DETERMINATION REPORT

JSC "MOTOR SICH"

DETERMINATION OF THE PROJECT

INTRODUCTION OF HEAT AND POWER COMPLEX "MOTOR SICH"

REPORT NO. UKRAINE/0144/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Date of first issue: 21/10/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: JSC "Motor Sich"	Client ref.: Volodymyr Semenov

Summary:

Bureau Veritas Certification has made the determination of the "Introduction of heat and power complex "Motor Sich" project of JSC "Motor Sich" located at city of Zaporizhzhya, Zaporizhzhya region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The project is submitted under the track 1 procedure.

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology developed according the Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

On behalf of determination team Flavio Gomes, Bureau Veritas Certification Holding SAS Operational Manager, approved and signed final version of the Determination Report.

Report No.: UKRAINE/0144/2010	Subject Group: JI
Project title: "Introduction of heat and power complex "Motor Sich"	
Work carried out by: Oleg Skoblyk – Team member, Lead Verifier Olena Manziuk - Team member, Verifier Denis Pishchalov – Team member, Financial Specialist	
Work verified by: Ivan Sokolov – Internal technical reviewer	
Report approved by: Flavio Gomes – Operational Manager	
Date of this revision: 11/11/2010	Rev. No.: 01
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Bureau Veritas Certification Holding SAS

Indexing terms

Climate Change, Kyoto Protocol, JI, Emission Reductions, Determination

Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Government Organization
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

JSC "Motor Sich" has commissioned Bureau Veritas Certification to determinate its JI project "Introduction of heat and power complex "Motor Sich" (hereafter called "the project") at the city of Zaporizhzhya, Zaporizhzhya region, Ukraine.

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

1.1 Objective

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

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

1.2 Scope

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

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

1.3 GHG Project Description

In the PDD of the SSC project stated that prior to the starting date of the Project the electricity demand of JSC 'Motor Sich' was secured by its supply from the national grid. The heat energy has been produced by natural gas fired boilers.

The purpose of the project "Implementation of heat and power complex "Motor Sich" is the improvements of energy resources consumption efficiency and subsequent greenhouse gases emission reductions due to

implementation of modern technologies of combined heat and electricity generation based on gas turbine units at JSC 'Motor Sich'.

JSC 'Motor Sich' is planning to construct two combined heat and power stations (heat and power complexes) based on gas turbine units PAES 2500 and EG 6000 with the electric installed capacity of 2.5 MW and 6 MW respectively and two exhaust boilers.

The project consists of two stages: a) construction of CHP station TEK-3 with the electric capacity of 2.5 MW and heat capacity 5.6 Gkal/hour in 2010; b) construction of CHP station TEK-6 with the electric capacity of 6 MW and heat capacity 10 Gkal/hour in 2011.

As a result, Project activity aims to achieve the following results: a) greenhouse gases emission reductions in the amount of 86 401 tonnes of CO2e; b) reduction of the amount of electricity purchased from the national grid; c) more efficient utilisation of energy resources (natural gas in particular).

According to the current information, Project implementation was started on the grounds of the necessity to optimize energy resources consumption at the Enterprise. Project implementation will significantly reduce electricity consumption from national grid and reduce associated greenhouse gases emissions.

Thus, generated electricity will be used for covering power demand of the Enterprise substituting electricity from national grid, which has high carbon intensity factor. The project owner could also analyse and consider the option of exporting generated electricity to the national grid in the future. Heat energy will be used both for covering the heat demand of the Enterprise and also for heating of residential area, substituting heat energy produced by natural gas fired boilers.

1.4 Determination team

The determination team consists of the following personnel:

Oleg Skoblyk – Team member, Climate Change Lead Verifier;

Olena Manziuk - Team member, Climate Change Verifier;

Denis Pishchalov – Team member, Financial Specialist.

The determination report was reviewed by:

Ivan Sokolov – Bureau Veritas Certification Internal Technical Reviewer.

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for "Baseline and Monitoring Methodologies" is omitted because the project participants established their own baseline and monitoring approach (JI specific approach) that is in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2.

Determination Protocol Table 1: Mandatory Requirements			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** or a **Clarification Request (CL)** of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2 and 3 to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then further sub-divided. The	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR)	The section is used to elaborate and discuss the checklist question and/or the conformance to the question.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification

lowest level constitutes a checklist question.		or interview (I). N/A means not applicable.	It is further used to explain the conclusions reached.	Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 4: Legal requirements				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 2**	**Summary of project owner response**	**Determination conclusion**
If the conclusions from the Determination are either a Corrective	Reference to the checklist question number in Tables 2 and 3 where the	The responses given by the Client or other project participants during the	This section should summarize the determination team's responses and final conclusions. The

Action Request or a Clarification Request, these should be listed in this section.	Corrective Action Request or Clarification Request is explained.	communications with the determination team should be summarized in this section.	conclusions should also be included in Tables 2 and 3, under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD version 01 of 15/03/2010) was submitted by JSC "Motor Sich" on 29/07/2010 together with supporting documentation regarding calculation of GHG emission and spreadsheets with investment analysis.

PDD version 01 was made publicly available for comments on Bureau Veritas Ukraine web-site from 29July 2010 till 27 August 2010.

PDD version 01 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed.

The first deliverable of the document review was the Draft Determination Report with 41 CAR's and 20 CL's.

To address Bureau Veritas Certification corrective action and clarification requests, JSC "Motor Sich" revised the PDD and as a response issued PDD version 01 of 15/03/2010 which was reviewed together with project participants' responses by the BV Certification and requests for supplementary explanations were raised. Taking into account all BV Certification's requests and findings JSC "Motor Sich" updated the PDD and supporting documentation and resubmitted PDD in version 2.3 dated 09/11/2010.

The determination findings presented in this report relate to the project as described in the PDD version 01 dated 15/03/2010, version 2.0 dated 06/08/2010, version 2.1 dated 21/09/2010, and version 2.2 dated 18/10/2010.

2.2 Follow-up Interviews

On 17th of August 2010 Bureau Veritas Certification determination team conducted a visit to the project site (JSC "Motor Sich", Zaporizhzha). On-site interviews with the project participant JSC "Motor Sich" and the PDD developer LLC "Joint Implementation Team" were conducted to confirm

the selected information and to clarify some issues identified during document review.
The main topics of the interviews are summarized in Table 1. The interviewees are listed in Section 6 References.

Table 1 Interview topics

Interviewed organization	Interview topics
JSC "Motor Sich"	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational structure ➢ Responsibilities and authorities ➢ Training of personnel ➢ Quality management procedures and technology ➢ Rehabilitation/Implementation of equipment (records) ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documentation ➢ Monitoring plan and procedures ➢ Permits and licenses ➢ Environmental Impact Assessment ➢ Local stakeholder's response.
LLC "Joint Implementation Team"	➢ Baseline methodology ➢ Monitoring plan ➢ Additionality proofs ➢ Calculation of emission reduction.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined the PDD;
ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where:

iv) additional information is needed to fully clarify an issue.

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

3 DETERMINATION FINDINGS

In the following sections, the findings of the determination are stated. The determination findings for each determination subject are presented as follows:

1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 41 Corrective Action Requests and 20 Clarification Requests.
3) The conclusions for determination subject are presented.

3.1 Project Design

The JI project "Introduction heat and power complex "Motor Sich" is expected to be in line with host-country specific JI requirements because it is aimed at reduction electricity consumption from national grid and reduction associated with greenhouse gases emissions (86 401 tones of CO2e through the crediting period). As a result of the project activity, it is also planned to achieve more efficient utilization of energy resources (natural gas in particular).

According to the information presented in the PDD, at JSC 'Motor Sich' there is planned to construct two combined heat and power stations (heat and power complexes) based on gas turbine units PAES 2500 and EG 6000 with the electric installed capacity of 2.5 MW and 6 MW respectively and two exhaust boilers.

The project scenario is in accordance with relevant host party legislation for energy and energy efficiency.

Bureau Veritas Certification recognizes that the present project is helping the host country fulfill its goals to promote sustainable development. The project is expected to be in line with the specific host-country JI requirements.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.

The project design is sound and the geographical (Project site is located at the territory of JSC "Motor Sich", city of Zaporizhzhya, Zaporizhzhya region, in the south-east of Ukraine) and temporal (12.5 years 150 months) boundaries of the project are clearly defined.

The identified areas of concern as to Project Design, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR01, CAR02, CAR03, CAR04, CAR05, CAR06, CAR07, CAR08, CAR09, CAR10, CAR11, CAR26, CAR27, CAR40, CL01, CL02, CL03, CL04, CL05, CL06, CL17, CL18, CL20).

The project has no approvals by the Parties involved, therefore CAR01 remains pending. CAR01 will be closed after report finalizing.

3.2 Baseline and Additionality

Project participants established the baseline using JI specific approach by identifying and listing possible alternatives on the basis of conservative assumptions and identifying the most plausible one.

According to the information provided in the PDD, JI specific approach was developed based partly on CDM approved methodology AM0014 "Natural gas-based packaged cogeneration". Namely the approaches for estimation of energy (fuel) consumptions for heat energy generation under the baseline scenario and associated baseline emissions as well as the approach for estimation of baseline emissions from electricity supply to the plant that is offset by the electricity supplied from the cogeneration units have been used. The mentioned CDM methodology is not applicable to this JI project to be used as a whole, because the project does not meet in full the applicability criteria of the methodology, namely the criterion that no excess heat from the cogeneration system is provided to another user and no excess of electricity is supplied to the power grid. In fact, heat energy generated within the project is partly supplied for ensuring heating and hot water supply of the residential buildings and electricity could be supplied to the national grid in the future.

