since all alternative scenarios can be implemented by the project participants, the procedure for identification of the baseline scenario deemed to be appropriately elaborated and consistent. Furthermore, determination team is of the opinion that the developed methodology is applicable for the considered JI project activity.	PDD, I /CPM/ /GBM/ /GCP/ /GJI/ /TA/	~~CAR B1, B3 and CL B4~~	OK
B.1.11. Is the project in accordance to every other stipulation or requirement mentioned in all	Yes, please refer to B.1.5. and B.1.11	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
sections of the methodology? *Describe the steps taken to check whether the proposed project activity meets all the other possible stipulations and /or limitations mentioned in all sections of the approved methodology selected.*				
B.2. Project Boundaries *Project Boundaries are the limits and borders defining the GHG emission reduction project*				
B.2.1. Are the project's spatial boundaries (geographical) clearly defined? *Provide information on how the validation of the geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.*	In this context it is important to note that the project site is remote from the civilization not interconnected with any other electricity grid. The spatial extent of the project boundary includes the project site, and all the energy generation equipment connected physically to the power grid of the project site (i.e. power transmission facilities of the Gaburtsev oil field). All equipment used within the project activity has been indicated in the PDD including the information about its purpose and the technical specification. In the course of determination the determination team has inspected the whole process of APG utilization. The process encompasses APG production, transportation, separation, preparation (drying) as well as power generation and transportation to different consumer groups. It could be verified that all equipment mentioned has been physically installed and is in a good working condition. Furthermore the	PDD, I, /TS/ /TS-BL/ /license/ /FS/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	technical specification of the installed equipment is in line with provided documentation and is in line the indication in the PDD. (For details pl. refer also to A.5.1.) The determination team came to an opinion that technology description in the PDD has been prepared appropriately and in a detailed manner and all equipment mentioned in the PDD is clearly defined and attributable to the considered project activity. Furthermore 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. To validate whether spatial extent of the project boundary has been appropriately identified determination team has assessed whether the technological process required for APG separation, preparation and transportation as well as the generation and transportation of the electrical power is complete and reflects good current practices. For this purpose determination team has considered technologies for APG utilization as provided by International Energy Agency and the World bank/B-1//B-2/. Furthermore the determination team as well as in-house technical experts have carried out an assessment of the technology applied for APG utilization. It could be verified that the technology applied reflects good current practices.			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology? *Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.*	The determination team has considered the equipment and facilities required for the APG utilization and identified all potential sources of GHG gas emissions. It could be verified that all anthropogenic emissions by sources under the control of the project participants that are significant and reasonably attributable to the JI project have been appropriately included in the project boundary.	PDD, I TS/ /TS-BL/ /license/ /FS/	OK	OK OK
B.2.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified? *Confirm if the justification provided by the PPs is reasonable, based on assessment of supporting documented evidence provided by the PPs or by onsite observations.*	All missions included in the project boundary represent the main GHG emission sources and account for more than 1 % or exceed an amount of 2000 tCO2e/a. Negligible emission sources have been appropriately excluded from the project boundary and a reasonable justification has been provided.	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.3. Baseline Identification *The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.*				
B.3.1. What possible baseline scenarios have been considered? *Fill in all alternatives in table A-2.*	1. Continuation of APG flaring at Khasyrey BPS and development of local on-site diesel based power generation at Khasyrey, Nyadeyu and Cherpayu oil fields. 2. Continuation of APG flaring at Khasyrey BPS and construction of power transmission lines (PTL) for connecting to centralized power grid. 3. The Project itself, i.e. APG flaring reduction and its utilization at Khasyrey Power Center in order to supply electric power to facilities located at Khasyrey, Nyadeyu and Cherpayu oil fields without being registered as JI project activity.	PDD, I	OK	OK
B.3.2. Is the list of alternatives complete? *Describe how it was validated that all alternatives are plausible and no plausible alternative is excluded from the consideration*	☐ All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or services are to be taken into consideration. Thus no plausible scenario has been omitted. ☒ The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been	PDD, I	~~CL B2~~	~~OK~~

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	issued In order to validate that the list of alternatives is complete determination team has investigated all possible alternatives for APG utilization. Furthermore plausible alternatives as required by methodologies for similar project activities (e.g. AM0009) have been examined in this context. In this context it should be mentioned that AM0009 is not applicable for this project activity. **CL B2** has been raised in this context because further clarification is required why following alternatives have been not included to the examination of plausible alternative scenarios and successfully closed. • Injection of the associated gas into an oil or gas reservoir; • Recovery, transportation, processing and distribution of the associated gas and products thereof to end-users without being registered as a JI project activity; • Recovery, transportation and utilization of the associated gas as feedstock for manufacturing of a useful product.			
B.3.3. What has been identified as the baseline scenario? *Describe the chosen BL scenario*	Continuation of APG flaring at Khasyrey BPS and development of local on-site diesel based power generation at Khasyrey, Nyadeyu and Cherpayu oil fields.	PDD, I	OK	OK
B.3.4. Has the baseline scenario been determined according to the methodology?	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2.	PDD, I	~~CL B5 and~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.	☐ The determination has been carried out as per the applied methodology. ☒ The following CARs / CLs have been identified with respect to the selection of the baseline scenario: CL B5 and CL B6 have been raised in this context and successfully closed.. Determination of the baseline has been carried out based on the project specific step-wise approach. The developed approach has been assessed to be appropriately elaborated and in line with requirements of JI Guidelines. (For details please refer to the Methodology checklist) All the steps of the project specific methodology for baseline determination have been appropriately carried out. For details regarding how the appropriateness of the particular steps please refer to Table A-2 - Assessment of Baseline Identification.		~~CL B6~~	
B.3.5. Has any plausible alternative scenario been excluded? *Describe how it is validated that no plausible alternative scenario has been excluded.*	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. ☐ No plausible baseline scenario has been excluded. ☒ The following plausible baseline scenarios have been excluded though no adequate justification has been provided for elimination. The following CARs / CLs have been issued:	PDD, I	~~CL B2 and CL B5~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	CL B2 has been raised in this context and successfully closed. CL B5 has been raised in this context requesting project participant in order to clarify the plausibility of the assumptions made within the investment analysis and successfully closed.			
B.3.6. Has the baseline scenario been determined using conservative assumptions where possible? *Describe whether the choice of the identified baseline scenario is reasonable by validating the key assumptions, calculations and rationales used in the PDD. Describe whether these are conservatively interpreted in the PDD.*	☐ The baseline scenario has been determined using conservative assumptions where possible. Please refer to comments in table A-2 and sections B.3.2 to B.3.5 above. ☒ The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative CAR B1 and CAR B3 have been raised in this context and successfully closed.	PDD, I	~~CAR B1 and CAR B3~~	OK
B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations? *Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD.*	Yes, the corresponding laws and regulation have been reviewed by determination team. Furthermore a background investigation on legal aspects regarding utilization of APG has been carried out. It could be verified that national and/or sectoral policies, macro-economic trends and political aspirations have been appropriately taken into account by project participant. For details please refer Table A2 – Assessment of baseline identification.	PDD, I /B-5/ /B-6/ /B-7/ /B-8/ /B-9/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced? *Describe whether the documents and sources referred to in the PDD are correctly quoted and clearly referenced.*	Yes, Within the baseline determination project participant has referenced to different sources of information. These sources represent both publicly available information and company internal information. Publicly available information (e.g. websites in internet) have been checked and the information provided in the references sources could be proved. The same is valid for documents provided by project participant. All required documentation has been provided and it could be verified that the information provided in the PDD is in line with provided documentation.	PDD, I /B-5/ /B-6/ /B-7/ /B-8/ /B-9/	OK	OK
B.4. Additionality Determination *The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.*				
B.4.1. Methodology				
B.4.1.1. Did the additionality justification follow the requirements of the applied methodology and/or methodological tools? *Describe how it is validated that additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools.*	Justification of the additionality as been carried out based on the project specific step-wise approach. The developed approach has been assessed to be appropriately elaborated and in line with requirements of JI Guidelines. (For details please refer to the Methodology checklist) All the steps of the project specific methodology have been	PDD, I /FS/ /D-6/	~~CL B6~~	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	appropriately carried out. The basic principle for additionality justification is to demonstrate that financial indicator of the project activity (IRR) is below the internal hurdle rate of the project participant. If this is the case than the project activity can be considered as additional. For this purpose project participant has carried out an investment analysis based on cost savings when considering the cost difference between the baseline alternative and the project scenario. Thereby cost savings (e.g. saving of diesel purchase costs) have been considered as income and the internal rate of return (IRR) has been calculated. It could be clearly demonstrated that the computed project IRR of 11.7% is below the internal hurdle rate of the project participant (15%). The benchmark has been defined as company internal hurdle rate. This is appropriate because there is only one potential project developer – project participant. Furthermore this is in line with provisions of and Combined Tool regarding the benchmark determination. The investment analysis has been carried out and provided in the excel worksheet. The input values applied within the investment analysis have been verified based on the documentation provided. It could be proved that all values applied in the IRR calculation are as per provided evidences and plausible. For details pl. refer to the table A-3:			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	Assessment of Financial Parameters To verify the correctness of the IRR calculation determination team has carried out own calculation based on the provided input values. The determined IRR of 11.79% without JI benefits could be reproduced and the IRR of 11.79% could be verified. In order to gain further confidence determination team has conducted own calculation of the levelized power costs of the two scenarios. It could be shown the levelized power costs of the project scenario are higher than that of the baseline scenario. The result could be further supported by the sensitivity analysis. Even assuming 14% lower investment cost for GT, 30 % lower OPEX for GT and 15% higher electricity generation the baseline remained a more financial alternative. This could provide further substantiate the additionality of the project scenario.			
B.4.2. Consideration of JI before project start				
B.4.2.1. Is the project starting date reported in accordance with the Guidelines for completing JI PDD4? *Describe the steps taken to validate this issue.*	Yes, the project starting date is defined as construction and assembly works started in the first quarter of 2005. The project starting date could be verified in the course of determination. The definition of the starting date is in line with JI glossary of terms and has been appropriately included in the PDD.	PDD, I, /FS/	OK	OK

[4] GUIDELINES FOR USERS OF THE JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM (VERSION 03)

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.4.2.2. In case the project start date is before commencing of validation, was the incentive from the JI seriously considered and are details given in the PDD? *Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.*	The management decided to move forward with the implementation of the project activity based on the outcome of the feasibility study carried out by an independent consultant in 2005. The feasibility study has been provided. It could be verified that the one of the main purposes of the feasibility study was to assess the viability of the project activity in general and to demonstrate the impact of the registration of the considered project activity under JI regime. The feasibility study clearly demonstrate that only JI benefits makes the project activity financial attractive for project participant. Hence it could be clearly verified that incentive from the JI seriously considered. The abstract of the study with the corresponding information is provided in the Annex of the PDD.	PDD, I, /FS/	OK	OK
B.4.2.3. How and when was the decision to proceed with the project taken? *Describe the steps taken to validate the starting date.*	Please refer to the comment above and abstract of the study with the corresponding information is provided in the Annex of the PDD.	PDD, I, /FS/	OK	OK
B.4.2.4. Is the project start date consistent with the available evidences? *Describe the evidence assessed regarding the prior consideration of the JI (if necessary). Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.*	Yes, the determination team has reviewed provided evidences and the consistence of the project starting date could be proved. The project start date is consistent with the feasibility study and the technical specification of the first installed gas turbine unit.	PDD, I, /FS/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.4.2.5. Was the decision to proceed with the project taken by a person which has the authority to do so? *Describe the steps taken to validate this issue.*	Yes, all provided evidences include an approval of the authorized persons. The provided evidences haven been checked and it could the corresponding approvals of the authorized persons could be verified.	PDD, I, /FS/	OK	OK
B.4.2.6. How was the JI involved in the decision making process? *Describe the steps taken to validate this issue.*	Feasibility study was reviewed and it could be verified that without JI the project would be not economically attractive for the project participant.	PDD, I, /FS/	OK	OK
B.4.2.7. Can the JI involvement in the decision assessed as serious? *Describe whether or not the project would have been undertaken without the incentive of the JI.*	Without JI the project IRR is below the internal hurdle rate of the project participant. Please also refer to the comments above	PDD, I, /FS/	OK	OK
B.4.3. Identification of alternatives Step 1 (in case of SSC projects pl. skip steps 1 and 2)				
B.4.3.1. Have all realistic alternatives been identified to the project? *Describe whether the list of alternatives is complete. Describe how it is validated that the alternatives are realistic.*	In order to validate that the list of alternatives is complete determination team has investigated all possible alternatives for APG utilization. Furthermore plausible alternatives as required by methodologies for similar project activities (e.g. AM0009) have been examined in this context. **CL B2** has been raised in this context because further clarification is required why following alternatives have been not included to the examination of plausible alternative scenarios.	PDD, I, /FS/	~~CL B2~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	• Injection of the associated gas into an oil or gas reservoir; • Recovery, transportation, processing and distribution of the associated gas and products thereof to end-users without being registered as a JI project activity; • Recovery, transportation and utilization of the associated gas as feedstock for manufacturing of a useful product.			
B.4.3.2. Contains the list of alternatives at least the status-quo situation and the project not undertaken as a JI project? *Describe the steps taken to validate this issue.*	Yes, this is as per the PDD.	PDD, I, /FS/	OK	OK
B.4.3.3. Do all identified alternatives comply with applicable regulation? *Describe the steps taken to validate this issue. Refer to the regulations.*	Yes, for details please refer to Table A2 regarding this issue.	PDD, I, /FS/	OK	OK
B.4.4. Investment analysis Step 2 *In case the investment analysis as per step 2 is chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additonal details of the the calculation parameters..*				
B.4.4.1. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or	The project specific methodology provides a benchmark analysis for justification of the additionality. The basic principle for additionality justification is to demonstrate that	PDD, I, /FS/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
benchmark analysis)? *Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.*	financial indicator of the project activity (IRR) is below the internal hurdle rate of the project participant. If this is the case than the project activity can be considered as additional. **Basis for Management Decision** In 2005 the investment analysis of the project activity has been carried out within the feasibility study. A detailed analysis of financial attractiveness has been carried out by the well-reputed engineering consultancy – ILF Russia LLC, Engineering and Project Management. In addition the assumed values have been reviewed by the responsible financial experts of the Project participant and crosschecked with the information as per the internal data sources. The feasibility study concludes that the project IRR of 11.79% is below company internal benchmark of 15%. For this reason the project activity is not a financial attractive alternative. Furthermore the feasibility study demonstrates that only with the benefits from ERUs the project IRR increases slightly over the hurdle rate and becomes 15.29%. By doing this the feasibility study clearly concludes that only registration under JI makes the project activity financial attractive alternative for the project developer. **Financial indicator** The selected financial indicator is the project IRR. The cash flow for its calculation reflects mainly the difference between the Investment costs and operating expenditures of the baseline and project scenario. By doing this the OPEX saving	/Capex/ /D-6/		

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	as a result of the project are taken into account as revenues. Also the difference between the investment requirements within the project baseline and project scenario has been also reflected in the calculation. The method of calculation financial indicator has been assessed as appropriate. Determination team has reproduced the calculation and the results could be proved. **Sensitivity analysis** The included sensitivity analysis shows that the conclusion regarding the financial/economic attractiveness is robust to variations (+/- 10%) in the critical assumptions like OPEX, investments and electricity generation. Determination team has reproduced the sensitivity analysis and it could be proved that the conclusion is robust even assuming 14% lower investment cost for GT, 30 % lower OPEX for GT and 15% higher electricity generation. **Levelized power costs** In order to gain further confidence determination team has conducted own calculation of the levelized power costs of the two scenarios. It could be shown the levelized power costs of the project scenario are higher than that of the baseline scenario. The result could be further supported by the sensitivity analysis. Even assuming 14% lower investment cost for GT, 30 % lower OPEX for GT and 15% higher electricity generation the baseline remained a more financial alternative. This could provide further substantiate the			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	additionality of the project scenario.			
B.4.4.2. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation? *Describe the steps taken to validate this issue.*	Yes, the excel spreadsheet available for the investment calculation is a clear, viewable and unprotected. The calculation has been reproduced by the determination team and the main results could be proved.	PDD, I, /FS/	OK	OK
B.4.4.3. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included? *Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.*	The investment analysis reflects the technical lifetime 20 year of the equipment. The technical lifetime applied is as per the technical specification provided.	PDD, I, /FS/ /Capex/ /D-6/	OK	OK
B.4.4.4. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice? *State the accounting regulations applied for calculating the fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.*	The period chosen for the investment analysis reflects the complete technical lifetime so that the fair value consideration was not necessary.	PDD, I, /FS/	OK	OK

Checklist Item (incl. guidance for the determination team)		Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.4.5.	Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation?	The period chosen for the investment analysis reflects the complete technical lifetime so that the fair value consideration was not necessary.	PDD, I, /FS/	OK	OK
B.4.4.6.	Are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator?	Yes, determination team has reviewed the excel spreadsheet and reproduced the results through own calculations. The calculation of the depreciation could be proved.	PDD, I, /FS/	OK	OK
B.4.4.7.	Is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?	Financial indicator and the benchmark have been determined on a post tax basis. The financial indicator has been appropriately calculated on a post tax basis.	PDD, I, /FS/	OK	OK
B.4.4.8.	Were the input values used in the investment analysis valid and applicable at the time of the investment decision?	Yes, the input values are as per the estimates made within the feasibility study/FS/ carried out in 2005 and hence were valid and applicable at the time of the investment decision. A detailed analysis of the input values has been carried out by the well-reputed engineering consultancy – ILF Russia LLC, Engineering and Project Management. In addition the assumed values have been reviewed by the responsible financial experts of the Project participant and crosschecked with the information as per the internal data sources. CL B5 has been raised in this context and successfully closed.	PDD, I, /FS/	~~CL B5~~	OK
B.4.4.9.	In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR?	Yes, the costs of financing expenditures are excluded from the calculation of project IRR.	PDD, I, /FS/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
B.4.4.10. In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow?	N/A	PDD, I, /FS/	OK	OK
B.4.4.11. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?	Yes, please refer to B.4.4.1 and B.4.4.7. CL B5 has been raised in this context and successfully closed.	PDD, I, /FS/ /Capex/ /D-6/	CL B5	OK
B.4.4.12. Is the benchmark value suitable for the project activity?	Yes the benchmark value is as per the internal hurdle rate for the project developer.	PDD, I, /FS/ /Capex/ /D-6/	OK	OK
B.4.4.13. Is it ensured that the project cannot be developed by other developers than the PP?	Yes, the project is carried out at the premises of the project participant where the project participant has exclusive licence for exploration and production and hence can not be developed by other developers.	PDD, I, /FS/	OK	OK
B.4.4.14. Was the benchmark consistently used in the past for similar projects with similar risks?	Yes, please refer to B.4.4.1 and B.4.4.7.	PDD, I, /FS/ /Capex/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
		/D-6/		
B.4.5. **Barrier analysis Step 3 or SSC additionality assessment**				
B.4.5.1. Are there any barriers given which have a clear and definable impact on the profitability of the project?	All barriers identified have a clear impact on the profitability of the project. Please refer to Table A2	PDD, I	OK	OK
B.4.5.2. How is it justified and evidenced that the barriers given in the PDD are real?	Project participant provided an elaborated justification of the identified barriers and supported his argumentation with the corresponding evidences. Please refer to Table A2	PDD, I	OK	OK
B.4.5.3. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity?	All the barriers identified are considered to be convincing and serious obstacles for implementation of the project activity. However no barrier could be assessed as sufficient to prevent the project implementation. The financial attractiveness of the project activity as compared to the company internal benchmark.	PDD, I	OK	OK
B.4.6. Common practice analysis Step 4 (in case of SSC projects skip this step)				
B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type?	Yes, the region identified in the PDD is the Nenets Autonomous Okrug - is the region with a high oil production capacities. As per the PDD there are 80 oil fields with	PDD, I, /nfg/ /ngv/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	potential reserves of 2bln. tonnes oil. Hence determination team is of the opinion that the project participant has appropriately identified the region and provided the necessary information in the PDD. The information provided could be proved through the background investigation.			
B.4.6.2. To what extent similar projects have been undertaken in the relevant region?	Project participant has provided a detailed analysis of APG utilization. It has been demonstrated that APG utilization is regulated by the license agreement for oil production. Similar project activities have been identified but essential differences (e.g. license requirements) could be duly explained. Considering the information from Minpromenergo (Ministry that is in charge of the national resources) it could be concluded that the utilization of APG for energy generation is not widespread in the region. The common practice analysis provided in the PDD is accurate. The information and data sources used are appropriately references and could be proved in the course of determination. The information provided by project participant can be further supported by the data provided by the Worldbank study and the IEA. According to these data sources the APG utilization rate is approximately 45%. Hence a sufficient confidence could be gained that the proposed project type (i.e.. technology and/or practice) has not diffused in the relevant sector and geographical area and	PDD, I, /B-1/ /B-2/ /nfg/ /ngv/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	the time the project started.			
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed?	As per the PDD APG utilization is regulated by the licences issues by local authorities for oil production. Thus the APG utilization is carried out with the purpose to meet such requirements. The licences relevant for the considered project activity issues do not have provide such requirement. This could be verified in the course of determination. Moreover at the project starting data there were no serious legal efforts aimed to increase the utilization of APG.	PDD, I /license/ /B-1/ /B-2/	OK	OK
B.5. Ex-Ante Calculation of GHG Emission Reductions *It is assessed whether the ex-ante calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore calculation of emission reductions shall be assessed.*				
B.5.1. Are the equations applied correctly according to the applied approved methodology? *Describe clearly the steps taken to assess whether The methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission*	☒ The equations applied for calculation are correctly applied according to the applied approved methodology. ☐ The following mistakes have been identified in this context:	PDD, I /D-1/ /D-2/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
reductions.	The formulae to calculate the project, baseline and leakage emissions are presented in the section D of the PDD in a clear and transparent manner. The section E of the PDD demonstrates how these formulae has to be applied within to determine the emission reductions. The calculation of estimated emission reduction reductions has been carried out in the section E of the PDD. The calculations as presented in this section strictly follow the algorithm developed in the monitoring plan. The determination team has reproduced the calculation of the forecasted emission reduction by applying the formulae for project, baseline and leakage emissions as described in the PDD. The expected amount of emission reductions as stated in the PDD could be proved through the carrying out own estimations based on the input values as provided in the PDD.	/D-3/ /D-4/		
B.5.2. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? *Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of the project activity and other evidence provided) and whether the correct equations have been used reflecting the relevant*	The project specific methodology has been developed for the considered project activity. The methodology provides clear procedure for calculation of the emission reductions. There are no provisions for choices between different methodological approaches.	PDD, I, /ER/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
methodological choices.				
B.5.3. Have conservative assumptions been used when calculating the project emissions? *Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the PDD including references and sources and are conservatively interpreted in the PDD.*	The input values are based on the historical figures. In this context it is important to mention that the project participant has very detailed monitoring system for the company's internal purposes. Information collected and archived since the implementation of the project activity could be used for the estimation of emission reductions. In particular PP was able to apply historical values for the years 2006-2007 within the ER-calculation. In particular: **The chemical composition of APG, including the NCV values.** Has been based on the measurements of the independent laboratory – Nauka II. The corresponding tests have been provided and the appropriateness of the values used within the ER-estimation has been verified/D-2/. **APG consumption in GTUs** APG consumption in GTUs has been based on the balance of production and utilization of APG at the Khasyrey oil field. The documents provided contain an information about the historical consumption in the years 2005-2008 and the forecasted consumption for the future years/D-3/. The plausibility of the presented figures has been verified based on the provided information about the expected oil and the corresponding APG production. The determination team has	PDD, I /D-2/ /D-3/ /D-4/ /D-5/	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	inspected the daily handling of the monitoring of the APG consumption in GTUs and an appropriate and accurate monitoring has been observed. The values used in the ER calculation are in line with provided evidences. **Electricity output** The electricity output of the GTUs has been based on the monitored electricity generation carried out by PP for the company's internal purposes. The information about electricity generation is available for the time period between 2006 and 2008. The documents provided by PP clearly indicate the electricity generation the time period between 2006 and 2008 by the baseline equipment (diesel units) and the project activity units (GTUs). The decrease diesel based electricity generation and the corresponding increase of APG based power generation has been observed. This development it fully corresponds to the implementation of the different stages of the project activity/D-4/. The determination team has inspected the daily handling of the electricity output monitoring and an appropriate and accurate monitoring has been observed. The values used in the ER calculation are in line with provided evidences. **Diesel Fuel consumption** The diesel fuel consumption has been based on the monitored diesel fuel consumed at the project site by the different consumers. Also the diesel fuel consumption is subject to strict internal monitoring procedures. determination			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	team has inspected the daily handling of the diesel fuel monitoring and an appropriate and accurate monitoring has been observed. In the course of determination it has been assessed that the values used in the ER calculation are in line with provided evidences/D-5/.			
B.5.4. Are all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions? *Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the project activity. Check esp. chapter 6.2 of the PDD.*	1. For the efficiency of APG combustion in flares (98%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 4. Fugitive emissions, p.4.45 "… Flaring destruction efficiency… typically a value 0.98 is assumed for those used at production and processing facilities. The applied value could be proved. 2. For the combustion efficiency for the GTUs (100%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 2. Stationary combustion. The applied value could be proved. 3. Net calorific value of diesel fuel (42.7 TJ/thousand tonnes). This is in line with the IPCCC value. 4. CO2 emission factor for diesel fuel 74,1 TCO2/TJ. This value is also in line with IPCC value. 5. Specific consumption of diesel fuel at on-site DPPs 0.228 t/MWh. This value has been substantiated based on the historical information on the fuel consumption and electricity generation.	PDD, I /IPCCC/ /D-2/ /D-5/	~~CL D5~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	The calculated emission factor for diesel generator systems is 0,72 kg CO2e/kWh. This value was found to be conservative in comparison to the default emission factor for diesel generator systems (0.8 kg CO2e/kWh as per the approved CDM methodology AMS ID.			
B.5.5. Are all ex-ante calculation values for monitoring parameters reasonable? *Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity*	☒ All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative. ☐ The following mistakes have been identified in this context: The monitoring plan provides a complete list of the parameters to be monitored for determination the project, baseline and leakage emissions. For the values which remain fixed throughout a crediting period a sufficient substantiation of the conservative value has been provided.	PDD, I	OK	OK
B.5.6. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change. *Describe the steps taken to validate this issue.*	Yes, the project will lead to a real reduction of GHG emissions through replacement of the diesel based power generation through the APG that would be otherwise flared. The developed monitoring plan provides a clear and transparent procedure to measure/calculate the emission reductions. As already indicated PP was able to sufficiently demonstrate that the baseline scenario would occur in the absence of the	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	project activity. For this reason determination team agrees that the project activity will lead to the long-term benefits related to the mitigation of climate change. For further details please refer to the assessment undertaken in this section.			
B.6. Monitoring of Emission Reductions *It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.*				
B.6.1. Are all monitoring parameters required by the applied methodology contained in the monitoring plan? *Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.* *Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.* *In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.*	A project specific monitoring has been developed for this project activity. The project involves utilization of APG for power generation. In the absence of project activity the APG would be otherwise flared and power would be produced in diesel units. According to this, the developed monitoring includes for **Baseline emissions**: • CO2 emission which would occur from diesel combustion. • CO2 emissions which would occur through flaring of APG at the flaring equipment • CH4 emissions which would occur through the imperfect destruction efficiency of the flare.	PDD, I	~~CL D5~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	Project emissions: • CO2 emissions occur through combustion of APG in the Gas Turbine Units • CO2 emissions through combustion of diesel which could occur in emergency cases when reserve diesel units become operational. Yes, all monitoring parameters required by the applied methodology contained in the monitoring plan. CL D5 has been raised in this context and successfully closed			
B.6.2. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? *Assess whether the provided information for all parameters w.r.t.* *a) Label (name of the data / parameter)* *b) data unit* c) *description* d) *source of data* e) *measurement equipment / method / procedure*	The main baseline emission source is the CO2 emission which would occur from diesel combustion in the baseline scenario. These emissions are determined based on the net power generation in gas turbine units multiplied with CO2 emission factor of diesel combustion. **Net power generation** a) ***name of the data / parameter*** is appropriate b) ***Data unit*** – MWh is also appropriate c) ***Description*** – The description clearly indicates that the net power output to the particular consumers should be monitored.	PDD, I /Mt-E/	CL D1 CL D2	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
f) *monitoring frequency* g) *QA/QC procedures* *are appropriately described and in compliance with the requirements of the methodology*	d) ***Source of data*** – Electricity meters are considered as an appropriate measurement equipment for this parameter. e) ***measurement equipment / method / procedure*** The monitoring of the net power generation is based on daily meter readings installed at switchgear of Power Center Substation. During the on-site-visit it could be observed that there are separate meters (a) for power supplied to equipment attributable to project activity (compressor station, gas preparation equipment) and (b) power is supplied to other consumers (oil production equipment etc.) Hence it could be concluded that an monitoring system provides for a clear and accurate monitoring. During the on-site visit the accurate measurement and recording frequency (i.e. archiving in log book) could be observed. The determination team has reviewed the log books and checked the plausibility of the recorded figures. The daily handling of the monitoring procedures for the power generation has been assessed as accurate and appropriate. The recorded figures have been cross checked with aggregated data in electronic form and it could be verified that the monitoring of net power generation has been			