The alternatives considered for determination of the baseline scenario in the context of the project activity were defined by project participants based on the existing practice analysis, existing technologies, national and sectoral policies and project specific circumstances the following plausible alternative future scenarios for the proposed project activity.

The possible alternative baseline scenarios are the following:

- Development of the project activity not being registered as a joint implementation project. In section B.2 it is demonstrated that the proposed project without JI revenue is financially not attractive and faces barriers.

- Continuation of existing practice. Covering electricity demand purchasing power from the national grid and covering heat energy demand using natural gas fired boilers.

The baseline options considered do not include those options that:

- do not comply with legal and regulatory requirements; or
- depend on key resources such as fuels, materials or technology that are not available at the project site.

The most economically attractive alternative among the alternatives mentioned above has been selected as the baseline scenario, since such alternative is not expected to face any prohibitive barriers that could have prevented it from being taken up as the project activity.

Financial analysis and common practice analysis were used by project participants to demonstrate project additionality.

As a result of the performed analysis there is known that project scenario without additional revenues from emission reduction units sale is not the most attractive from the financial point of view. Overall, financing due to project ERU sale will ensure additional incentive to implement the project activity for the Enterprise. Revenues from the sale of emission reduction units generated as a result of first project stage implementation will be used to finance second stage of the project. Moreover, in the PDD of this project is concluded that gas turbine cogeneration technology is not a common practice in Ukraine.

Thus, the proposed approach to additionality demonstration and assessment provides 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 of GHG.

The identified areas of concern as to Baseline and Additionality, project participants responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR12, CAR13, CAR14, CAR15, CAR16, CAR17, CAR18, CAR19, CAR20, CAR21, CAR22, CAR23, CAR24, CAR25, CAR41, CL07, CL08, CL09).

3.3 Monitoring Plan

The Project uses the monitoring approach developed according to the Guidance on Criteria for Baseline Setting and Monitoring (Version 02), appendix B of the JI guidelines and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Presented in the PDD monitoring plan ensures the collection and archiving of all relevant data necessary for measuring anthropogenic emissions and calculation of GHGs emission reductions occurring within

the project boundary during the crediting period. Monitoring plan of this JI SSC project provides also quality assurance and control procedures for the monitoring process and procedures for the periodic calculation of the reductions of anthropogenic emissions by sources of the proposed JI project.

Detailed theoretical description, assumptions, formulae, data sources and key factors used in the monitoring plan is described in the project design documents.

Monitoring plan is established in accordance with the list of Host Party regulations that indicated in the PDD.

All roles and responsibilities connected with monitoring plan implementation, frequency of data monitoring, responsible departments described in the project design documents.

After performance of documents review and site visit there was confirmed that monitoring data will be archived in paper and electronic forms.

Detailed information relating to the collection all relevant data necessary for estimating or measuring project emissions, determining baseline emissions, and assessing leakage effects provided in the sated monitoring plan in the PDD.

The identified areas of concern as to Monitoring Plan, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR28, CAR29, CAR30, CAR31, CAR32, CAR33, CAR34, CAR35, CL10, CL11, CL12, CL13).

3.4 Calculation of GHG Emissions

Greenhouse gases emissions sources in baseline scenario of the project include several components: greenhouse gases emissions due to natural gas consumption for heat energy generation in the amounts that would be generated by TEK-3 and TEK-6; and greenhouse gases emissions due to electricity generation by power plants of the national grid in the amounts that would be generated by TEK-3 and TEK-6.

The baseline emissions are calculated according to the JI specific approach for this project.

$$BE = BE_{heat,\ TEK\text{-}3} + BE_{el.,\ TEK\text{-}3} + BE_{heat,\ TEK\text{-}6} + BE_{el.,\ TEK\text{-}6}$$

where:

$BE_{heat,\ TEK\text{-}3}$ – baseline emissions due to heat energy generation using natural gas fired boilers under the baseline scenario in the amount which will be substituted with heat energy generated by TEK-3 under the project scenario.

$BE_{el.,\ TEK\text{-}3}$ – baseline emissions due to electricity generation by power plants of the national grid under the baseline scenario in the amount

which will be substituted with electricity generated by TEK-3 under the project scenario.
$BE_{heat,\ TEK-6}$ – baseline emissions due to heat energy generation using natural gas fired boilers under the baseline scenario in the amount which will be substituted with heat energy generated by TEK-6 under the project scenario.
$BE_{el.,\ TEK-6}$ – emissions due to electricity generation by power plants of the national grid under the baseline scenario in the amount which will be substituted with electricity generated by TEK-6 under the project scenario.

The detailed algorithms are described in sections D of the PDD.

According to the estimated data in the PDD, total amount of baseline emissions for the crediting period 2010-2012 within the project boundaries is 204 462 t CO_2 equivalent.

As described in stated JI specific approach, the project emissions estimated according to formulae presented below:

$$PE = PE_{NG,TEK-3} + PE_{NG,TEK-6}$$

where,
$PE_{NG,TEK-3}$ – project emissions due to natural gas consumption by TEK – 3,
$PE_{NG,TEK-6}$ – project emissions due to natural gas consumption by TEK – 6.

$$PE_{NG,TEK-3} = NG_{TEK-3} \cdot NCV_{NG} \cdot EF_{CO2,\ NG} \cdot 10^{-6}$$

where,
NG_{TEK-3} is the quantity of natural gas used for combined heat and power generation by TEK-3 during the year y, m^3. Parameter is monitored throughout the crediting period.
NCV_{NG} is the net calorific value of natural gas, GJ/thousand m^3. Parameter is monitored throughout the crediting period.
$EF_{CO2,\ NG}$ is the emission factor for natural gas, kg CO_2/GJ. According to the data of IPCC, and with allowance for full oxidation of carbon fraction this factor is assumed constant and equal to $EF_{CO2\ ng\ combustion}$ = *56.1 kg CO2/GJ* (1996 IPCC Guidelines for National Greenhouse Gas Inventories, Table 1-2). Parameter is not monitored throughout the crediting period.

$$PE_{NG,TEK-6} = NG_{TEK-6} \cdot NCV_{NG} \cdot EF_{CO2,\ NG} \cdot 10^{-6}$$

where,
NG_{TEK-6} is the quantity of natural gas used for combined heat and power generation by TEK-6 during the year y, m^3. Parameter is monitored throughout the crediting period.
NCV_{NG} is the net calorific value of natural gas, GJ/thousand m^3. Parameter is monitored throughout the crediting period.
$EF_{CO2,\ NG}$ is the emission factor for natural gas, kg CO2/GJ. According to the data of IPCC, and with allowance for full oxidation of carbon fraction this factor is assumed constant and equal to $EF_{CO2\ ng\ combustion}$ = *56.1 kg*

CO2/GJ (1996 IPCC Guidelines for National Greenhouse Gas Inventories, Table 1-2). Parameter is not monitored throughout the crediting period.

As a result of calculations presented by PPs, total amount of project emissions for the crediting period 2010-2012 within the project boundaries is 118 061 t CO_2 equivalent.

With reference to this JI specific approach, project does not lead to any leakages. According to the PDD, leakages in the project activity are associated with additional fugitive emissions of CH_4 during transportation due to increased natural gas consumption by cogeneration units in comparison of gas consumption by natural gas fired boilers under the baseline scenario to produce the same amount of heat energy. At the same time, leakages will be decreased as a result of project activity due to substitution of electricity consumption from the national grid with on site electricity generation by CHP units and consequent decrease of organic fuel consumption by power stations connected to the national grid and associated fugitive emissions of CH_4 during production and transportation of organic fuel, which is used by power stations. Thus, leakages were not taken into account within the calculation of greenhouse gases emission reductions and assumed to be zero. Conservative principle is followed.

The estimated annual average of approximately 28 800 t CO_2 equivalent over the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

The identified areas of concern as to Calculation of GHG Emissions, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR36, CAR 37, CAR39, CL14, CL19).

3.5 Environmental Impacts

Implementation of the project "Implementation of heat and power complex "Motor Sich" will have straight positive environmental effects in local and global scopes due to more efficient fossil fuel consumption and greenhouse gases emission reductions. Modern natural gas fired cogeneration technology will be employed within the project and the produced power will substitute electricity from national grid (which have high carbon emission factor) and, in addition, produced heat will particular substitute heat energy currently being produced by natural gas-fired boilers.

As a fact, the Ministry of Environmental protection of Ukraine has issued a positive conclusion of state environmental impact audit.

Based on information from the project design document, local air pollution could be slightly increased within project boundary due to larger natural

gas consumption by cogeneration equipment in comparison with the amount of natural gas needed for production of the same amount of heat energy by boilers, but assuming the effect of air emission reductions due to substitution of electricity from national grid, we can conclude positive trend. Expected concentrations of pollutants will be in compliance with the requirements of the plant's operational license and local environmental regulations. Additionally to greenhouse gases emissions, the substitution of electricity from national grid will lead to nitrous and sulphur oxide emission reductions.

The waste heat produced during electricity generation process will be utilised by exhaust boilers to produce heat power. All equipment has appropriate isolation in accordance to the technical requirements and state standards, which helps avoiding other harmful impacts like noise and vibration. The level of noise at the distance of about 2 meters from the cogeneration unit will not exceed regulated value for industrial facilities.

The project does not have transboundary environmental impacts.

In general, construction of the cogeneration units will not have negative impact on the living conditions of nearby residential sectors.

The identified areas of concern as to Environmental Impacts, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR38, CL15).

3.6 Comments by Local Stakeholders

Ukrainian legislation on conducting the environmental impact assessment stipulates that for every EIA, a public stakeholder consultation process, during which the affected public is informed of the proposed and invited to provide comments.

No comments from local stakeholders were received.