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	established in an appropriate and accurate manner. In the course of determination it could be proved that the accuracy class and the calibration procedures of the electricity meters are as per the provided technical specification/Mt-E/ and calibration norms for power meters. This data is also in line with information provided in the PDD. Both accuracy class of 0.2 has been assessed as appropriate. Calibration has been also assessed as appropriate for the corresponding meter types and in line with provided calibration and maintenance norms and procedures. f) ***Monitoring frequency***. The electricity output is measured continuously and the measurements are recorded on the daily basis in log book. This deemed to be appropriate. As already indicated the daily handling observed during the on-site visit has been assessed as accurate. ***g) QA/QC Procedures*** The recorded figures as per the log book are submitted for the review carried out by the responsible personal. By doing this the monitoring figures undergo plausibility and accuracy check review. Based on this determination team has gained a sufficient confidence that monitoring plan for this parameter specify procedures for quality control and thus will provide a sufficient level quality assurance.			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	However CL D1 has been raised in order to clarify whether archiving period more than two years can be provided. CL D2 has been raised in order to clarify how many meters are installed within the overhead meter-points M-9, M-10, and M-11 and what is their exact numbering			
B.6.3. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? *Assess whether the provided information for all parameters w.r.t.* *a) Label (name of the data / parameter)* *b) data unit* c) *description* d) *source of data* e) *measurement equipment / method / procedure* f) *monitoring frequency* g) *QA/QC procedures* B.6.4. *are appropriately described and in compliance with the requirements of the methodology..*	**Chemical composition of APG** a) ***name of the data / parameter*** The PDD indicates the components to be monitored/determined in this context in a detailed manner. It deemed to be appropriate to use a overall name for the parameters to be determined in this context. b) ***Data unit*** – percentage is also appropriate in this context **c) *Description*** – The description indicates the chemical composition of APG should be monitored. d) ***source of data –*** Chromatograph is an appropriate measurement equipment for the chemical composition of gases. ***e) measurement equipment / method / procedure*** The monitoring plan provides the monitoring of the chemical composition of APG. As per the monitoring plan the measurements should be carried out by an independent	PDD, I, /D-1/ /D-2/	~~CAR D4~~	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	laboratory – Nauka II. The independent laboratory is responsible for measurement and proper maintenance of the monitoring equipment – Chromatograph. Calibration procedures and accuracy class (0.3%) of the measurement equipment – chromatograph – has been crosschecked with provided evidences and the appropriateness could be verified. These measurements are carried out not only for monitoring purposes but also for internal needs of the project participant. The measurements in 2008 have been provided and it could be verified that they are carried out in accordance official standards . ***f) monitoring frequency*** CAR D4 has been raised in this context because during the on-site visit it was observed that the measurements of the chemical composition are not carried out monthly as indicated in the PDD. Consistence should be provided. ***g) QA/QC procedures*** It could be also verified that Nauka II is an independent laboratory accredited with respect to technical competence according to Russian standards for accreditation (GOST). Hence a sufficient confidence that monitoring plan for this parameter specify procedures for quality control and thus will provide a sufficient level quality assurance.			

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
B.6.5. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? *Assess whether the provided information for all parameters w.r.t.* *a) Label (name of the data / parameter)* *b) data unit* c) *description* d) *source of data* e) *measurement equipment / method / procedure* f) *monitoring frequency* g) *QA/QC procedures* *are appropriately described and in compliance with the requirements of the methodology..*	**APG consumption in GTUs** Along with CO2 emission factor it also necessary to determine the APG consumption in GTUs in order to be able to calculate the CO2 emissions from flaring in the baseline scenario. Within the determination it could be proved that the APG consumption is monitored for each GTU separately. In the CAR D5 project participant was requested to clearly define provisions for monitoring of the APG combusted in GTUs in particular including the description of the applied technology and procedures for determination of reserve fuel used in GTUs. In response to the raised clarification PP has requested the technology supplier to provide detailed information of the installed metering system. As per the specification given by the manufacturer the main metering system incorporates measurements of the fuel pressure in the fuel supply system and temperature measurements. Furthermore the inlet and outlet pressure of the compressor air as well as temperature of the exhaust gases will be measured and turbine rotation will be measured. The algorithm of the calculation and the detailed information of the metering system have been provided. Based on the provided information it could be concluded that this system enables an appropriate metering of the APG	PDD, I /Mt-APG/ /MT-D/	CL D5	OK

Checklist Item (incl. guidance for the determination team)	Determination Team Comments (Means and results of assessment)	Ref.	Draft Concl.	Final Concl.
	consumption and appropriate control of the gas turbine operation. Furthermore the indicated accuracy (1%) of the system measurements could be verified. **Diesel Fuel consumption in GTUs.** As the GTUs can be fired with Diesel the diesel consumption in GTU has to be monitored to calculate the project emissions. Fuel consumption in GTUs. is defined by measuring the reservoir level three times per month (data are put into the special inventory book). Also the fuel added to the reservoir will be monitored. In this context it is important to note that diesel should be used only in emergency cases. Based on the recorded figures could be observed that diesel was used within the installation and testing phase. After proper commissioning it was observed that diesel was almost not used.			
B.6.6. Are the means of monitoring of all parameters contained in the monitoring plan in accordance with the requirements of the applied methodology? *Assess whether the provided information for all parameters w.r.t.* *h) Label (name of the data / parameter)* *i) data unit*	**Diesel Fuel consumption in Diesel units in emergency cases.** This parameter will be monitored by flow meters installed at particular consumers. The monitored data will be recorded in the inventory book on daily basis. Measurement equipment and procedure and the monitoring frequency deemed to be appropriate. From this book data are aggregated in total inventory book	PDD, I /MT-D/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
j) *description* k) *source of data* l) *measurement equipment / method / procedure* m) *monitoring frequency* n) *QA/QC procedures* *are appropriately described and in compliance with the requirements of the methodology..*	for monthly diesel fuel consumption. Flow meter data is registered with invoice at the end of each month. Considering this it was concluded that the QA/QC procedures have been appropriately elaborated.			
B.6.7. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity? *Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.*	Yes, the monitoring arrangements are already in place due to the internal procedures of the company.	PDD, I	OK	OK
B.6.8. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activit can be reported ex-post and verified? *Please consider the description given in section B.7.2. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.*	Yes, this issue has been discussed during the on-site visit and later in the course of determination. The company has implemented environmental and industrial safety management system that corresponds to requirements of international standards ISO14001 and OHSAS 18001 Project participant has established the procedures for data management and processing within the particular stages of the monitoring. Double check procedures have been introduced to ensure high quality project management of all	PDD	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
	sub-projects. Different tasks within the monitoring are clearly allocated to the personal of the different departments of the. Personal and the corresponding tasks/responsibilities of the project monitoring are clearly defined. Furthermore all procedures have been clearly documented. The QA/QC procedures are integral part of the management system. It has been observed that QA/QC procedures are in place and appropriately used.			
B.6.9. Are procedures identified for data management? *Check whether appropriate provisions are considered for data management including responsibilities, what records to keep, storage area of records and how to process performance documentation* *Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.*	Yes, this issue has been discussed during the on-site visit and later in the course of determination. The responsibilities are clearly defined and indicated in the PDD. CAR D1 has been raised in the context of archiving and successfully closed.	PDD	~~CAR D1~~	OK
C. Duration of the Project/ Crediting Period *It is assessed whether the temporary boundaries of the project are clearly defined.*				

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
C.1. Is the project's starting date clearly defined and evidenced? *Check whether the starting date is correct. Apply the definition of the project starting date as per the "Glossary of JI terms".*	Yes, project starting date 2005 has been defined as a date when construction and assembly works started in the first quarter of 2005. This is in line with JI Guidelines. Supporting evidences have been provided and the starting has been verified.	PDD /TS/ /FS/	OK	OK
C.2. Is the project's operational lifetime clearly defined and evidenced? *Check whether the project lifetime is correctly defined. Consider the guidance on the assessment of investment analysis (annex to the addionality tool).* *Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.*	Yes, the operational lifetime of 20 years is clearly defined and supported by provided evidences. The technical specification has been proved and the value could be verified.	PDD /TS/ /FS/	OK	OK
C.3. Is the start of the crediting period clearly defined and reasonable? *Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for determination and registration.*	The start of crediting period is 01.01.2008. This is in line with JI Guidelines.	PDD	OK	OK
D. Environmental Impacts *Documentation on the analysis of the environmental*				