The realisation of the project has been supported by local authorities and Zaporizhzhya regional state administration issued to JSC "Motor Sich" a Letter of award for the best energy saving project in Zaporizhzhya region in 2009.

The identified areas of concern as to Comments by Local Stakeholders, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CL16).

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the AIE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC

accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the website http://www.bureauveritas.com.ua on 29/07/2010 and invited comments till 27/08/2010 by Parties, stakeholders and non-governmental organizations.

No comments from stakeholders were received.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the project "Introduction of heat and power complex "Motor Sich" in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests have provided Bureau Veritas Certification with the sufficient evidences to determine the fulfillment of the above stated criteria and to demonstrate that the project is additional.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides financial analysis and common practice analysis to determine that the project activity itself is not the baseline scenario.

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

The determination revealed one pending issue related to the current determination stage of the project: the written approval of the project by the host Party (Ukraine) was not obtained. If the written approval by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, version 2.3 dated 09/11/2010, meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria, meeting the expectations of interested parties.

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

6 REFERENCES

Category 1 Documents:
Documents provided by the JSC "Motor Sich" and related directly to the GHG components of the project.

/1/ PDD "Introduction of heat and power complex "Motor Sich", version 01 dated 15/03/2010
/2/ PDD "Introduction of heat and power complex "Motor Sich", version 2.0 dated 06/08/2010
/3/ PDD "Introduction of heat and power complex "Motor Sich", version 2.1 dated 21/09/2010
/4/ PDD "Introduction of heat and power complex "Motor Sich", version 2.2 dated 18/10/2010
/5/ PDD "Introduction of heat and power complex "Motor Sich", version 2.3 dated 09/11/2010
/6/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006
/7/ Guidelines for Users of the Join Implementation SSC Project Design Document Form, JISC
/8/ Joint Implementation SSC Project Design Document Form, JISC
/9/ Glossary of JI terms, version 02, JISC.
/10/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC.
/11/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 03
/12/ Letter of Endorsement #5937/11/10-08 of the JI Project "Implementation of heat and power complex "Motor Sich" issued by the Ministry for Environmental Protection of Ukraine dated 12/05/2008.

Category 2 Documents:

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

/1/ Statement #1 on testing of gas pipeline for strength and density.
/2/ Statement #15 on control of welded joints by internal inspection and measurement.
/3/ Statement #2 on testing of gas pipeline for strength and density.
/4/ Statement #3 on testing of gas pipeline for strength and density.
/5/ Statement #4 on testing of gas pipeline for strength and density.

/6/ Statement #5 on testing of gas pipeline for strength and density.

/7/ Statement #56 of finish of installation (equipments, pipelines, steel constructions).

/8/ Statement #57 of finish of installation (equipments, pipelines, steel constructions).

/9/ Statement #58 of finish of installation (equipments, pipelines, steel constructions).

/10/ Statement #59 of finish of installation (equipments, pipelines, steel constructions).

/11/ Statement #6 on testing of gas pipeline for strength and density.

/12/ Statement #60 of finish of installation (equipments, pipelines, steel constructions).

/13/ Statement #88 of finish of installation (equipments, pipelines, steel constructions).

/14/ Statement #89 of finish of installation (equipments, pipelines, steel constructions).

/15/ Statement #9 of finish of installation (equipments, pipelines, steel constructions).

/16/ Statements of performed work at power plant ПАЭС-2500Г-Т6300 #34866.

/17/ Statement of hydraulic testing of impulse lines dated 21.06.2010.

/18/ Statement of facility preparation to operation dated 04.08.2010.

/19/ Statement of testing of technological latch dated 18.12.2009.

/20/ Statement of testing of electro motors dated 18.12.2009.

/21/ Statement of testing of electro motors dated 22.06.2010.

/22/ Statement of running of gas compressors 2ГМ4-19/1,5-13СМ1 in the air dated 12.11.2009.

/23/ Statement dated 30.06.2010. Natural gas consumption for June 2010.

/24/ Statement dated 31.05.2010. Natural gas consumption for May 2010.

/25/ Statement dated 31.07.2010. Natural gas consumption for July 2010.

/26/ Statement of transferring-acceptance of natural gas for heat energy generation for budget institutions and organizations and other consumers dated 31.05.2010.

/27/ Statement of transferring-acceptance of natural gas for providing public services of heating and hot water supply dated 31.05.2010.

/28/ Statement of acceptance-transferring of natural gas dated 31.07.2010.

/29/ Statement of verification of technological regimes regulators dated 18.12.2009.

/30/ Statement of verification of technological protectors of deaeration feed water facility of boiler utilizer of thermal power complex TEK-3 in accordance with instruction on operation arch. #27811 dated 22.06.2010.

/31/ Statement of sanitary epidemiological survey of the facility 7-9.04.2010.

/32/ Conclusion #01-02/2511и dated 22.07.2010 of adjustment approval of land area substantiation on Rubana st.-Hortytske shose str. for location thermal power complex TEK-6.

/33/ Conclusion #11 of the project construction dated 20.05.2005.

/34/ Conclusion of the expertise #80.3-04-05-0521/1.10 of high-risk equipment compliance with legislation requirements on labour protection and industrial safety and ability of the entity to operate it. Approved 02.08.2010. The conclusion is valid to 02.08.2011.

/35/ Contract #06/09-1914 of the delivery of natural gas dated 22.12.2009.

/36/ Contract #240м-2010 (УГМетр) of performance of metrological work and services dated 18.12.2009.

/37/ Contract #55/3 (УГЭ) of services performance of water supply and sewage acceptance to the drainage system dated 01.01.2010.

/38/ Contract #94 of services performance of waste disposal dated 14.01.2010.

/39/ Contract of electricity energy supply #70 dated 10.02.2004.

/40/ Construction contract #114/3634/07-Д(УСиСР) dated 29.05.2007.

/41/ Contract #117/10 (УГЭ) dated 30.06.2010.

/42/ Contract of sale and purchase #4/84 dated 22.02.2005.

/43/ Construction contract #196/0578/08-Д(УСиСР) dated 28.11.2007.

/44/ Permit #01.13/10 dated 26.06.2009 on waste disposal in 2010. It is valid from 01.01.2010 to 31.12.2010.

/45/ Permit #2310137500-4 on pollutant emissions into the air by stationary sources dated 16.02.2010. It is valid for 5 years from 16.02.2010 to 15.02.2015.

/46/ Permit #2310137500-4a on pollutant emissions into the air by stationary sources dated 26.12.2007. It is valid for 5 year from 216.12.2007 to 25.12.2012.

/47/ Permit on performance of construction work #25/з dated 08.05.2008.

/48/ Permit on special water usage dated 31.12.2009. Main plant JSC "Motor Sich".

/49/ Documents where justified amount of emissions for receiving of permit on pollutant emissions into the air by stationary sources for JSC "Motor Sich" (industrial site #1,2,3) dated 2009.

/50/ Construction contract #УА/198 (УСиСР) dated 29.04.2008.

/51/ Logbook of planning dates of calibration of measurement devices in 2010 ТЕК-3.

/52/ Logbook of accounting of fuel consumption by complex ТЕК-3.

/53/ Conclusion of the state ecological expertise #192/05 dated 5.08.2005.

/54/ Statement of intention of JSC "Motor Sich".

/55/ Statement of environmental effects of activity of thermal power complex ТЕК-3 and boiler shop with boiler ДЕ-10-1,4ГМ at JSC "Motor Sich" (project Х4-03014-ОВС).

/56/ Instruction of operation of automatic fire fighting device of ТЕК-3 Gas compressor station (Dry chemical fire fighting). Approved 14.03.2010.

/57/ Instruction of labor protection for the staff during testing and operation of gas turbine drives and electrical stations that work using natural gas with pressure to 38 kg/cm2 ИОТ-0367. Approved 13.09.2004. it is valid to 01.09.2012.

/58/ Instruction on labour protection for boiler operator of boiler-utilizer ИОТ-0671. It Is valid to 10.12.2012.

/59/ Instruction on labour protection for machinist of the compressor unit that works using explosive gas ИОТ-0670. It is valid to 10.12.2012.

/60/ Operational manual arch. #28111 dated 2010. Water treatment plant of the system ГВС ТЕК-3 of JSC "Motor Sich".

/61/ Operational manual of natrium-cation filters ФИПр-2,0-0,6 thermal power complex ТЭК-3 УГЭ-1048. Approved 07.06.2010.

/62/ Letter #160/19/07 dated 16.02.2010.

/63/ Letter #348/2/10 dated 28.05.2010.

/64/ Limit #01.13 on the waste generation and disposal in 2010 by JSC "Motor Sich" engine production plant.

/65/ Passport #5776 ААЛУ.405511.003 ПС. Measuring polimarginal transducer МТМ402-ИТ-С. Verification date 13.04.2010.

/66/ Passport of boiler, reg. #47954 dated 13.04.2010, ser. #15.

/67/ Passport of diaphragm, reg. #0208 with angular pressure drop selection. Verification date 30.04.2010.

/68/ Passport of diaphragm, reg. #0308 with angular pressure drop selection. Verification date 28.05.2010.

/69/ Passport of diaphragm, reg. #0408 with angular pressure drop selection. Verification date 30.04.2010.

/70/ Passport of diaphragm, reg. #0608 with angular pressure drop selection. Verification date 30.04.2010.

/71/ Passport of diaphragm, reg. #0708 with angular pressure drop selection. Verification date 30.04.2010.

/72/ Passport of diaphragm, reg. #0808 with angular pressure drop selection. Verification date 30.04.2010.

/73/ Passport of diaphragm, reg. #0908 with angular pressure drop selection. Verification date 30.04.2010.