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
impacts will be assessed, and if deemed significant, an EIA should be provided to the AIE.				
D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)? *Check the host party regulations, regarding EIA.*	Yes, according to the relevant Russian regulation an Environmental Impact Assessment (EIA) has to be carried out.	PDD /FS/ /EIA/ /B-5/ /B-6/ /B-7/ /B-8/ /B-9/	OK	OK
D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applcable duly approved? *Check the EIA and its approval, if applicable.*	Yes, Environmental Impact Assessment (EIA) has been prepared as a part of the feasibility study. Within the EIA a detailed assessment on soil resources, air, vegetation, animal world, etc. has been carried out. The EIa has been proved and approved by the Expert conclusion for the Khasyrey Power Center project №8-61/18 dated December 25, 2006, is done by Russian Scientific Institute of Organization, Management and Economics of Oil and Gas Industry. Experts' opinion confirms that environmental impact assessment developed under technical documentation with regard to the project is performed in conformity with effective norms and standards.	PDD /FS/ /EIA/ /B-5/ /B-6/ /B-7/ /B-8/ /B-9/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
D.1.3. Has an analysis of the environmental impacts of the project activity been sufficiently described and in line with the host party environmental legislation? *Check the PDD (section D). Check whether the project will create any adverse environmental effects.* *Check the relevant national environmental legislation.*	Yes analysis of the environmental impacts of the project activity has been sufficiently described and is in line with the host party environmental legislation.	PDD /FS/ /EIA/ /B-5/ /B-6/ /B-7/ /B-8/ /B-9/	OK	OK
D.1.4. Are transboundary environmental impacts considered in the analysis? *Check the documents and local official sources / expertise regarding transboundary environmental impacts.*	Yes, please refer to the comment above.	PDD	OK	OK
E. Stakeholder Comments *The AIE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.*				
E.1. Have relevant local stakeholders been invited to consultation prior to the publication of the PDD? *Check by means of document review and interviews with*	Yes, Information on the construction and the commissioning of the Khasyrey Power Center was published in the article —Power Center- heart of the Swell‖ of local newspaper —Nash noviy sever‖ (Our new North) №32 (244) 31.08.2006, Information includes the description of both technical and	PDD, I /SC/	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**
local stakeholders if and when a local stakeholder consultation process has been carried out.	environmental issues regarding to the project. Publication did not raise any readers' comments. The stakeholder consultation process has been appropriately evidenced. In this context it is also important to mention that the project activity is located remote from developed infrastructure. The local population of the region (The Nenets Autonomous Okrug) have been informed.			
E.2. Can the local stakeholder consultation process be assessed as adequate? *Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.* *Please consider the following requirements in this context:* *(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed JI project activity, have been invited;* *(b) The summary of the comments received as provided in the PDD is complete;* *(c) The project participants have taken due account of any comments received and have described this process in the PDD.*	Yes, Please refer to the comment above	PDD, I	OK	OK

Checklist Item (incl. guidance for the determination team)	**Determination Team Comments** (Means and results of assessment)	**Ref.**	**Draft Concl.**	**Final Concl.**

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification

☐	Baseline is not identified
☒	Assessment of baseline see below

Baseline Alternatives identified	Inline with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evi-dence used	AIE Assessment	
					Appro-priateness of elimination	Assessment of determination team (results and means of assessment)
Continuation of APG flaring at Khasyrey BPS and development of local on-site diesel based power generation at Khasyrey, Nyadeyu and Cherpayu oil fields.	☒	☐	**Step 1**		☒	**Step 1** Within the Step1 this alternative has been appropriately identified as a **plausible baseline** scenario because it represents the current practice. Furthermore the alternative is in line with current **laws and regulations**. Determination team has reviewed the license oil exploration and production for all three oil field of Gamburtsew Swell – Khasyrey, Nyadeyu and Cherpayu oil fields. It could be verified that utilization of APG is not required by the relevant regulations (in particular licences)[/Licence/]. Determination team has also reviewed laws and regulations relevant for evaluation of the legal aspects. In particular

						• *Federal law on environment protection dated 10.01.2002 Nr.7* • *Federal law on air pollution protection 04.05.1999 Nr. 96* • *Resolution of the Government RF 01.07.2005 Nr. 410* It could be verified that utilization of the associated gas is not regulated by the national laws. This conclusion could be further substantiated by the information provided by the worldbank[5]. On the official website of the worldbank it is stated that "*In Russia, gas flaring restrictions vary from region to region as the federal Mineral Resource Act, which sets standard license terms, does not require the condition on associated gas flaring and usage to be included in the oil production license or license agreement.* *As a result, the issue of dealing with gas flaring has been left to the regional authorities. To date, only a few regions have included special provisions on associated gas flaring and usage in their regional mineral acts. For example, under the mineral acts of Khanty-Mansijsk and Yamalo-Nenetz—two major oil- and gas-producing regions in West Siberia—the usage rate of associated gas is a mandatory license condition that the operator and the regional authorities have to agree on before signing the license agreement.* *Khanty-Mansijsk went even further by setting a mandatory 5 percent cap on gas flaring (95 percent of associated gas has to be used). However, this 5 percent*

5 ttp://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTOGMC/EXTGGFR/0,,contentMDK:21106210~isCURL:Y~menuPK:2912252~pagePK:64168445~piPK:64168309~theSitePK:578069,00.html

			Step 2 Barrier analysis ***Technological barrier: technical feasibility*** The alternative represents the continuation of the current practice. For this reason it was concluded that this alternative does <u>not</u> face technological barrier. ***Technological barrier: Availability of fuel resources*** Though the fuel can be delivered only in the time period between December-May via winter roads, this is a current practice of fuel supply and the alt. cannot be excluded.			*limit might be increased if the operator's feasibility study can prove this threshold is unrealistic. Often oil companies opt not to negotiate for a higher limit since their compliance with the gas flaring condition is unlikely to be scrupulously monitored."* In addition this scenario is in line with the information provided within the national reports /B-3/ and progress report /B-4/ of Russian Federation. **Step 2 Barrier analysis** ***Technological barrier: technical feasibility*** The alternative represents the continuation of the current practice. There no barriers which would prevent the capacity addition based on diesel fired power generation units. For this reason it was appropriately concluded that this alternative does <u>not</u> face technological barrier. ***Technological barrier: Availability of fuel resources*** Project participant has appropriately demonstrated in the PDD that though the fuel can be delivered only in the time period between December and May the fuel can be stored at site, so that this alternative does not face the barrier – Unavailability of fuels. As this reflects a current practice of the fuel supply it was appropriately concluded <u>not</u> to eliminate this alternative from further consideration.

			Technological barrier: Availability of skilled personnel. Continuation of current diesel based power generation is a traditional method of producing electricity. Hence the sufficient skilled personnel is available and the barrier does <u>not</u> exist. ***Technological barrier: Difficulties in maintenance*** Continuation of current diesel based power generation is a traditional method of producing electricity. Hence the sufficient skilled personnel is available and the barrier does not exist. **Step 3 – Investment analysis.** Investment analysis clearly demonstrates that this is the most financial attractive scenario			***Technological barrier: Availability of skilled personnel.*** determination team agrees that considering the common practice for energy generation it was appropriately concluded that the alternative does <u>not</u> face unavailability of skilled personnel. ***Technological barrier: Difficulties in maintenance*** The determination team agrees that considering the common practice for energy generation it was appropriately concluded that the alternative does not face difficulties in maintenance. **Step 3 – Investment analysis.** Investment analysis clearly demonstrates that this is the most financial attractive scenario For details please refer to the assessment under B.4.4.1 – B.4.4.14
Continuation of APG flaring at Khasyrey BPS and	☒	☒	***Technological barrier: technical feasibility***	PDD	☒	**Step1:** Within the Step1 this alternative has been appropriately

construction of power **transmission lines** (PTL) for connecting to centralized power grid.			Installation and construction of 110 kW transmission line for distance of 350 km including the corresponding infrastructure and special maintenance and repair personal is considered to be improbable.			identified as a plausible baseline scenario because construction of power transmission lines represents a plausible alternative to provide oil production facilities with electrical power. Furthermore this alternative is not prohibited by any national laws and regulations. **Step 2 Barrier analysis** ***Technological barrier: technical feasibility*** During the on-site- visit the remoteness and difficult geological conditions for construction of the transmission lines could be observed. The determination has agreed with the argumentation of the project participant that the installation of such a complex and (also expensive) infrastructure is disproportionate and incommensurate with the electricity demand on the project site and for this reason cannot be considered as plausible. Taking the above-mentioned into account determination has is of the opinion that this alternative has been appropriately excluded from further consideration.
The Project itself, i.e. APG flaring reduction and its utilization at Khasyrey Power Center in order to supply electric power to facilities located at Khasyrey, Nyadeyu and Cherpayu oil fields without being registered as JI project activity.	☒	☒	**Step1:** Within the Step1 this alternative has been identified as a plausible baseline scenario because the alternative represents the project activity itself.	PDD	☒	**Step1:** Within the Step1 this alternative has been appropriately identified as a plausible baseline scenario because the alternative represents the project activity itself. Furthermore the determination team has reviewed the licences issued for oil production and the oil fields of Gamburtsew swell. It could be verified that utilization of APG is not regulated by the license(s) issued. Hence this alternative is also in line This alternative is in line with current laws and regulations.

			Step 2 Barrier analysis ***Technological barrier: technical feasibility*** The first stages of the project activity are already in operation. There are no technical barriers which would prevent the (further) implementation of the alternative. For this reason the alternative has been not eliminated due to the technical feasibility. ***Technological barrier: Availability of fuel resources*** According to the forecasted decline of the oil production project faces high risk of APG shortage in the future. Construction of 50 km gas pipelines from the Nadeyu and Cherpayu oil fields will be required in order to meet APG demand. Construction of the gas pipelines might lead to an additional significant costs and therefore lead to a decrease of economic attractiveness of the project activity.			**Step 2 Barrier analysis** ***Technological barrier: technical feasibility*** The determination team agrees with the argumentation of the project participant that there are no technical barriers which would prevent the implementation of the alternative. The first stages of the project activity are already in operation. The last stage of the project – installation of the 5th gas turbine unit is close to completion. For this reason it is appropriate to conclude that that this alternative does not face technological barrier. ***Technological barrier: Availability of fuel resources*** The forecasted decline of the oil production could be verified based on the evidences provided by the project participant/D-1/. To ensure APG supply to the Kharsyrey power center gas pipelines (50km) should be build from the two oil fields from Nyadeyu and Cherpayu oil fields. In the course of determination it could be verified that project activity faces a risk of a significant shortage of APG produced on Khasyrey oil field. Within the site visit the determination team has carried out interviews and it could be also verified that project participant has corresponding plans for construction of additional gas pipelines to prevent the shortage of APG. In this context it is important to mention that after the implementation of the project activity the whole electricity demand will be covered by the gas turbines. Diesel units will be kept only in reserve. Stoppage of electricity supply will lead to serious and cost-intensive consequences for the entire oil production and oil production facilities.

						The construction costs of the gas pipelines have been taken into account within the investment analysis and was demonstrated that project activity is not economically attractive for project participant. For this reason the determination team considers the possible shortage of APG as an important project risk and barrier the project has faced. Moreover the determination team is of the opinion that argumentation as provided by the project participant is convincing. However through the construction of the gas pipeline from other oil fields the risk of APG shortage can be reduced or even eliminated. For this reason the shortage of APG could not be assessed as sufficient barrier that would prevent the implementation of this alternative.
			Technological barrier: Availability of skilled personnel. APG power generation requires more stringed requirements for the personnel as compared to the diesel based power generation.			***Technological barrier: Availability of skilled personnel.*** The determination team agrees that utilization of APG for power generation purposes requires a proper skilled personal that is familiar with applied technology. As compared to diesel based power generation power generation based on APG requires know-how of APG production, transportation, and especially preparation like dehydration, drying, etc. Also power generation technology -gas turbine units – are more complex. Furthermore gas turbine units are sensitive to changes in fuel composition and for this reason have more stringent requirements regarding fuel specification (like fuel composition, pressure, etc.). Considering this personnel working with this technology should be appropriately trained. The determination team also agrees that as this is a first project of the project participant the lack of

						proper trained personnel capable to serving this complex equipment was a important barrier for implementation of the project activity. For this reason the determination team considers the lack of appropriately trained and skilled personnel as a serious difficulty. In the course of the determination a sufficient confidence could be gained that an immense effort has been spent by the project participant for personnel training and know-how. Hence the determination team is of the opinion that argumentation as provided by the project participant in this context is convincing. However the personnel costs have been taken into account within the investment analysis and it was demonstrated that project activity is not economically attractive for project participant. Within the investment analysis it could be explained – using qualitative or quantitative arguments – how the registration of the JI project activity will alleviate this barrier that prevent the proposed project activity from occurring in the absence of the JI. For this reason unavailability of skilled personnel could not be assessed as a barrier that would prevent the implementation of this alternative. ***Technological barrier: Difficulties in maintenance***
			Technological barrier: Difficulties in maintenance Following risks have been identified to justify the elimination: *1. APG from Khasyrey oil field requires additional dehydratation*			1*. APG from Khasyrey oil field requires additional dehydratation and removal of —fat fractions from APG.* Though the determination team considers this barrier to

			and removal of —fat fractions from APG.			be an serious difficulty for project implementation this barrier could not be assessed as sufficient to justify the elimination of this alternative. This is mainly because the treatment of APG is an (integral) part of the project activity and should be considered in the context of the entire project activity, i.e. not as a stand-alone risk or stand-alone additional costs of project implementation. Furthermore additional costs arise from additional requirements for APG treatment have been taken into account within investment analysis and it could be demonstrated that the entire project activity is not economically attractive for project participant. For this reason this barrier (as a stand-alone barrier) could not be assessed as sufficient to justify the elimination of this alternative.
			2. The lack of experience in APG utilization for producing electric power sometimes result into the unexpected stoppage of gas turbines operation at Power Center.			*2. The lack of experience in APG utilization for producing electric power sometimes results into the unexpected stoppage of gas turbines operation at Power Center.* It could not be sufficiently demonstrated how often stoppage occur due to lack of experience. Furthermore lack of experience has been considered in the context of unavailability of skilled personnel. Please refer to the comments made in this context. For this reason this barrier (considered as a stand-alone barrier and not in the context of the entire project activity) could not be assessed as sufficient to justify the elimination of this alternative.

			3. To ensure efficient operation of GTU, a shutdown of 8 h is needed to perform turbine maintenance – 2 hours more as compared to traditional turbines (6hours)).			*3. To ensure efficient operation of GTU, a shutdown of 8 h is needed to perform turbine maintenance – 2 hours more as compared to traditional turbines (6hours)).* It could not be sufficiently demonstrated/justified that maintenance time required for appropriate maintenance of gas turbine would prevent the implementation of the project activity. For this reason this barrier (considered as a stand-alone barrier and not in the context of the entire project activity) could not be assessed as sufficient to justify the elimination of this alternative.
			4. GTU life time untill the overhaul is equal to 60,000 h. To conduct the overhaul, it is necessary to transport the turbine to a specialized repair plant of the manufacturer. In conditions of impassable tundra and remoteness of Khasyrey oil field from the mainland, this transportation is expensive and problematic.			*4. GTU life time untill the overhaul is equal to 60,000 h. To conduct the overhaul, it is necessary to transport the turbine to a specialized repair plant of the manufacturer. In conditions of impassable tundra and remoteness of Khasyrey oil field from the mainland, this transportation is expensive and problematic.* During the on-site-visit the determination team has observed the extreme difficult conditions project participant faces to conduct the required maintenance. In the course of the determination it could be proved that in conditions of tundra – absence of road system and remoteness from the developed infrastructure transportation of the gas turbine units has to be done via winter roads in the time period between December and May. This would definitely lead to extreme high transportation costs and risk of damage. The determination team considers the argumentation as

			Step 3 – Investment analysis. Investment analysis clearly demonstrates that this is not the most financial attractive scenario			provided by the project participant as convincing. However this barrier (considered as a stand-alone barrier and not in the context of the entire project activity) could not be assessed as sufficient to justify the elimination of this alternative. **Step 3 – Investment analysis.** Investment analysis clearly demonstrates that this is a less financial attractive scenario as compared to the continuation of the current practice. For details please refer to the assessment under B.4.4.1 – B.4.4.14

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters

☐	No financial parameters are used for additionality justification
☒	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	Appropriateness of information source	Comment
Electricity Generation	As per /XLS/ 184,456 (average over the operational lifetime)	MWh/a	Proof for the forecasted electricity demand. Proof for the forecasted oil production. Actual electricity demand	/D-1/ /D-2/ /EL/	☒	☒	Electricity generation within the investment analysis has been assumed based on the forecasted electricity demand. The corresponding evidences for the forecasted electricity demand have been provided and the expected electricity demand could be verified /D-1//D-2/. The current electricity demand has been provided and the plausibility of the assumption made in 2005 could be verified.
Electrical capacity GTU	2 x 4.7 3 x 7.9	MW	Technical specification	/TS/	☒	☒	The capacity is as per the technical specification. The document has been checked and the value applied in the IRR calculation and the PDD could be proved.
Number of GTUs	6	unit	Feasibility study	/FS/	☒	☒	Number of GTU units is in line with the project description. This could be verified in the course of determination.

Investment costs of GTUs	2,280,145	Th. Rub.	Feasibility study	/FS/ /CAPEX/ /XLS/ /I-GTU/	☒	☒	The values applied within the excel calculation spreadsheet are in line with the values assumed within the feasibility study/FS/. The investment cost within the feasibility study has been estimated based on the detail analysis of the particular cost components/CAPEX/. The cost estimation has been carried out by the well-reputed engineering consultancy – ILF Russia LLC, Engineering and Project Management. In addition the costs estimation has been reviewed by the responsible financial experts of the PP and crosschecked with the information as per the internal data sources of PP. The estimation of the investment costs has been discussed in detail with the financial experts of the PP. The plausibility of the assumed values for the particular cost components as indicated in the feasibility study could be substantiated by the supporting documentation/CAPEX//XLS/. Considering the significant escalation of construction costs for new power plants since 2005 (please refer and IHS CERA Power Capital Costs Index Index[6] it was concluded that the actual investment costs were estimated in a conservative manner. A detailed implementation schedule of the project activity in the time period between 2004 and 2012 as per the feasibility study has been provided. The investment cost of the GTUs in the time period between 2004 and 2012 is

[6] [6] Please refer to: http://energy.ihs.com/News/Press-Releases/2008/IHS-CERA-Power-Capital-Costs-Index.htm

							consistent with the scheduled implementation of particular steps of the project activity. In this context it should be mentioned that for the most part the project activity has been implemented prior to the schedule as of 2005.
OPEX (GTUs)	130,076	Th. Rub	Feasibility study	/FS/ /XLS/	☒	☒	The OPEX cost consists mainly of the O&M costs. The fuel costs were appropriately assumed to be nil. This is appropriate. The values applied within the excel calculation spreadsheet are in line with the values assumed within the feasibility study/FS/. The operating cost within the feasibility study has been estimated based on the detail analysis of the particular cost components. The cost estimation has been carried out by the well-reputed engineering consultancy – ILF Russia LLC, Engineering and Project Management. In addition the costs estimation has been reviewed by the responsible financial experts of the PP and crosschecked with the information as per the internal data sources. The estimation of the operation costs in detail has been discussed with the financial experts of the PP. A sufficient confidence could be gained that the operating costs have been assessed in a appropriate and conservative manner.
Number of additional diesel units	24	unit	Feasibility study	/FS/ /D-1/ /D-2/	☒	☒	The number of the diesel units has been elaborated within the Feasibility study based on the forecasted electricity demand and

							electrical capacity of diesel units. Assuming load factor of 70%-80% and electrical capacity of 1MW for one diesel units, it could be concluded that 24 units is a plausible number of diesel units required to meet projected electricity demand/D-1//D-2/.
Investment cost of Diesel units	9778	Th. Rub.	Feasibility Study page 4	/FS/	☒	☒	Investment costs only for additional diesel units have been taken into account. Investment costs for already existing units have been assumed as sunk costs The values applied within the excel calculation spreadsheet are in line with the values assumed within the feasibility study/FS/. Investment costs for diesel units takes also into account additional costs required for additional diesel fuel storage tanks (reservoir). The feasibility study has been used as a basis for the management decision to go ahead with the project activity. A CL B5 has been raised in the context and successfully closed. The cost estimation has been reviewed by the responsible financial experts of the PP and crosschecked with the information as per the internal data sources. The plausibility of the assumed values for the particular cost components as indicated in the feasibility study could be justified and supported by the provided documentation/CAPEX/.

							Considering the significant escalation of construction costs for new power plants since 2005 (please refer and IHS CERA Power Capital Costs Index Index[7] it was concluded that the actual investment costs were estimated in a conservative manner.
OPEX (Diesel)	Average 44,513	Th. Rub.	Feasibility Study	/FS/	☒	☒	OPEX consists mainly of the fuel cost and fix cost for operation of diesel units. The values applied are as per the feasibility study. The figures have been estimated based on the historical operating costs for diesel units as substantiated by the internal data source of PP. The fuel cost is calculated as the electricity generation multiplied with the specific operation expenditures for diesel units.
Specific operation expenditures for diesel units.	1.72	Rub/kWh	Feasibility Study	/FS/ /FS-D/	☒	☒	The specific operating expenditures has been based on the historical information about the operating and costs of the installed diesel units. The break-down of the operating cost has been provided including materials, fuel cost, fuel transportation cost, O&M cost, etc. The plausibility and appropriateness of the applied values could be proved based on the provided cost break-down and supporting documents/FS-D/.
Benchmark	15	%	Feasibility Study	/FS/ /D-6/	☒	☒	Feasibility study carried out in 2005 clearly indicate that internal benchmark (15%) of the PP. As the IRR of the project activity is below 15% the feasibility study concludes that the project activity is not a financial attractive

[7] [7] Please refer to: http://energy.ihs.com/News/Press-Releases/2008/IHS-CERA-Power-Capital-Costs-Index.htm

							alternative to the baseline scenario. In addition PP has provided a confirmation of the company internal benchmark (15%)

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis

☒	No barrier parameters are used for additionality justification
☐	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
			☒	

Project participant has carried out a barrier analysis in the context of the Baseline justification. For details please refer to the Annex 2 Assessment of the baseline identification. Additionality justification has been based mainly on the investment analysis.

ANNEX 5: OUTCOME OF THE GSCP

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

☒	No comments were received during the global stakeholder consultation period
☐	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation 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 validation team corresponding rows shall be added

ANNEX 6: JI METHODOLOGY DETERMINATION CHECKLIST

☐	An approved CDM or country specific methodology was applied.
☒	An non approved methodology was applied.

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General requirements for baseline and monitoring methodologies					
A.1. Is the methodology internally consistent (i.e. the applicability, project boundary, baseline emissions estimation procedure, project emission estimation procedure, leakage and monitoring)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Project participant has developed a project specific methodology. The developed methodology is applicable for utilization of the associated petroleum gas (APG) from oil wells that would otherwise be flared. There are several approved CDM methodologies dealing with fugitive emissions from fuels (solid, oil and gas). These are: AM0009, AM0023, AM0037, AM0043, AM0064, AM0077, AMS-III.W, ACM0008. In this context it is important to mention the CDM methodology **AM0009** has been developed for recovery and utilization of APG from oil wells that would otherwise be flared or vented. However there is neither a **natural gas pipeline** in the vicinity of the project site, nor a **processing plant** on the project site[89].	OK	OK

[8] The distance between the project site and the natural gas pipeline is approximately 300 km.