/74/ Passport of diaphragm, reg. #Б-320 with angular pressure drop selection. Verification date 30.04.2010.

/75/ Passport of gas meter dated 28.01.2010, ser. #8976. Results of the state verification dated 28.01.2010.

/76/ Passport ПБВИ.407223.002 ПС, winged water meter КВ-1,5 ПБВИ.407223.002-02, ser. #388084.

/77/ List and amount of permitted waste disposal to the permit #01.13/10 dated 26.06.2009 at the enterprise JSC "Motor Sich" engine production plant.

/78/ Positive conclusion of complex state expertise #08-00264-10 dated 28.07.2010 of working draft "Thermal power complex TEK-3 and boiler shop with boiler ДЕ-10-14ГМ".

/79/ Decision #3 dated 08.02.1996 of approval of Conditions and Rules of electrical energy production business performance.

/80/ Order #329 dated 16.08.2010 of implementation of monitoring system of greenhouse gas emission reduction of JSC "Motor Sich".

/81/ Order of construction management and social development JSC "Motor Sich" #52 dated 29.04.2008 of construction of thermal power complex TEK-3.

/82/ Project "Implementation of thermal power complex "Motor Sich" dated 2008.

/83/ Protocol #713к dated 12.02.2010 of exam passing according to the program "General principles of operation and process of operation of program-software complex АСУТП of boiler-utilizer ТЕК-3".

/84/ Protocol of verification of measurement devices that installed at ТЕК-3.

/85/ Decision #247/10 of design and construction the thermal power complex ТЕК-3 and boiler shop with steam boiler by JSC "Motor Sich" at the territory of industrial site of the enterprise in Krugova st., Briulova st., 8 Bereznia dated 30.06.2004.

/86/ Certificate of acceptance, multichannel thermometer ТМ 5103, ser. #060-13001. Date of verification (calibration) 17.02.2009.

/87/ Certificate of attestation. Date of registration 07.08.2010.Registration number #06544-5-1-30-КЛ. It is valid to 07.08.2013.

/88/ Certificate #213545 ISO 9001:2000 JSC "Motor Sich" dated 07.05.2007.

/89/ Certificate of compliance #ЗП 000441 dated 04.08.2010.

/90/ Certificate of physical and chemical parameters of natural gas that transferred ММР "Kharkivtransgas" and accepted Zaporizhzha LMMP ГРС-1 of gas pipeline ШДО, ШДКРІ for the period from 01.06.2010 to 30.06.2010.

/91/ Special instruction of services and reparation of explosion-proof electrical equipment. Approved 18.01.2004.

/92/ Certificate #1 of the installation quality of boiler-utilizer КУ 8/1,4-55-450ГТ.

/93/ Approving part of the working draft Environmental Impact Assessment Х4-03014-ОВС dated 2003. JSC "Motor Sich". Thermal power complex ТЕК-3 and boiler shop with boiler ДЕ-10-14ГМ.

/94/ Approving part of the working draft General explanatory note 219005-ПЗ dated 2007of JSC "Motor Sich" Thermal power complex ТЕК-3.

/95/ Form 317-132.000-00 ФО dated 15.03.2006. Compressor device 2ГМ4-19/1,5-13СМ1 #1.

/96/ Photo - Amperemeter #125153, #309932, #б/н.

/97/ Photo - Gas meter #8976.

/98/ Diploma issued to the team of OJSC "Motor Sich". Decision #161-к dated 01.09.2009.

/99/ Extract from the protocol of the meeting dated 17.02.2007.

Persons interviewed:

(List of persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above)

/1/ Mykhailo Berezovskyi – Director of construction and social development
/2/ Oleksandr Iuferev – Head of technical department of management construction
/3/ Andrij Zheltukhin – Head engineer V.I. Omelchenko ЗМЗ (JSC "Motor Sich")
/4/ Viktor Nimich – Deputy technical director
/5/ Sergij Shevchenko – Deputy head power engineer
/6/ Valerij Kurbatov – Head power engineer
/7/ Vladuslav Ben' - Economist
/8/ Oleg Afonin – Lead designer УЭУ and ГПА
/9/ Anatolij Kryklyvyi - Lead designer УЭУ and ГПА
/10/ Sergij Pal'chyk – Deputy head of thermal power shop
/11/ Petro Kharchenko – Head ОООС
/12/ Natalia Avericheva – Head КСТЛ
/13/ Oleksij Gordijchuk – field engineer (subcontractor)
/14/ Viktor Lomeiko – operator of transportable э/с
/15/ Oleksandr Donin - Senior master at the equipment electricity service station
/16/ Kateryna Levyk – Lead specialist of "Jiont Implementation Team"
/17/ Marta Kundryk – Head specialist of JIT
/18/ Mykola Shlapak – Deputy director of JIT

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved	Kyoto Protocol Article 6.1 (a)	Corrective Action Request (CAR) 01. The project has no approval of the host Party. Please provide Letters of Approval. After finishing project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine for receiving the Letter of Approval. The Letter of Approval from the country - investor will be provided after approval of project by Ukraine.	Table 2, Section A.5
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur	Kyoto Protocol Article 6.1 (b)	OK	Table 2, Section B

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3	Kyoto Protocol Article 6.1 (d)	OK	N/A
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects	Marrakech Accords, JI Modalities, §20	Host country has designated their Focal Points. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine: National Environmental Investment Agency of Ukraine 35, Urytskogo str. 03035 Kiev Ukraine Email: info.neia@gmail.com Mr. Sergii Orlenko Head National Environmental	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		Investment Agency of Ukraine Phone: +380 44 594 9111 Fax: +380 44 594 9115 Email: slorlenko@gmail.com National guidelines and procedures for the approval of JI projects are available at www.neia.gov.ua	
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.	
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	In the Initial Report submitted by Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e	
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities,	The designed system of the national registry has been described in the Initial Report mentioned	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	§21(d)/24	above.	
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination	Marrakech Accords, JI Modalities, §31	JSC "Motor Sich" has submitted the PDD to Bureau Veritas Certification, which contains information needed for determination.	
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	Marrakech Accords, JI Modalities, §32	The PDD was made publicly available trough AIE website from 29/07/2010 till 27/08/2010.	
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account	Marrakech Accords,	OK	Table 2, Section B