N	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			For this reason the applicability criteria of this methodology are not met and AM0009 is not applicable for the considered project activity. The determination team has also examined other methodologies. However they been developed for different technologies and measures and for this reason are not applicable for the considered project activity. The elaborated project specific methodology defines the project boundary the applicability, baseline emissions estimation procedure, project emission estimation procedure, leakage and monitoring. This structure of the methodology reflects the requirements of the Guidance for criteria for baseline setting and monitoring and hence is considered to be consistent.		
ation a clear and ological steps?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	As per the revised PDD the developed methodology has been established on a project-specific basis in accordance with appendix B of the JI guidelines. This has been assessed as appropriate. The section B of revised PDD provides a detailed theoretical description of the applied methodology and specifies the algorithm to	~~CAR B1~~	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			specific assumptions to be applied in this regard. Assumptions, formulae, parameters, data sources and key factors, and statement how uncertainties have to be taken into account have been provided. Procedure for both the financial indicator and the benchmark have been appropriately specified in the context of the methodology description. As per the revised PDD the project activity is considered to be additional in case the financial indicator is below the hurdle rate of the company. Sensitivity analysis has been also included in the own methodology.		
A.3. Has the additionality section a clear and concise presentation of methodological steps?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Within the own methodology the additionality has been demonstrated by using the **approach b (iii)** as per the Annex 1, Additionality Guidance on criteria for baseline setting and monitoring. by doing this provision of traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario has been provided. The methodological steps ensure that the project will lead to additional reductions of anthropogenic emissions by	~~CAR B3~~	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			sources or enhancements of net anthropogenic removals by sinks of GHGs; The applied approach has been assessed to be in line with requirements of JI Guidelines. The PDD has been revised in accordance with the raised CAR B3 and assumptions, formulae, parameters, data sources and key factors, and statement how uncertainties have to be taken into account have been provided.		
A.4. Has the emission reduction calculation section provided all relevant formula and are all used variables adequately explained?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, in the section D the algorithm to calculate emission reductions has been provided in a clear manner. The formulae to be applied for calculation of baseline, project and leakage emissions have been provided in the corresponding sections of the PDD. The calculation approach has been assessed by the determination team and it could be proved that the applied formula lead to a appropriate and conservative determination of emission reductions.	OK	OK
B. Baseline Setting *The baseline is assessed to be a scenario that reasonably represents the anthropogenic emissions by sources or anthropogenic removals by sinks of GHGs that would occur in the absence of the JI project. The baseline*					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
shall cover emissions from all gases, sectors and source categories listed in Annex A of the Kyoto Protocol, and anthropogenic removals by sinks, within the project boundary.					
B.1. Establishing of a baseline					
B.1.1. Is the baseline established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, The step-wise approach to identify the baseline scenario has been developed by the project participant on a **project specific basis.** The developed methodology for baseline setting and additionality justification has been established in a transparent manner with regard to the **choice of approaches**. Following main steps have been established to identify the baseline scenario and justify the additionality. **STEP 1. Identification of alternative scenarios** **STEP 2. Barrier analysis** **STEP 3. Investment analysis** **STEP 4. Common practice analysis** Within the first step plausible alternatives that are in line with current laws and regulations should be identified.	~~CR B2~~ ~~CAR B1~~	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Within the next step barriers which would prevent the implementation of the project activity and identified alternative scenarios should be defined and examined. Alternatives which are prevented by the identified barriers are eliminated from further consideration. The alternatives which are not prevented by the barriers should be examined within the investment analysis. Outcome of this step is a ranking of the short list of alternative scenarios and the economically or financially most attractive alternative scenario is considered as the baseline scenario. Finally common practice analysis should analyse the extent to which the proposed project type has already diffused in the relevant sector and geographical area. This serves as a credibility check to demonstrate additionality which complements the barrier analysis and/or the investment analysis. If similar activities cannot be observed or similar activities are observed but essential distinctions between the proposed project activity and similar activities can reasonably be explained, then the proposed project activity is additional. The developed project specific approach draws upon the step-wise approach as per		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			the "**Combined tool to identify the baseline scenario and demonstrate additionality**" ("Combined Tool"). The incorporation of the main steps of the Combined Tool is considered to be appropriate because this tool also provides for a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. Also a similar approach is required by methodologies developed for similar project activities. The methodology specifies procedures for baseline stetting in a manner that is sufficiently explicit to enable it application for the considered specific case. The step-by-step procedures needed to apply the methodology are described in the PDD. Text is clear, well-written, and logically sequenced. However **CAR B1** has been raised in this context and successfully closed.		
B.1.2. Is the baseline established taking account of uncertainties and using conservative assumptions?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the project specific methodology takes into account uncertainties and using conservative assumptions. Assumption of parameters within the investment analysis which were uncertain (i.e. were not fixed or not exactly known) have been assumed in a conservative manner. All underlying assumptions has been	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			presented in a clear a transparent manner and all documents/proofs/evidences have been provided. Determination team has reviewed the corresponding documents and could verify the conservative nature of the analysis. For details please refer to the assessment of the investment analysis. Furthermore the methodology makes provisions for monitoring of diesel based electricity generation which lead to a conservative calculation of the emission reductions. Parameters which remain fixed within the crediting period has been based on the information provided by IPCCC in a conservative manner.		
B.1.3. Is the baseline established in such a way that ERUs cannot be earned for decreases in activity levels outside the project activity or due to force majeure?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, determination team is of the opinion that the baseline is determined in such a way that emission reduction units (ERUs) cannot be earned for **decreases in activity levels** outside the project activity or due to force majeure. The emission reduction is determined based on the net electricity generation of the gas turbine units. Hence the emission reduction depends on the activity level, i.e. electricity generation so that the decreases in activity levels i.e. net electricity generation would lead to the corresponding decrease of the	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			emission reductions. In this context it is important to mention that three of five gas turbines are dual fired. For this reason the monitoring plan provides provisions for the monitoring of the diesel consumption in the gas turbines. However **CL D2** has been raised in this context and successfully closed.		
B.1.4. Is the baseline scenario established by identifying and listing plausible future scenarios on the basis of conservative assumptions and identifying the most plausible one?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, please refer to the assessment under B.1.1. The procedure for baseline identification is presented in the PDD.	OK	OK
B.1.5. Is the baseline established on a project specific basis and/or using a multi-project emission factor?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The baseline established on a project specific basis.	OK	OK
B.1.5.1. If a multi-project emission factor is applied, is it ensured that: (a) the physical characteristics of the sector justify the application of a standard emission factor across the sector (e.g. in the case of an integrated	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	N/A	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
electricity network with no major transmission constraints, the physical characteristics of the system may imply that the impact of a project on emissions can be assessed irrespective of its location); and/or (b) The emissions intensity does not vary significantly across the sector (e.g. in the case of diesel power generation in off-grid electricity systems, the emission factor for electricity generation may be based on standard factors with a reasonable degree of accuracy)?					
B.1.5.2. If a project specific emission factor is applied, is it ensured that the baseline is established in accordance of appendix B of the JI guidelines?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes. The baseline is established in accordance with requirements of Appendix B of the JI Guidelines. In particular, - in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors; - taking into account relevant national and/or sectoral policies and circumstances, such as ectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector;	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			- in such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure; - taking account of uncertainties and using conservative assumptions. For details please refer to the comments under B.1.1. Furthermore particular provisions of the Guidance on criteria for baseline setting and monitoring as per the Annex 6 of JISC 4 have been appropriately addressed. For details please refer to the comments made already in this section.		
B.1.6. Is the baseline established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	For details please refer to the comments under B.1.1.	OK	OK
B.1.7. Is the baseline established by use of the standard variables contained in appendix B of the "Guidance on criteria for baseline setting and monitoring"?	PDD /GPM/ /GBM/	DR, I	Yes, in the course of determination the determination team reviewed the **variables** as indicated in the PDD and it could be proved that standard variables as indicated in appendix B of the "Guidance on criteria for	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GCP/ /GJI/		baseline setting and monitoring" have been applied.		
B.1.8. Is the baseline established taking national and/or sectoral policies and circumstances into account like:	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the project specific methodology makes provisions for taking into account **relevant national and/or sectoral policies** and circumstances. Evaluation of legal aspects (i.e. laws and regulations for associated petroleum gas) is a obligatory in the context of baseline identification.	OK	OK
B.1.8.1. Sectoral reform policies?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the project participant has investigated the laws and regulation which were valid at the time of the project starting date. Furthermore project participant has evaluated the legal aspects valid at the time of determination of the project activity. Laws, licences, (industrial) agreements and standards which regulate, prohibit or implicitly restrict alternative scenarios have been addressed in the context of baseline and additionality justification. All identified baseline alternatives are in compliance with all applicable legal and regulatory requirements.	OK	OK
B.1.8.2. Economic situation/growth and socio-demographic factors in the relevant sector	PDD	DR, I	Establishing of the baseline has been made on a detail analysis and projection of the	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
as well as resulting predicted demand. Suppressed and/or increasing demand that will be met by the project can be considered in the baseline as appropriate (e.g. by assuming that the same level of service as in the project scenario would be offered in the baseline scenario)?	/GPM/ /GBM/ /GCP/ /GJI/		future energy demand of the oil production facilities. The forecast has been carried out by the oil production company – OJSC "Rosneft" and the main results are provided in the PDD. Within the site visit TUV has reviewed this analysis based on the documentation as provided by the project participant and it a sufficient confidence could be gained that the analysis has been appropriately carried out.		
B.1.8.3. Availability of capital?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Baseline has been established based on the examination of barriers and investment comparison analysis. Within the investment analysis project participant has demonstrated that without ERU benefits the realisation of the project activity would not be financial attractive. It could be shown that the impact of ERU benefit makes the project activity economically attractive for the project participant. Availability of capital has a less significant effect on the baseline justification.	OK	OK
B.1.8.4. Local availability of technologies, skills and know-how and availability of best available technologies in the future?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Local availability of technologies has been taken into account within the baseline determination. Project participant has demonstrated that at the time where the project has started similar technologies or practices for APG utilization have not been diffused in the relevant sector and	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			geographical area. Furthermore baseline has been also established taking into account skills and know-how required for implementation of the project. Project participant has examined whether skilled and/or properly trained labour to operate and maintain the technology is available in the relevant geographical area. As per the analysis presented in the PDD OJSC "Rosneft" being mainly involved in oil production (rather than in electricity generation) has been faced with lack of properly skilled and/or properly trained labour to operate and maintain APG based power generation technology.		
B.1.8.5. Fuel prices and availability?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Baseline scenario is the continuation of diesel based power generation at the project site. Fuel prices and availability have been taken into account within the investment analysis. Investment analysis has been evaluated by the determination team. For details please refer to the assessment of the investment analysis.	OK	OK
B.1.8.6. National and/or subnational expansion plans for the energy sector, as appropriate?	PDD /GPM/	DR, I	National and/or subnational expansion plans for the energy sector are directly or indirectly reflected within the national laws and regulations. For this reason they have been	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GBM/ /GCP/ /GJI/		also taken into account within evaluation of legal aspects and the baseline determination.		
B.1.8.7. National and/or subnational forestry or agricultural policies, as appropriate?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	National and/or subnational forestry or agricultural policies are not relevant in the context of the project activity.	OK	OK
B.1.9. Have the project participants justified the choice of the baseline?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, please refer to the assessment of the baseline determination in Annex I of the determination report.	OK	OK
B.1.10. In case the baseline approach differs from approaches already chosen in comparable projects (same GHG mitigation measure, same country, similar technology, similar scale) positively determined by an AIE, are the differences clearly explained and reasonably justified?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The determination team has reviewed a list of already registered CDM project activities which involve APG utilization technologies and it was concluded that neither the baseline approach, nor the identified baseline differs from approaches already chosen in comparable projects.	OK	OK
B.2. Project boundary					
B.2.1. Does the project boundary encompass	PDD	DR, I	The project´s spatial and system boundaries	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
all anthropogenic emissions by sources that are (a) under the control of the project participants (b) reasonably attributable to the project activity (c) significant (i.e. emissions should account for more than 1 % or exceed an amount of 2000 tCO_{2e}/a)	/GPM/ /GBM/ /GCP/ /GJI/		are clearly defined in the project documentation. The spatial extent of the project boundary includes the project site, and all the energy generation equipment connected physically to the power grid of the project site (i.e. power transmission facilities of the oil field). The boundary definition encompasses all anthropogenic emissions by sources that are under the control of the project participants. The project site (oil field) is located in tundra, remote from developed infrastructure. The nearest location – Usinsk – is located 350 km from the oil field. All equipment installed at the oil field is under control of the project participant. Power generation and flaring equipment represent the GHG emission sources and for this reason have been appropriately included in the project boundary. All missions included in the project boundary represent the main GHG emission sources and account for more than 1 % or exceed an amount of 2000 tCO_{2e}/a. Negligible emission sources have been excluded from the project boundary.		
B.2.2. Is the delineation of the project boundary and the gases and sources/sinks included described and justified in the relevant	PDD /GPM/	DR, I	Definition of the project boundary as presented in section B.3. in **text form** (explanations), table form and as schematic	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
JI PDD by use of a figure or flow chart?	/GBM/ /GCP/ /GJI/		illustration has been reviewed . Both the relevant equipment and the GHG emissions have been appropriately identified and included in the project boundary The delineation of the project boundary is defined in the PDD (section B.3.) All GHG emissions have been appropriately and transparent summarized in the corresponding **table**. The table applied in the PDD summarizes the source, GHG type, information whether included or not and a commentary. The table form and information to be provided is consistent with table templates used within the CDM methodologies. For this reason it is considered as appropriate. Furthermore a **schematic illustration** of the project activity including the information about the equipment has been provided in the section B.3. of the PDD. Schematic illustration is clear and transparent. .		
B.2.3. Are all gases and sources/sinks included explicitly stated?	PDD /GPM/ /GBM/ /GCP/	DR, I	Yes, all gases and GHG emission sources attributable to the project activity have been appropriately identified. In order to assess the appropriateness determination team has examined all	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GJI/		potential GHG emission sources which are significant and reasonably attributable to the project activity. The main emission sources are subject to the energy generation and flaring equipment as well as to the potential methane emission sources. All emission sources have been assessed with regard to their relevance for determination of the emission reductions. Furthermore the appropriateness has been assessed based on the emission sources whose inclusion is obligatory within similar CDM project activities (in particular according to AM0009 methodology). However it is important to mention that there are substantial differences between this methodology and the project case. For this reason project specific circumstances like absence of processing plant and remoteness to the natural gas pipeline have been also taken into account. Determination team has come to an opinion that all relevant GHG emission sources have been appropriately included in the project boundary.		
B.2.4. Are exclusions of any sources/sinks related to the baseline or the project justified?	PDD /GPM/	DR, I	Yes, certain gases have been excluded from consideration for conservative purpose and due the lack of their significance for	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GBM/ /GCP/ /GJI/		determination of emission reductions. An appropriate justification for this exclusion has been provided and is in line with requirements f JI guidelines.		
B.3. Assessment of leakage	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I			
B.3.1. Is leakage (i.e. the net change of anthropogenic emissions by sources and/or removals by sinks of GHGs which occurs outside the project boundary, and that can be measured and is directly attributable to the JI project.) clearly addressed or the negligence of leakage clearly justified?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	According to the PDD leakage has not been identified. To assess this the determination team has examined all potential leakage emissions that could occur due to the project activity outside the project boundary. One theoretically potential leakage source identified is the leakage emissions in case where the fossil fired power generation equipment is installed on other project sites and replaces less GHG intensive power generation technology. (e.g. diesel fired units would be sold and installed at other sites). However the existing diesel generation units will remain in reserve for the unforeseen situations and will be not installed on other sites outside the project boundary. Moreover project participant has included	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			CO2 emissions from combustion of diesel fuel in emergency cases. Furthermore leakage can in general theoretically result in a temporarily or permanent shortage of APG for other conventional consumer groups, forcing them to switch to move GHG intensive fuels. However as already indicated the project site is remote from developed infrastructure and APG to be used for power generation has not been delivered to other consumers but flared on-site. It was also justified that would be not be delivered otherwise but flared. In opposite negative leakage will occur within the project activity because the project is in a remote location and will use APG instead of diesel which has been transported via trucks to the project site. Implementation of the project activity would eliminate the need to transport diesel, thereby reducing vehicle emissions. (reduction of vehicle emissions is not claimed by the project participants).		
B.3.2. In case leakage is attributable to the project, is a procedure provided for ex ante calculation and is the leakage quantified?	PDD /GPM/ /GBM/ /GCP/	DR, I	N/A	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GJI/				
C. Additionality *In accordance with Article 6 of the Kyoto Protocol a joint implementation project has to provide a reduction in emissions by sources, or an enhancement of net removals by sinks that is additional to any that would otherwise occur.*	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I			
C.1. Is the additionality of the proposed JI project activity demonstrated and justified?	PDD /GPM/ /GBM/ /GCP/ /GJI/ /FS/ /D-6/	DR, I	Justification of the additionality as been carried out based on the project specific step-wise approach. The developed approach has been assessed to be appropriately elaborated and in line with requirements of JI Guidelines. All the steps of the project specific methodology have been appropriately carried out. The basic principle for additionality justification is to demonstrate that financial indicator of the project activity (IRR) is below the internal hurdle rate of the project participant. If this is the case than the project activity can be considered as additional. For this purpose project participant has carried out an investment analysis based on cost savings when considering the cost difference between the baseline alternative	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			and the project scenario. Thereby cost savings (e.g. saving of diesel purchase costs) have been considered as income and the internal rate of return (IRR) has been calculated. By doing this it could be clearly demonstrated that the computed project IRR of 11.7% is below the internal hurdle rate of the project participant (15%). The benchmark has been defined as company internal hurdle rate (i.e. and not as standard in the market). This is appropriate because there is only one potential project developer – project participant. Furthermore this is in line with provisions of and Combined Tool (and Additionality Tool) regarding the benchmark determination. The investment analysis has been carried out and provided in the excel worksheet. The input values applied within the investment analysis have been verified based on the documentation provided. It could be proved that all values applied in the IRR calculation are as per provided evidences and plausible. For details pl. refer to the table A-3: Assessment of Financial Parameters To verify the correctness of the IRR calculation determination team has carried out own calculation based on the provided		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			input values. The determined IRR of 11.79% without JI benefits could be reproduced and the IRR of 11.79% could be verified. In order to gain further confidence determination team has conducted own calculation of the levelized power costs of the two scenarios. It could be shown the levelized power costs of the project scenario are higher than that of the baseline scenario. The result could be further supported by the sensitivity analysis. Even assuming 14% lower investment cost for GT, 30 % lower OPEX for GT and 15% higher electricity generation the baseline remained a more financial alternative. This could provide further substantiate the additionality of the project scenario.		
C.2. Is one of the following approaches applied:	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I		OK	OK
C.2.1. Application of the most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board?	PDD /GPM/ /GBM/	DR, I		OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GCP/ /GJI/				
C.2.2. Application of any other method for proving additionality approved by the CDM Executive Board?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	A JI specific approach has been chosen for addittionality justification. The rationale of the project specific approach chosen by project participant can be summarized as follows: Within the first steps (step 1- step 3) baseline scenario should be identified through the barrier and/or investment analysis. (For details on assessment of the baseline identification please refer to the comments above). If the alternative considered as baseline scenario is the "proposed project activity undertaken without being registered as a JI project activity", then the project activity is not additional. If this is not the case then common practice analysis should be carried out. The purpose of the common practice analysis is to examine the extent to which the proposed project type has already diffused in the relevant sector and geographical area. This serves as a credibility check to demonstrate additionality which complements the barrier analysis and/or the investment analysis. If similar activities cannot be observed or similar activities are observed but essential distinctions between the proposed project activity and similar	~~CL B4~~ ~~CAR B3~~	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			activities can reasonably be explained, then the proposed project activity is additional. Moreover it should be demonstrated that the financial indicator of the project activity (IRR) is below the internal hurdle rate of the project participant. If this is the case than the project activity can be considered as additional. The rationale of the chosen approach draws upon the basic principle of the step-wise approach as per the "**Combined tool to identify the baseline scenario and demonstrate additionality"** ("Combined Tool"). The incorporation of the procedure to justify the additionality as per the Combined Tool is considered to be appropriate because this tool also provides for a step-wise approach to identify the baseline scenario and simultaneously demonstrate additionality. Also a similar approach is required by methodologies developed for similar project activities (e.g. AM0009). CAR B3 and CL B4 have been raised in this context and successfully closed.		
C.2.3. Provision of traceable and transparent information showing that the baseline was identified on the basis of conservative	PDD /GPM/	DR, I	Yes, The baseline identification is based on the basis of conservative assumptions. These are the evaluation of legal aspects and	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources or enhancements of net anthropogenic removals by sinks of GHGs?	/GBM/ /GCP/ /GJI/ /D-4/		evaluation of the economically and financial attractiveness of the project activity in comparison to the baseline scenario. Project scenario includes utilization of APG in gas turbine units. In the baseline scenario APG would be flared and electricity would be generated by the diesel units. Before the implementation of the project activity APG has not been used power generation. APG has been used at oil fields to heat up technological systems and residential premises. This use of APG continues even after the implementation of the project activity. The use of APG heating purposes could be verified during the site visit. In this context it important to mention that utilization of APG for heating on Khasyrey oil field was approximately 55%. Furthermore according to the forecasts made by experts of Rosneft oil production will decrease since 2011 /D-1/. The decreasing of the oil exploration would lead to the decrease of the APG production. However the electricity and APG demand would remain on the same level. In order to cover the lack of APG on the Khasyrey oil field APG from the Nyadeyu and Cherpayu oil fields will be supplied via		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			pipelines.[10] APG produced on these oil fields has been also flared in the absence of the project activity. Hence is was concluded that project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions. The corresponding evidences have been reviewed in the course of determination and it could be proved that forecasted utilization of APG as described in detail in the PDD is appropriate and is in line with provided evidences/D-4/.		
C.2.4. Provision of traceable and transparent information that an accredited independent entity has already positively determined that a comparable project (to be) implemented under comparable circumstances (same GHG mitigation measure, same country, similar technology, similar scale) would result in a reduction of anthropogenic emissions by sources or an enhancement of net anthropogenic removals by sinks that is additional to any that would otherwise occur and a justification why this determination is relevant for the project at hand?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The determination team has reviewed a list of already registered CDM project activities which involve APG utilization technologies and it was concluded that neither the basline/additionality approach, nor the identified baseline differs from approaches already chosen in comparable projects. It was concluded that continuation of current practice (like flaring of APG and diesel based generation) is observed within comparable projects under comparable circumstances.	OK	OK