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
relevant national and/or sectoral policies and circumstances	JI Modalities, Appendix B		
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	Conclusion is pending until Letters of Approval authorizing the project participants by Parties involved will be issued (ref. CAR 01).	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1. Title of the project					
A.1.1. Is the title of the project presented?	1, 2	DR	The title of the project is indicated: "Introduction of heat and power complex "Motor Sich".	OK	OK
A.1.2. Is the current version number of the document presented?	1, 2	DR	The current version of the project is indicated. See section A.1.	OK	OK
A.1.3. Is the date when the document was completed presented?	1, 2	DR	The date of completeness of the current version 2.0 of the project design document is 06/08/2010.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1, 2, 6	DR I	The purpose of the project is the improvements of energy resources consumption efficiency and subsequent greenhouse gases emission reductions due to implementation of modern technologies of combined heat and electricity generation based on gas turbine units at JSC "Motor Sich". Corrective Action Request (CAR) 40 Current JI project is small scale project. Please, use PDD form for small scale JI project.	CAR40	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	2, 6	DR	Clarification Request (CL) 01 Please, justify that the proposed project is not a debundled component of a large project. According to the PDD, project implementation will significantly reduce electricity consumption from national grid and reduce associated greenhouse gases emissions. Corrective Action Request (CAR) 02 Please, provide a brief description of the Baseline scenario in section A.2. Corrective Action Request (CAR) 03 Please, briefly describe the situation existing prior to the starting date of the project. Corrective Action Request (CAR) 04 Please, add to the description of the history of the JI SSC project its JI component. Clarification Request (CL) 17 Please, describe current situation. In the PDD about the completeness of first stage of the project is mentioned in the future tense and stated its approximate	CL01 CAR02 CAR03 CAR04 CL17	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			date of completeness as March 2010, and documents dated September 2010 (p. 3). Clarification Request (CL) 18 Please, clarify why is there no mentioned the efficiency for second cogeneration unit (p. 10). Clarification Request (CL) 20 Please, explicitly explain the statements: «no excess heat from the cogeneration system is provided to another user» и «Heat energy generated within the project is partly supplied for ensuring heating and hot water supply of the residential buildings» (p. 13).	CL18 CL20	
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	2	DR	There is indicated Party A – JSC "Motor Sich", Ukraine.	OK	OK
A.3.2. Are project participants authorized by a Party involved?	2	DR	Clarification Request (CL) 02 Please, clarify are project participants authorized by a Party involved.	CL02	OK
A.3.3. The data of the project participants are presented in tabular format?	2	DR	Information on the project participants is presented in the correct order (see		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			section A.3. of the PDD). Corrective Action Request (CAR) 05 Please, preserve format of all tables through the PDD as presented in Guidelines for users of the JI SSC PDD form.	CAR05	
A.3.4. Is contact information provided in annex 1 of the PDD?	2, 6	DR	Contact information on the project participants is provided in Annex 1 of the PDD, version 2.0, dated 06.08.2010.	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?	2	DR	Party involved Ukraine is indicated as a Host Party.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	2	DR	Ukraine is a Host Party.	OK	OK
A.4.1.2. Region/State/Province etc.	2	DR	Zaporizhzhya region	OK	OK
A.4.1.3. City/Town/Community etc.	2	DR	Zaporizhzhya city	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	2	DR	Project will be implemented at two project sites in Zaporizhzhya city. The geographical coordinates of the project sites are the following: 1) Project site #1, where the first stage of the project will be implemented (CHP unit with electricity capacity of 2.5 MW –	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			TEK-3) - 47°82' 77"N, 35°19' 80" E; 2) Project site #2, where the second stage of the project will be implemented (CHP unit with electricity capacity of 6 MW – TEK-6) - 47°83' 92"N, 35°00' 65" E. All the information is provided according to the template and does not exceed one page.		
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	2	DR	The project design engineering represents current good practices of using high efficiency thechnology of CHP units (TEK-3 and in the future TEK-6). <u>Corrective Action Request (CAR) 06</u> Please, revise section A.4.2 of the PDD and explaine what you mean when state that "JI project will reduce energy consumption on the supply side by not more than 648 000 GJ annually, which is an appropriate equivalent of 60 GWh (e) per year" (648 000 GJ = 180 GWh). <u>Corrective Action Request (CAR) 07</u>	CAR06	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			Please, in section A.4.3 present the implementation schedule of measures or other project activities. Clarification request (CL) 03 Please, indicate references of the data that presented in tables in section A.4.3 of the PDD.	CAR07 CL03	
A.4.2.2. 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?	2	DR	As stated in the PDD, the project uses more efficient technology and units. Corrective Action Request (CAR)08 Please, indicate does the project use the-state-of-the-art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country.	CAR08	OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	2, 6	DR	Corrective Action Request (CAR) 09 Please, give grounds in section A.4.3 for whether the given technology is likely to be substituted by other or more efficient technologies within the project period?	CAR09	OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	2, 6	DR	Clarification Request (CL) 04 Please, state in section A.4.3 whether the project requires extensive initial	CL04	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			training and maintenance efforts.		
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	2, 6	DR	Clarification Request (CL) 05 Please, clarify in section A.4.3 of the PDD, are additional provisions for meeting training and maintenance needs envisaged.	CL05	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	2	DR	Based on information stated in the PDD, anthropogenic emissions of greenhouse gases will be reduced due to more efficient utilisation of energy resources (natural gas in particular) in combined cycle of heat and power generation. Implementation of the project activity will reduce anthropogenic emissions of greenhouse gases due to substitution of electricity from the national grid, which has high carbon intensity factor, with on site generated natural gas based electricity; and also due to more efficient heat energy generation using natural	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			gas as a fuel source. The information is provided according to the requirements and does not exceed one page.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	2	DR	The estimation of emission reductions over the crediting period 2010-2012 is 86 402 t CO_2 equivalent. Corrective Action Request (CAR) 10 Total amount of emission reductions over the crediting period is not correct. Please, recalculate and made amendments in appropriate tables in the PDD and Excel file.	CAR10	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	2	DR	The estimated annual reduction for the chosen credit period in tCO_2e is provided in the table of section A.4.4.1. of the PDD version 2.0.	OK	OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?	2, 6	DR	Yes, the data about emission reduction calculation is presented in tabular format (see Table in section A.4.4.1).	OK	OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	2	DR, I	Corrective Action Request (CAR) 11 In the PDD there is stated that "National Agency of the Ecological Investments of Ukraine issued a Letter of Endorsement …", but this letter was issued by the	CAR11	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			Ministry of Environmental Protection of Ukraine. Please, make appropriate amendments. Clarification Request (CL) 06 Please, state in the PDD number of the Letter of Endorsement issued by the Ministry of Environmental Protection of Ukraine. After finishing the Project determination procedure, the PDD and Determination Report will be submitted to the National Environmental Investment Agency of Ukraine for receiving the Host Country Letter of Approval. See CAR01.	CL06	
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	2, 6, 9	DR	Project participants have established a JI specific approach to baseline setting and monitoring in accordance with Appendix B of the JI Guidelines and in accordance with the Guidance on Criteria for baseline setting and monitoring. Corrective Action Request (CAR) 12 Please, describe JI specific approach	CAR12	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			selected for this JI project. Corrective Action Request (CAR) 13 Please, try to avoid citation of the UNFCCC documents in the PDD.	CAR13	
			Corrective Action Request (CAR) 41 IPCC Guidelines for National Greenhouse Gas Inventories (2006) is not approved. Please use 1996 IPCC Guidelines for National Greenhouse Gas Inventories.	CAR41	
			Clarification Request (CL) 07 Please, clarify is selected JI specific approach of the project based on appropriate approved CDM methodology; if yes, justify why it is not applicable to this JI project.	CL07	
B.1.2. Is it justified the choice of the applicable baseline for the project category?	2, 9	DR	In the PDD there are identified two realistic and credible alternative scenarios to the project activity.	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?	2, 9	DR	This is a JI specific approach. See CAR12.	-	-
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	2, 9	DR	Corrective Action Request (CAR) 14 Please, summarize basic assumptions of the baseline methodology in the context of the project activity in section B.1.	CAR14	OK
B.1.5. Is all literature and sources clearly	2, 6	DR	All literature and sources are clearly	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
referenced?			referenced.		
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?	2, 6, 9	DR	According to analysis presented in the PDD, the project is additional and greenhouse emission reductions would not have been occurred in the absence of joint implementation activity. Corrective Action Request (CAR) 15 Please, in section B.2 of the PDD explicitly indicate the approache chosen. Clarification Request (CL) 08 In Table B.2-2 there are two different values of equipment cost for TEK-3. Please, explaine what is a difference. Corrective Action Request (CAR) 16 In case, calculation on the input values with VAT included, the cash flow shall account for reimbursement of the VAT both from investment and operational activities.	CAR15 CL08 CAR16	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			Corrective Action Request (CAR)17 Taking into account that operational life time of the units is stated in PDD to be 12,5 years, the liquidating value of the assets amounting to 20% of their initial value shall be added to the cash flow for 2020. Please note that liquidating value shall be adjusted for inflation level used in the financial model. Corrective Action Request (CAR) 18 The use of the higher price growth index (1,4) for the natural gas for 2008-2010 is obviously an afterthought based on actual abrupt price increase during that period which could hardly be predicted at the project launch in November 2007. The tariffs for heat and electrical energy shall be adjusted for the same price index (1,4) not 1,05 in order to reflect the strong correlation actually existing between three resources prices. Corrective Action Request (CAR) 19 Based on NBU forecast, please, use 10% inflation rate for adjusting future	CAR17 CAR18 CAR19	

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			prices for resources. Corrective Action Request (CAR) 20 The discount rate of 10% based on NBU discount rate used by Developer is acceptable but it may be more reasonable to use less conservative (higher) value derived from loan rates in UAH as of November 2007 which are available from bank.gov.ua web site. Corrective Action Request (CAR) 21 Please, provide the results of sensitivity analysis.	CAR20 CAR21	
B.2.2. Is the baseline scenario described?	2, 6, 9	DR	Corrective Action Request (CAR) 22 Please, provide in section B.2 a clear and vivid statement of which baseline scenario is chosen.	CAR22	OK
B.2.3. Is the project scenario described?	2, 6, 9	DR	Corrective Action Request (CAR) 23 Please, clearly describe the project scenario.	CAR23	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	2, 6, 9	DR	Corrective Action Request (CAR) 24 Please, present in section B.2 an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project	CAR24	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			scenario.		
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	2, 6, 9	DR	Yes, it is demonstrated that the project activity itself is not a likely baseline scenario.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	2, 6, 9	DR	In the PDD indicated that establishment of the baseline is carried out with taking into account the mandatory law and regulations (see section B.2 of the PDD).	OK	OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	2, 6	DR	Project boundary includes emission sources attributable to the project which are under the control of project participants. Clarification Request (CL) 09 Please, provide grounds for the exclusion of the emissions connected with the fuel production and transportation from the project boundary.	CL09	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	2, 6	DR	The date of the baseline setting is August 6th, 2010.		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			Corrective Action Request (CAR) 25 Please, present the date of the baseline setting in the format DD/MM/YYYY as required in the Guidelines for users of the JI SSC PDD form.	CAR25	
B.4.2. Is the contact information provided?	2, 6	DR	The contact information is provided. Mykola Shlapak, LLC "Joint Implementation Team".	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	2, 6	DR	LLC "Joint Implementation Team" is not the project participant of this project.	OK	OK
C. Duration of the small-scale project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	2, 6	DR	Corrective Action Request (CAR) 26 Please, clearly indicate the project's starting date (DD/MM/YYYY).	CAR26	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	2, 6	DR	Expected operational lifetime of the project is 12.5 years or 150 months for each stage.	OK	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	2, 6	DR	Yes, the length of the crediting period is specified in correct order.		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			The length of the crediting period is 5 years or 60 months. Start of the crediting period for proposed project activity is January 1st, 2010, which corresponds to the start of operational phase of the project activity. End of the first crediting period is December 31st, 2012. Corrective Action Request (CAR) 27 There is nonconformity in the PDD connected with length of crediting period. Please, correct.	CAR27	
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	2, 6	DR	JI specific approach was chosen for monitoring of greenhouse emission reductions. Monitoring plan ensures the collection and archiving of all relevant data necessary for measuring anthropogenic emissions and calculation of GHGs emission reductions occurring within the project boundary during the crediting period. Monitoring plan provides also quality assurance and control procedures for the monitoring process and procedures for the periodic		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			calculation of the reductions of anthropogenic emissions by sources by the proposed JI project. <u>Corrective Action Request (CAR) 28</u> Please, present more detailed description of the monitoring plan. <u>Corrective Action Request (CAR) 29</u> Please, justify in section D.1 how monitoring data will be archived.	CAR28 CAR29	
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	2, 6, 9	DR	<u>Clarification Request (CL) 10</u> Please, clarify who is responsible for performance of monitoring of the emissions in the project scenario and the baseline scenario.	CL10	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	2, 6	DR	Data to be collected in order to monitor emissions from the project are presented in sectin D.2. Also see CAR29 above. <u>Clarification Request (CL) 11</u> Please, precisely indicate recording frequency of different monitoring data of the project.	CL11	OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc,; emissions in units of CO2 equivalent).	2, 6	DR	See Section D.1 of the PDD version 2.0.	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	2, 6	DR	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are presented in tables in section D.2 in the PDD version 2.0. <u>Corrective Action Request (CAR) 30</u> There is mistake connected with description of parameter HG_{TEK6} in table in section D.2. Please, make appropriate amendments. <u>Clarification Request (CL) 12</u> Please, clarify in section D.1 how monitoring data of the project will be collected.	CAR30 CL12	OK
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc,; emissions in units of CO2 equivalent).	2, 6	DR	See Section D.1 of the PDD version 2.0.	OK	OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	2, 6	DR	Not applicable.	OK	OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	2, 6	DR	Not applicable.	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc,; emissions/emission reductions in units of CO2 equivalent).	2, 6	DR	See Section D.1 of the PDD version 2.0.	OK	OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	2, 6	DR	Leakages were not taken into account within the calculation of greenhouse gases emission reductions and assumed to be zero.	OK	OK
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).	2, 6	DR	Not applicable as no leakages are included. See Section E.2 of the PDD version 2.0.	OK	OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc,; emissions in units of CO2 equivalent).	2, 6	DR	See Section D.1 of the PDD version 2.0.	OK	OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	2, 6	DR, I	Corrective Action Request (CAR) 31 Please, provide information on the procedures of monitoring, collecting, and archiving of data on the environmental impacts of the project.	CAR31	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	2, 6	DR, I	Corrective Action Request (CAR)32 Please, provide reference to the relevant host Party regulations; If not applicable, please, state it in the PDD section D.1.	CAR32	OK
D.1.15. If not applicable, is it stated so?	2, 6	DR,	See CAR32 above.	-	-

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
		I			
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	2	DR	See section D.3 of the PDD version 2.0. <u>Corrective Action Request (CAR) 33</u> Please, give direct reference to the national and existing regislations in section D.2. <u>Corrective Action Request (CAR) 34</u> In Table of section D.3 there are inappropriate references to data. Please, correct. <u>Clarification Request (CL) 13</u> Please, clarify are measurement equipments calibrated according to national regulations.	CAR33 CAR34 CL13	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project	2, 6	DR	Corrective Action Request (CAR) 35 The information about absence of operational and management structure of implementation the monitoring plan is inappropriate. Please, correct and extend the section D.4.	CAR35	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	2	DR	The contact information is provided. See section D.5.	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	2	DR	LLC 'Joint Implementation Team' is not a participant of this Project. See section D.5.	OK	OK
E. *Estimation of greenhouse gases emission reductions*					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?	2, 6	DR	In the PDD is stated that greenhouse gases emissions sources in project scenario within the defined project boundaries include emissions due to	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			natural gas consumption by both cogeneration units (TEK-3 and TEK-6). Appropriate formulae for calculation of GHG emissions are presented in section E.1 of the PDD.		
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?	2, 6	DR	The estimated values of the project emissions are presented in PDD section E.1. An excel spreadsheet was made available to the verifiers.	OK	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	2, 6	DR	In the PDD is stated that conservative assumptions have been used to calculate project GHG emissions. <u>Corrective Action Request (CAR) 36</u> Please, provide directly estimated emission reductions due to the project in section E.1. <u>Corrective Action Request (CAR) 39</u> Please, correct deviation in calculation (table p. 38). <u>Clarification Request (CL) 19</u> Second unit will be commissioning in the first quarter 2011 and will not work a whole year. Please, clarify why the emission reductions for 2011 and 2012	CAR36 CAR39 CL19	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			are equal (p. 11, tables on the p. 36).		
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?	2, 6	DR	Project participants consider the possible leakages insignificant; therefore don't include them to the calculation.	OK	OK
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?	2, 6	DR	Not applicable. See section E.2 of the PDD.	OK	OK
E.2.3. Have conservative assumptions been used to calculate leakage?	2, 6	DR	Not applicable. See section E.2.1 of the present Protocol.	OK	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the small-scale project activity emissions?	2, 6	DR	Due to the fact that no leakage is expected during the project activity the sum of E.1 and E.2 equals E.1	OK	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	2, 6	DR	The formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category are described. See section E.4.	OK	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?	2, 6	DR	Description of calculation of GHG baseline emissions for the applicable project is presented in the table of section E.4 and Excel spreadsheets.		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	2, 6	DR	Corrective Action Request (CAR) 37 Please, revise calculation of total amount of GHG emissions due to heat energy production by natural gas fired boilers and make appropriate corrections in the PDD table and in Excel file. Clarification Request (CL) 14 Please, clarify in the PDD section E.4 whether conservative assumptions have been used to calculate baseline GHG emissions.	CAR37 CL14	OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	2, 6	DR	See section E.5 of the PDD version 2.0.	OK	OK
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	2, 6	DR	There is a table in section E.6 providing values of total CO_2 abated.	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	2, 6	DR, I	Analysis of the environmental impacts of the project is sufficiently described in the section F of the project design document.	OK	OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?	2, 6	DR, I	According to Ukrainian legislation, an Environmental Impact Assessment (EIA), as a part of the project design documents, has been done for the proposed project and approved by local authority.	OK	OK
F.1.3. Are the requirements of the National Focal Point being met?	2, 6	DR, I	Refer to section F.1 of the PDD. Clarification Request (CL) 15 Please, clarify list of the environmental documents connected with this JI project.	CL15	OK
F.1.4. Will the project create any adverse environmental effects?	2, 6	DR, I	The project creates some adverse environmental effects connected with noise and vibration, but all equipment has appropriate isolation in accordance	OK	OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			to the technical requirements and state standard, which helps avoiding harmful effects.		
F.1.5. Are transboundary environmental considered in the analysis?	2, 6	DR, I	Corrective Action Request (CAR) 38 The information considering transboundary environmental effects is not provided. Please, include this one in section F of the PDD.	CAR38	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	2, 6	DR, I	Yes, positive environmental effects of the project are provided in section F.1, as well as in section F.2 of the PDD.	OK	OK
G. Stakeholders' comments					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	2, 6	DR	Ukrainian legislation on conducting the environmental impact assessment stipulates that for every EIA, a public stakeholder consultation process, during which the affected public is informed of the proposed and invited to provide comments. No stakeholder consultation process for the JI projects is required by the Host Party. Stakeholder comments will be collected during the time of this PDD		OK