[10] Khasyrey, Nyadeyu and Cherpayu oil fields belong to the Gamburtsev Swell – the physical location where the project takes place.

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D. Crediting Period					
D.1. Has the project started on or after 2000-01-01?	PDD /GPM/ /GBM/ /GCP/ /GJI/ /FS/	DR, I	Project has started in 2005 – after 2000-01-01. Decision to move forward with the project implementation has been made based on the results of the feasibility study dated 2005. In the course of determination project participant has provided sufficient evidences for the project starting date. These evidences have been reviewed and the accurateness of the project starting date could be proved/FS/*.	OK	OK
D.2. Will the crediting period start after 2008-01-01?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, as per the PDD crediting period starts on 2008-01-01 and hence is appropriate.	OK	OK
D.3. Will the crediting period start on or after the date the first emission reductions or enhancements of net removals are generated by the project activity?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The crediting period starts on the date of the first emission reductions.	OK	OK
E. Monitoring					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A monitoring plan for the monitoring and reporting of GHG emissions, emission reductions and/or removals of emissions by sinks acc. to para 4 – 6 JI Guidelines has to be provided.					
E.1. Is a monitoring plan in place that provides for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources and/or anthropogenic removals by sinks of GHGs occurring within the project boundary during the crediting period?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	A project specific monitoring has been developed for this project activity. The project involves utilization of APG for power generation. In the absence of project activity the APG would be otherwise flared and power would be produced in diesel units. According to this, the developed monitoring includes for **Baseline emissions:** • CO2 emission which would occur from diesel combustion. • CO2 emissions which would occur through flaring of APG at the flaring equipment • CH4 emissions which would occur through the imperfect destruction efficiency of the flare. **Project emissions:** • CO2 emissions occur through	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			combustion of APG in the Gas Turbine Units • CO2 emissions through combustion of diesel which could occur in emergency cases when reserve diesel units become operational. **CO2 emission from diesel combustion** The main baseline emission source is the CO2 emission which would occur from diesel combustion in the baseline scenario. These emissions are determined based on the net power generation in gas turbine units multiplied with CO2 emission factor of diesel combustion. This is an appropriate method to determine CO2 emission which would occur from combustion of (fossil) fuels in the absence of the project activity. In this context it is important to measure the Net power generation, i.e. to subtract power generation attributable to the project activity. Such provision is contained in the developed monitoring plan. **Net power generation** The monitoring of the net power generation is		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			based on daily meter readings installed at switchgear of Power Center Substation. During the on-site-visit it could be observed that there are separate meters (a) for power supplied to equipment attributable to project activity (compressor station, gas preparation equipment) and (b) power is supplied to other consumers (oil production equipment etc.) Hence it could be concluded that an monitoring system provides for a clear and accurate monitoring. During the on-site visit the accurate measurement and recording frequency (i.e. archiving in log book) could be observed. Determination team has reviewed the log books and checked the plausibility of the recorded figures. The monitoring of the power generation could be assessed as accurate and appropriate. The recorded figures have been cross checked with aggregated data in electronic form and it could be verified that the monitoring of net power generation has been established in an appropriate and accurate manner. In the course of determination it could be proved that the accuracy class and the		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			calibration procedures of the electricity meters are as per the provided technical specification and calibration norms for power meters. This data is also in line with information provided in the PDD. Both accuracy class of 0.2 has been assessed as appropriate. Calibration has been also assessed as appropriate for the corresponding meter types and in line with provided calibration and maintenance norms and procedures. However **CL D1** has been raised in order to clarify whether archiving period more than two years can be provided. **CL D2** has been raised in order to clarify how many meters are installed within the overhead meter-points M-9, M-10, and M-11 and what is their exact numbering For calculation of the baseline emissions occur from displacement of diesel based power generation it necessary to determine emission factor for diesel based power generation. **Emission factor for diesel based power generation.** According to the monitoring plan specific consumption of diesel units has been		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			determined and set as an fixed ex-ante parameter. The determined specific consumption of diesel units is 0.228 t/MWh. This value could be appropriately justified based on historical specific consumption of diesel units/D-1/. The corresponding evidences for the last three years have been provided and it could be observed that specific consumption has been almost stable[11]. The determined value of 0.228 represents the lowest of the historical values and hence is conservative. Taking into account specific consumption (0.228t/MWh) and CO2 emission factor for diesel fuel (3.16) an emission factor for diesel generator unit can be calculated as 0.72. Comparing this value with emission factors for diesel generator systems (0.8 t/MWh) used within different methodologies under CDM, (e.g. AMS ID) the determined value has been assessed as conservative and hence appropriate. Furthermore the project specific methodology assumes that destruction efficiency of the flaring equipment is lower than that of a gas turbine. Destruction efficiency of 100% has been assumed for GTU. In the Correspondingly in the baseline scenario only		

[11] Historical monthly data on diesel consumption and the corresponding electricity output as well as the calculation of specific diesel consumption for the time period 2006-2008 have been provided.

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			98% of APG would be combusted in the flare, i.e. 2% of methane would release into the atmosphere. CO2 emissions. **CL D3** has been raised in order to 1. clarify how the developed project **specific methodology regulates the justification** of the assumed efficiency values. What are the assumptions and data sources to be applied in this context? 2. justify and provide evidences for the conservative nature for the assumed efficiency (98%) of **APG combustion in flare**. 3. justify and provide evidences for the conservative nature for the assumed efficiency (100%) of **APG combustion in GTU**. **CO2 emissions from APG burning** In order to determine the CO2 emissions occur in the baseline scenario through APG flaring the CO2 emission factor should be multiplied with APG combusted in the GTU. **CO2 emission factor**		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Calculation of CO2 emission factor for APG combustion in the flare device has been carried out according to formula 4.4.5 proposed in Subchapter 4.2, —Fugitive emissions in oil and gas systems of 2006 IPCC Guidelines. The applied method has been also in detail justified in the PDD. The applied approach has been assessed as appropriate because this method is based on the IPCC Guidelines – well accepted date sources for CDM projects. **Chemical composition of APG** In order to calculate these emissions mass balance of the APG combusted in GTU should be known. The monitoring plan provides the monitoring of the chemical composition of APG. As per the monitoring plan the measurements should be carried out by an independent laboratory – Nauka II. The independent laboratory is responsible for measurement and proper maintenance of the monitoring equipment – Chromatograph. Calibration procedures and accuracy class (0.3%) of the measurement equipment – chromatograph – has been crosschecked with provided evidences and the appropriateness could be verified.		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			It could be also verified that Nauka II is an independent laboratory accredited with respect to technical competence according to Russian standards for accreditation (GOST). These measurements are carried out not only for monitoring purposes but also for internal needs of the project participant. The measurements in 2008 have been provided and it could be verified that they are carried out in accordance official standards[12]. However **CAR D4** has been raised in this context because during the on-site visit it was observed that the measurements of the chemical composition are not carried out monthly as indicated in the PDD. Consistence should be provided. **APG consumption in GTU** Along with CO2 emission factor it also necessary to determine the APG consumption in GTUs in order to be able to calculate the CO2 emissions from flaring in the baseline scenario. Within the determination it could be proved that the APG consumption is monitored for		

[12] The measurements standards applied Russian Federation for this type of measurements is GOST 23781-87, GOST 22387.2-97 and GOST 22667-82.