CHECKLIST QUESTION		MoV*	COMMENTS	Draft Concl	Final Concl
			publication during the determination procedure. Clarification Request (CL) 16 Please, prove or confirm with appropriate documents (newspaper articles) that no negative comments were received.	CL16	
G.1.2. The nature of comments is provided?	2, 6	DR	No negative comments were received.	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?	2, 6	DR	See section G.1.1 above.	OK	OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. **Legal requirements**					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	The project activity is environmentally licensed by the competent authority.	OK	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	There are conditions of the environmental permit. It is indicated in the documents of the report.	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	This project is in line with relevant legislation and plans of the Host country.	OK	OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 01. The project has no approval of the host Party. Please provide Letters of Approval.	Table 1, 1	In accordance with the "Requirements for the Joint Implementation Projects preparation" approved by National Agency of Ecological Investments of Ukraine (Order #33 from 25th of June, 2008) to receive a Letter of Approval for the JI project the project proponent should provide to the National Agency of Ecological Investments of Ukraine the final determination report of the proposed project along with project design documentation and the copy of Letter of Endorsement. Thus, the Letter of Approval will be provided after the determination of the Project.	To be pending.
Corrective Action Request (CAR) 02 Please, provide a brief description of the Baseline scenario in section A.2.	Table 2, A.2.2	Brief description of the Baseline scenario has been added in section A.2	Based on the amendments, issue is closed.
Corrective Action Request (CAR) 03 Please, briefly describe the situation	Table 2, A.2.2	Brief description of the situation existing prior to the starting date of the project has	Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
existing prior to the starting date of the project.		been added in section A.2	
Corrective Action Request (CAR) 04 Please, add to the description of the history of the JI SSC project its JI component.	Table 2, A.2.2	Project implementation started in February 2007, when the decision regarding project development was made by Scientific and Technical Council of JSC 'Motor Sich'. The decision on the project implementation has been made taking into account additional incentives due to application of Kyoto Protocol flexible mechanisms (joint implementation). Estimation of greenhouse gases emissions reduction potential due to project implementation has been made simultaneously with the overall project feasibility assessment. The substantiating materials for the proposed joint implementation project have been provided to national designated focal point for consideration and issuing Letter of Endorsement in February 2008. The Ministry of environmental protection of Ukraine issued a Letter of Endorsement #5937/11/10-08 at May 12th, 2008.	According to the appropriate explanation and correction in the PDD, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 05 Please, preserve format of all tables through the PDD as presented in Guidelines for users of the JI SSC PDD form.	Table 2, A.3.3	The format of all tables through the PDD is preserved as presented in Guidelines for users of the JI SSC PDD form.	Issue is closed.
Corrective Action Request (CAR) 06 Please, revise section A.4.2 of the PDD and explaine what you mean when state that "JI project will reduce energy consumption on the supply side by not more than 648 000 GJ annually, which is an appropriate equivalent of 60 GWh (e) per year" (648 000 GJ = 180 GWh).	Table 2, A.4.2.1	Section A.4.2 of the PDD has been revised.	The information was cleared in the PDD. Issue is closed.
Corrective Action Request (CAR) 07 Please, in section A.4.3 present the implementation schedule of measures or other project activities.	Table 2, A.4.2.1	The implementation schedule is presented in section A.4.3.	Necessary information was added. Issue is closed.
Corrective Action Request (CAR)08 Please, indicate does the project use the-state-of-the-art technology or would the technology result in a significantly better	Table 2, A.4.2.2	The project uses the state-of-the-art technology, which will result in a significantly better performance than commonly used technologies in the Host country (natural gas fired boilers for heat	According to the corrections, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
performance than any commonly used technologies in the host country.		generation and generation of electricity by power stations of national grid). Indicated in section A.4.3 of the PDD.	
Corrective Action Request (CAR) 09 Please, give grounds in section A.4.3 for whether the given technology is likely to be substituted by other or more efficient technologies within the project period?	Table 2, A.4.2.3	The technology was specially developed for the implementation of the project and thus is not likely to be substituted by other or more efficient technologies within the project period. Indicated in section A.4.3 of the PDD.	Issue is closed.
Corrective Action Request (CAR) 10 Total amount of emission reductions over the crediting period is not correct. Please, recalculate and made amendments in appropriate tables in the PDD and Excel file.	Table 2, A.4.3.2	Corrected.	Issue is closed based on appropriate amendments.
Corrective Action Request (CAR) 11 In the PDD there is stated that "National Agency of the Ecological Investments of Ukraine issued a Letter of Endorsement …", but this letter was issued by the Ministry of Environmental Protection of Ukraine. Please, make appropriate amendments.	Table 2, A.5.1	Corrected.	The information was corrected. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 12 Please, describe JI specific approach selected for this JI project.	Table 2, B.1.1	Project participants established the baseline using JI specific approach. JI specific approach foresees use of project specific baseline and monitoring methodology based partly on CDM approved methodology AM0014 "Natural gas-based packaged cogeneration". Namely the approaches for estimation of energy (fuel) consumptions for heat energy generation under the baseline scenario and associated baseline emissions as well as the approach for estimation of baseline emissions from electricity supply to the plant that is offset by the electricity supplied from the cogeneration units have been used. Indicated in section A.4.3 of the PDD.	According to the presented additional information, issue is closed.
Corrective Action Request (CAR) 13 Please, try to avoid citation of the UNFCCC documents in the PDD.	Table 2, B.1.1	Appropriate amendments have been made.	Issue is closed.
Corrective Action Request (CAR) 14 Please, summarize basic assumptions of the baseline methodology in the context of the project activity in section B.1.	Table 2, B.1.4	The basic assumptions of the baseline methodology in the context of the project activity could be summarized as following:	Issue is closed based on the presented explanation.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		- emission reductions occur due to displacing of electricity consumption from the grid and avoiding consumption of fossil fuel for heat generation; - electricity consumption from the grid under the baseline are considered equal to electricity generation during the project and heat energy generation are considered equal both in the baseline and project scenarios; electricity and heat generation under the project scenario was estimated based on technical characteristics of the project equipment and the number of operating hours during the year; - actual baseline emissions will be determined based on the monitoring data.	
Corrective Action Request (CAR) 15	Table 2,	Appropriate amendments have been	Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please, in section B.2 of the PDD explicitly indicate the approache chosen.	B.2.1	made.	
Corrective Action Request (CAR) 16 In case, calculation on the input values with VAT included, the cash flow shall account for reimbursement of the VAT both from investment and operational activities.	Table 2, B.2.1	All input values have been used with VAT excluded.	OK. Issue is closed.
Corrective Action Request (CAR)17 Taking into account that operational life time of the units is stated in PDD to be 12,5 years, the liquidating value of the assets amounting to 20% of their initial value shall be added to the cash flow for 2020. Please note that liquidating value shall be adjusted for inflation level used in the financial model.	Table 2, B.2.1	Response 1: Liquidating value of the assets amounting to 20% of their initial value has been added to the cash flow for 2020. Response 2: Liquidating value for the total project assets (including design, construction etc.) has been added. Liquidating value has been adjusted for inflation level for the period of 2011-2020.	Conclusion 1: Please note that liquidating value shall amount to 20% of the total project assets value. According to the IAS 16 the fixed assets value shall include any expenses that are necessary for commissioning of equipment and its proper operation. Thereby the cost of design, construction etc are the valid components of the liquidating value as well. In addition the liquidating value shall be adjusted for inflation

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
			level for the period of 2011-2020. Please correct. Final conclusion: Issue is closed.
<u>Corrective Action Request (CAR) 18</u> The use of the higher price growth index (1,4) for the natural gas for 2008-2010 is obviously an afterthought based on actual abrupt price increase during that period which could hardly be predicted at the project launch in November 2007. The tariffs for heat and electrical energy shall be adjusted for the same price index (1,4) not 1,05 in order to reflect the strong correlation actually existing between three resources prices.	Table 2, B.2.1	Response 1: The use of the higher price growth index (1.4) for the natural gas for 2008-2010 is based tendencies of natural gas price increase in Ukraine during the period 2006-2007 and also to the projections of its further gradual but rapid increase to reach the level of natural gas price for European countries, which have been based on the overall strategy of Russian 'Gasprom' (main supplier of natural gas to Ukraine) to increase natural gas prices for former USSR countries to the level of prices for European countries. Response 2: Corrected. The following conservative assumptions were applied for natural gas,	Conclusion 1: The use of different growth indexes for heat/ electrical energy and natural gas can not be accepted as it clearly contradicts with historical data and common sense. The price of heat energy depends directly on the price of natural gas due to the fact that the natural gas is the common heat carrier used at industrial installations. The same applies to electrical energy. There is inherent relation between price of the natural gas and electrical energy due to the fact that substantial part of