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			each GTU separately. In the CAR D5 project participant has been kindly requested to clearly define provisions for monitoring of the APG combusted in GTUs. In response that project participant has requested the manufacturer and provided a detailed specification of the monitoring equipment for APG consumption in GTUs. CL could be closed. Final conclusion whether monitoring plan that provides for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources can be provided after closure of the relevant CARs and CLs.		
E.2. Is a monitoring plan in place that provides for the identification of all potential sources of, and the collection and archiving of data on increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of GHGs outside the project boundary that are significant and reasonably attributable to the project during the crediting period?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the monitoring plan is in place that provides for the identification of all potential sources. For details please refer to the comment above.	OK	OK
E.3. Is a monitoring plan in place that provides for the collection and archiving of information on	PDD	DR, I	Collection and archiving of information on environmental impacts after implementation	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
environmental impacts, in accordance with procedures as required by the host Party, where applicable?	/GPM/ /GBM/ /GCP/ /GJI/		of the project activity is not required. Assessment of environmental impacts before project implementation is required and has been also appropriately carried out.		
E.4. Is a monitoring plan in place that provides for quality assurance and control procedures for the monitoring process?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Project participant has established the procedures for data management and processing within the particular stages of the monitoring. Double check procedures have been introduced to ensure high quality project management of all sub-projects. Different tasks within the monitoring are clearly allocated to the personal of the different departments of the. Personal and the corresponding tasks/responsibilities of the project monitoring are clearly defined. Furthermore all procedures have been clearly documented. The QA/QC procedures are integral part of the management system. It has been observed that QA/QC procedures are in place and appropriately used.	OK	OK
E.5. Is a monitoring plan in place that provides for procedures for the periodic calculation of the reductions of anthropogenic emissions by sources and/or enhancements of anthropogenic removals	PDD /GPM/ /GBM/	DR, I	Yes, monitoring plan is in place that provides for procedures for the periodic calculation of the reductions of anthropogenic emissions by sources. It is envisioned to determine	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
by sinks by the proposed JI project, and for leakage effects, if any?	/GCP/ /GJI/		emission reductions on a monthly basis and verify them yearly.		
E.6. Is a monitoring plan in place that provides for documentation of all steps involved in the calculations referred to in paragraphs 4 (b) and (f) of appendix B of the JI guidelines?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the monitoring plan provides the documentation and archiving of all steps and measurements required to calculate emission reductions. During the on-site-visit the documentation and recording procedures have been inspected and it could be observed that they have been established in line with the monitoring plan. Some minor deviations have been observed and the corresponding CARs/CLs have been raised and successfully closed..	OK	OK
E.7. Are all relevant factors and key characteristics that will be monitored clearly described (incl. also all decisive factors for the control and reporting of project performance)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, Please refer to the comment under E.1. and B.6. of the determination protocol.	OK	OK
E.8. Are the indicators, constants and variables used specified?	PDD /GPM/ /GBM/	DR, I		OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	/GCP/ /GJI/				
E.8.1. Are the indicators, constants, variables and/or models used reliable and valid and provide a transparent picture of the emission reductions or enhancements of net removals (to be) monitored?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the determination team has analysed the emission sources and came to a conclusion that the developed monitoring concept is consistent and provide a transparent picture of the emission reductions. For further details please refer to the comment under E.1. and B.6. of the determination protocol.	OK	OK
E.8.2. Are the project-specific indicators used, to the extent possible, indicators that are already used in normal business practice and/or have to be reported e.g. to local authorities?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, project specific indicators like specific diesel consumption have been used. The applied values are conservative as compared to default values used under CDM. Specific consumption of diesel fuel at on-site DPPs 0.228 t/MWh. This value has been substantiated based on the historical information on the fuel consumption and electricity generation. The calculated emission factor for diesel generator systems is 0,72 kg CO2e/kWh. This value was found to be conservative in comparison to the default emission factor for diesel generator systems (0.8 kg CO2e/kWh as per the approved CDM methodology AMS ID.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.8.3. Are leakage indicators used data from suppliers/utilities and/or available public statistics and/or surveys?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Leakage has not been identified. In opposite negative leakage will occur within the project activity because the project is in a remote location and will use APG instead of diesel which has been transported via trucks to the project site. Implementation of the project activity would eliminate the need to transport diesel, thereby reducing vehicle emissions. (reduction of vehicle emissions is not claimed by the project participants).	OK	OK
E.8.4. Are default values used in the project? Are accuracy and reasonableness carefully balanced in the selection of default values? Are default values chosen from recognized sources, be supported by statistical analyses providing reasonable confidence levels and be presented in a transparent manner?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	In case of applying IPCCC default values it could be appropriately justified that a conservative nature has been ensured. 1. For the efficiency of APG combustion in flares (98%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 4. Fugitive emissions, p.4.45 "… Flaring destruction efficiency… typically a value 0.98 is assumed for those used at production and processing facilities. The applied value could be proved. 2. For the combustion efficiency for the GTUs (100%) the IPCC value has been assumed. Project participant has indicated the data source. This is the volume 2, chapter 2. Stationary combustion. The applied value	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			could be proved. 3. Net calorific value of diesel fuel (42.7 TJ/thousand tonnes). This is in line with the IPCCC value. 4. CO2 emission factor for diesel fuel 74,1 TCO2/TJ. This value is also in line with IPCCC value.		
E.9. Are the standard variables, given in Appendix B of the Guidance on Criteria for Baseline Setting and Monitoring used?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Please refer to the comment above.	OK	OK
E.10. Are the methods employed for data monitoring (including its frequency) and recording clearly described?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, the methods employed for data monitoring (including its frequency) and recording are clearly described	OK	OK
E.11. Are procedures for quality assurance and control for the monitoring process provided (This includes, as appropriate, information on calibration and on how records on data and/or method validity and	PDD /GPM/ /GBM/	DR, I	Yes, please refer to the comment under E.4.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
accuracy are kept and made available on request)?	/GCP/ /GJI/				
E.12. Are the responsibilities and the authority regarding the monitoring activities clearly identified?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, please refer to the comment under E.4.	OK	OK
E.13. Is a complete compilation of the data that needs to be collected for its application provided (This includes data that is measured or sampled and data that is collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.). Data that is calculated with equations should not be included in the compilation. The information in the monitoring plan shall be provided in tabular form)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The monitored parameters will be recorded and summarized in the monitoring report. Procedures for data monitoring and determination of the emission reduction is has been established in a clear and transparent manner.	OK	OK
E.14. If a national or international monitoring standard has to be and/or is applied to monitor certain aspects of the project, is this standard identified and a reference as to where a detailed description of the standard can be found provided?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The monitoring equipment is in line with the regulation of the Host country. This could be verified based on the provided technical specification.	OK	OK
E.15. If statistical techniques are used for monitoring,	PDD	DR, I	Statistical techniques are not used.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
are these documented and used in a conservative manner?	/GPM/ /GBM/ /GCP/ /GJI/				
E.16. Will the data monitored and required for determination according to paragraph 37 of the JI guidelines be kept for two years after the last transfer of ERUs for the project?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Yes, CAR D1 was raised under this context and successfully closed.	~~CAR D1~~	OK
F. Estimations and Calculations used in the baseline and the monitoring plan *The emission reductions or enhancements of net removals generated by the project have to be estimated ex ante in the project design document (PDD) of the project and calculated ex post according to the monitoring plan included in the PDD*					
F.1. General issues					
F.1.1. Are the emission reductions or enhancements of net removals generated by the project estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan **on a project**	PDD /GPM/ /GBM/ /GCP/	DR, I	The emission reductions have been calculated based on the formulae as per the monitoring plan. By doing this the PP has applied the most recent historical data.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
specific basis?	/GJI/				
F.1.2. Are the emission reductions or enhancements of net removals generated by the project estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan **at least from the beginning until the end of the crediting period?**	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The emission reductions have been estimated from the beginning until the end of the crediting period.	OK	OK
F.1.3. Are the emission reductions or enhancements of net removals generated by the project estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan **on a source-by-source/sink-by-sink basis?**	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The emission reductions generated by the project are estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan on a source-by-source/sink-by-sink basis	OK	OK
F.1.4. Are the emission reductions or enhancements of net removals generated by the project estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan **in tonnes of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?**	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The emission reductions generated by the project are estimated ex ante in the project design document (PDD) of the project and procedures provided for ex post calculation according to the monitoring plan in tonnes of CO_2 equivalent.	OK	OK
F.1.5. Is it ensured that the description of	PDD	DR, I	The description of emission reductions is	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
emission reductions or enhancements of net removals is consistent with the monitoring plan?	/GPM/ /GBM/ /GCP/ /GJI/		consistent with the monitoring plan		
F.2. Algorithms and formulae used					
F.2.1. Are the underlying rationale for the algorithms / formulae (e.g. marginal vs. average etc.) explained?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The underlying rationale for the algorithms / formulae for determination of the calculated values are explained in the PDD	OK	OK
F.2.2. Have consistent variables, equation formats, subscripts etc. been used?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The variables, equation formats, subscripts have been used consistently throughout the PDD.	OK	OK
F.2.3. Are all equations numbered?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	All equations are numbered	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
F.2.4. Are all variables, with units indicated, defined;	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	All variables, with units are indicated and defined.	OK	OK
F.2.5. Is the conservativeness of the algorithms / procedures justified (To the extent possible, methods to quantitatively account for uncertainty in key parameters should be included)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Conservativeness of the algorithms / procedures is justified. In particular please refer to the specific electricity consumption in the baseline scenario.	OK	OK
F.2.6. Are any parts of the algorithms or formulae that are not self-evident clearly explained (It should be justified that the procedure is consistent with standard technical procedures in the relevant sector. References should be provided as necessary)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	A clear and appropriate explanation is provided for all formulae and algorithm.	OK	OK
F.2.7. Are implicit and explicit key assumptions explained in a transparent manner (It should be clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	All assumptions are explained in a transparent manner.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
F.3. Parameters, coefficients and variables used					
F.3.1. For those values that are to be provided by the project participants, is it clearly indicated how the values are to be selected and justified, for example, by explaining:	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Values that are to be provided by the project participants the process of data collection including the source of data is clearly indicated and justified. The main monitoring parameter is the electricity generation by the GTUs.	OK	OK
F.3.1.1. What types of sources are suitable (official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Appropriate data sources like IPCCC values have been applied in the PDD.	OK	OK
F.3.1.2. The vintage of data that is suitable (relative to the project's crediting period)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The vintage of data is consistent with the time frame of the implementation of the project activity.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
F.3.1.3. What spatial level of data is suitable (local, regional, national, and international)?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Local nad regional have been used within the common practice analysis. National data has been applied within the assessment of the laws and regulations. International like IPCC data has been used for defining default values. Determination team has concluded that the spatial level of data has been appropriately selected.	OK	OK
F.3.1.4. How conservativeness of the values is to be ensured?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Conservativeness of the algorithms / procedures is justified. In particular please refer to the specific electricity consumption in the baseline scenario.	OK	OK
F.3.2. For other values:	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Please refer to the comment under B.5.4. of the validation protocol.	OK	OK
F.3.2.1. Are the precise references from which these values are taken clearly indicated (e.g. official statistics, IPCC Guidelines,	PDD /GPM/ /GBM/	DR, I	Please refer to the comment above	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
commercial and scientific literature)?	/GCP/ /GJI/				
F.3.2.2. Is the conservativeness of the values provided justified?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Please refer to the comment above	OK	OK
F.3.3. Are procedures provided for all data sources, to be followed if expected data are unavailable (For instance, it could be pointed to a preferred data source (e.g. national statistics for the past 5 years), and indicated a priority order for use of additional data (e.g. using longer time series) and/or fall back data sources to preferred sources (e.g. private, international statistics etc))?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The main monitoring parameters are based on the internal sources and are to be provided and collected by the project participant.	OK	OK
F.3.4. Are International System Units (SI units) used?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	Ok, please refer to the comments above.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
F.3.5. Are the standard variables given in Appendix B Guidance on Criteria for baseline setting and monitoring used?	PDD /GPM/ /GBM/ /GCP/ /GJI/	DR, I	The standard variables given in Appendix B Guidance on Criteria for baseline setting and monitoring are used	OK	OK