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		electricity and heat energy price data: - natural gas price will increase 38% (average natural gas price increase rate for industrial users in Ukraine during 2005-2007) annually during first three years (2008-2010), and further increase rate will be 18.4% (based on average natural gas price increase rate for industrial users in European Union during 1997-2006 of 8.4% and adjusted for higher inflation rates in Ukraine); the assumption corresponds to tendencies of natural gas price increase in Ukraine during the period 2006-2007 and also to the projections of its further gradual but rapid increase to reach the level of natural gas price for European countries (market price); - electricity price will increase 19% (average electricity price increase rate for industrial users in Ukraine during 2005-2007) annually during first three years (2008-2010), and further increase rate will be 12.4% (based on average electricity	electrical energy is produced at fossil fuel plants consuming the same fuel. Please apply the equal price index of 1,4 for heat energy, electrical energy and natural gas for the periods of 2008-2010. Final conclusion: Issue is closed. All necessary aspects were improved.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		price increase rate for industrial users in European Union during 1997-2006 of 2.4% and adjusted for higher inflation rates in Ukraine) annually; there are surplus of electricity generation capacities in Ukraine and no reasons for rapid electricity price increase; - heat energy price will increase 10% annually during first three years (2008-2010), and further increase rate will be 18.4% as for natural gas; price of heat energy is not likely to increase at rapid levels as the price of natural gas in 2008-2010 because the process of heat price setting is highly regulated and politically bound; due to the high social impact the price of heat energy is used to be low and more o less stable even if the heat tariffs did not cover the heat production costs.	
Corrective Action Request (CAR) 19 Based on NBU forecast, please, use 10% inflation rate for adjusting future prices for resources.	Table 2, B.2.1	10% inflation rate for adjusting future prices for resources has been used.	OK for the periods of 2011-2020. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 20 The discount rate of 10% based on NBU discount rate used by Developer is acceptable but it may be more reasonable to use less conservative (higher) value derived from loan rates in UAH as of November 2007 which are available from bank.gov.ua web site.	Table 2, B.2.1	The acceptable discount rate of 10% based on NBU discount rate has been used.	OK. Issue is closed.
Corrective Action Request (CAR) 21 Please, provide the results of sensitivity analysis.	Table 2, B.2.1	The results of sensitivity analysis have been provided.	OK. Issue is closed.
Corrective Action Request (CAR) 22 Please, provide in section B.2 a clear and vivid statement of which baseline scenario is chosen.	Table 2, B.2.2	Baseline scenario foresees continuation of existing practice: covering electricity demand purchasing power from the national grid and covering heat energy demand using natural gas fired boilers. Indicated in section B.2 of the PDD.	According to the corrections in the PDD, issue is closed.
Corrective Action Request (CAR) 23 Please, clearly describe the project scenario.	Table 2, B.2.3	Project scenario foresees installation two combined heat and power stations (heat and power complexes) based on gas turbine units PAES 2500 and EG 6000 with the electric installed capacity of 2.5	Issue is closed due to the appropriate amendments.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		MW and 6 MW respectively and two exhaust boilers. Generated electricity will displace electricity from the national grid and heat energy will substitute heat energy generation by natural gas fired boilers. Indicated in section B.2 of the PDD.	
Corrective Action Request (CAR) 24 Please, present in section B.2 an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario.	Table 2, B.2.4	Appropriate amendments have been made.	Based on presented information, issue is closed.
Corrective Action Request (CAR) 25 Please, present the date of the baseline setting in the format DD/MM/YYYY as required in the Guidelines for users of the JI SSC PDD form.	Table 2, B.4.1	Corrected.	Issue is closed.
Corrective Action Request (CAR) 26 Please, clearly indicate the project's starting date (DD/MM/YYYY).	Table 2, C.1.1	The starting date of the small-scale JI project is 17.02.2007.	The date was indicated in the PDD. Issue is closed.
Corrective Action Request (CAR) 27	Table 2,	Corrected.	Issue is closed based on amendments made in the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
There is nonconformity in the PDD connected with length of crediting period. Please, correct.	C.3.1		PDD.
Corrective Action Request (CAR) 28 Please, present more detailed description of the monitoring plan.	Table 2, D.1.1	More detailed description of the monitoring plan is provided in Section D.1 of the PDD.	According to the information that was added to the project design documents, issue is closed.
Corrective Action Request (CAR) 29 Please, justify in section D.1 how monitoring data will be archived.	Table 2, D.1.1	Monitoring data will be archived in paper and electronic form.	Issue is closed due to the presented information.
Corrective Action Request (CAR) 30 There is mistake connected with description of parameter HG_{TEK6} in table in section D.2. Please, make appropriate amendments.	Table 2, D.1.5	Corrected.	Issue is closed due to the correction.
Corrective Action Request (CAR) 31 Please, provide information on the procedures of monitoring, collecting, and archiving of data on the environmental impacts of the project.	Table 2, D.1.13	Information provided in Section D.2.	The information on the procedures of monitoring, collecting, and archiving of data on the environmental impacts of the JI project was provided in the PDD. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR)32 Please, provide reference to the relevant host Party regulations; If not applicable, please, state it in the PDD section D.1.	Table 2, D.1.14	Monitoring plan is established in accordance with Host Party regulations, namely in accordance with Decree of Cabinet of Ministers of Ukraine #206 dated 22.02.2006 'On Approval of the Procedure of Drafting, Review, Approval and Implementation of Projects Aimed at Reduction of Anthropogenic Emissions of Greenhouse Gases' and "Requirements for the Joint Implementation Projects preparation" approved by National Agency of Ecological Investments of Ukraine (Order #33 from 25th of June, 2008).	According to the presented information, issue is closed.
Corrective Action Request (CAR) 33 Please, give direct reference to the national and existing regislations in section D.2.	Table 2, D.2.1	Data are monitored with compliance to Law of Ukraine "On metrology and metrological activities'.	Issue is closed.
Corrective Action Request (CAR) 34 In Table of section D.3 there are inappropriate references to data. Please, correct.	Table 2, D.2.1	Corrected.	The amendments were made in section D.3 of the PDD. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 35 The information about absence of operational and management structure of implementation the monitoring plan is inappropriate. Please, correct and extend the section D.4.	Table 2, D.3.1	The information about operational and management structure of implementation the monitoring plan is provided in Section D.4.	Issue is closed.
Corrective Action Request (CAR) 36 Please, provide directly estimated emission reductions due to the project in section E.1.	Table 2, E.1.3	Estimated emission reductions due to the project have been indicated in section E.1.	Issue is closed.
Corrective Action Request (CAR) 37 Please, revise calculation of total amount of GHG emissions due to heat energy production by natural gas fired boilers and make appropriate corrections in the PDD table and in Excel file.	Table 2, E.4.2	Corrected.	Appropriate corrections were made. Issue is closed.
Corrective Action Request (CAR) 38 The information considering transboundary environmental effects is not provided. Please, include this one in section F of the PDD.	Table 2, F.1.5	The project does not have transboundary environmental impact.	Issue is closed due to the additional information.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL) 01 Please, justify that the proposed project is not a debundled component of a large project.	Table 2, A.2.1	The proposed project is not a debundled component of a larger project. JSC Motor Sich is not a project participant to any other joint implementation or small-scale joint implementation project with a publicly available determination in accordance with paragraph 34 of the JI guidelines.	Issue is closed.
Clarification Request (CL) 02 Please, clarify are project participants authorized by a Party involved.	Table 2, A.3.2	JSC 'Motor Sich' is authorised by the Host Party to implement the joint implementation project 'Introduction of heat and power complex 'Motor Sich''. The designated focal point of the Host Party has provided a Letter of Endorsement #5937/11/10-08 from 12.05.2008 supporting further development of JI project. The Letter of Approval for the JI project will be issued after the determination stage.	Issue is closed based on presented explanation and provided information.
Clarification request (CL) 03 Please, indicate references of the data that presented in tables in section A.4.3 of the PDD.	Table 2, A.4.2.1	References of the data that presented in tables in section A.4.3 of the PDD have been provided.	The required information was added. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL) 04 Please, state in section A.4.3 whether the project requires extensive initial training and maintenance efforts.	Table 2, A.4.2.4	Due to the use of modern technology project requires initial training of the personal. All responsible workers have successfully passed the training course on general principles of functioning and the rules of operation of exhaust boiler automatic and control system as well as were acquainted with the relevant operation and safety regulation manuals. Indicated in Section A.4.3.	According to the stated information, issue is closed.
Clarification Request (CL) 05 Please, clarify in section A.4.3 of the PDD, are additional provisions for meeting training and maintenance needs envisaged.	Table 2, A.4.2.5	Additional provisions for meeting training and maintenance needs envisaged due to training of the personal during the setup mode operation period and enforced requirements for educational and professional background of the working personal.	Issue is closed.
Clarification Request (CL) 06 Please, state in the PDD number of the Letter of Endorsement issued by the Ministry of Environmental Protection of Ukraine.	Table 2, A.5.1	The designated focal point of the Host Party has provided a Letter of Endorsement #5937/11/10-08 from 12.05.2008.	The information was added to the PDD. Issue is closed.
Clarification Request (CL) 07	Table 2,	JI specific approach foresees use of	According to the provided

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please, clarify is selected JI specific approach of the project based on appropriate approved CDM methodology; if yes, justify why it is not applicable to this JI project.	B.1.1	project specific baseline and monitoring methodology based partly on CDM approved methodology AM0014 "Natural gas-based packaged cogeneration". Namely the approaches for estimation of energy (fuel) consumptions for heat energy generation under the baseline scenario and associated baseline emissions as well as the approach for estimation of baseline emissions from electricity supply to the plant that is offset by the electricity supplied from the cogeneration units have been used. The mentioned CDM methodology is not applicable to this JI project to be used as a whole, because the project does not meet in full the applicability criteria of the methodology, namely the criterion that no excess heat from the cogeneration system is provided to another user and no excess of electricity is supplied to the power grid. Heat energy generated within the project is partly supplied for ensuring heating and hot water supply of the residential buildings and electricity could	clarification, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		be supplied to the national grid in the future.	
Clarification Request (CL) 08 In Table B.2-2 there are two different values of equipment cost for TEK-3. Please, explaine what is a difference.	Table 2, B.2.1	Corrected.	Issue is closed based on correction.
Clarification Request (CL) 09 Please, provide grounds for the exclusion of the emissions connected with the fuel production and transportation from the project boundary.	Table 2, B.3.1	Emissions connected with the fuel production and transportation could be considered as leakages, because they occur outside the project boundary and are not under control of project owner. However, due to the fact that emissions connected with the fuel production and transportation under the baseline scenario are substantially higher than emissions connected with the fuel production and transportation under the project scenario they were not taking into account for conservative purposes. Emissions due to production and transportation of natural gas used by TEK-3 and TEK-6 per year (27.4 million m^3 or 0.918 PJ) correspond to about 845	Issue is closed due to provided explanation.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		tonnes of CH_4 (emission factor is 921 tonne CH_4 / PJ. See AM0029. Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas). Emissions due to production and transportation of natural gas used under baseline scenario for heat energy generation per year (14.7 million m^3 or 0.491 PJ) correspond to about 452 tonnes of CH_4. Besides emissions due to production and transportation of organic fuel used for electricity generation under the baseline scenario (72 100 MWh annually) corresponds to additional 660 tonnes of CH_4. Thus, emissions connected with the fuel production and transportation under the baseline scenario is 32% higher than in the project scenario.	
<u>Clarification Request (CL) 10</u> Please, clarify who is responsible for performance of monitoring of the emissions in the project scenario and the baseline scenario.	Table 2, D.1.2	Responsible for monitoring system implementation divisions are indicated in Section D.1 and D.4.	According to provided clarification, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL) 11 Please, precisely indicate recording frequency of different monitoring data of the project.	Table 2, D.1.3	Indicated in the tables of section D.2 of the PDD.	Issue is closed.
Clarification Request (CL) 12 Please, clarify in section D.1 how monitoring data of the project will be collected.	Table 2, D.1.5	Clarified. See Section D.1 for details.	Issue is closed due to clarified information.
Clarification Request (CL) 13 Please, clarify are measurement equipments calibrated according to national regulations.	Table 2, D.2.1	All measurement equipment is calibrated according to national regulations. Indicated in Section D.3.	Issue is closed.
Clarification Request (CL) 14 Please, clarify in the PDD section E.4 whether conservative assumptions have been used to calculate baseline GHG emissions.	Table 2, E.4.3	The following conservative assumptions were taken into account while estimation baseline emissions: - The amount of electricity generated during the project activity would have been consumed from national electricity grid under the baseline scenario; - The amount of heat energy	Based on explanation and included to the section E.4 additional information, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		generated during the project activity would have been produced using natural gas fired boilers with the efficiency of 92% under the baseline scenario.	
Clarification Request (CL) 15 Please, clarify list of the environmental documents connected with this JI project.	Table 2, F.1.3	In accordance to Ukrainian legislation, an Environmental Impact Assessment (EIA), as a part of the project design documents, has been completed for the proposed project and approved by local authority. The Ministry of Environmental protection of Ukraine has also issued a positive conclusion of state environmental impact audit. The requirements of the following regulations were met during the project design development: - Law of Ukraine 'On atmospheric air protection', - State construction norms A.2.2-3-97 'The scope, the order of development, endorsement and approval of project	Clarification connected with the environmental documents was added. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		documentation for construction', - State construction norms A.2.2-1-95 'Designing. The structure and content of environmental impact assessment (EIA) materials for designing and construction of plants, buildings, houses and structures. Basic concepts of designing'. - State sanitary rules on planning and development of residential places, approved by Ministry of Health Protection of Ukraine by Order #173 from 19.06.96, - Sanitary Regulations and Norms 4946-89 Sanitary regulations on atmospheric air protection. The Ministry of Environmental protection of Ukraine has issued an Allowance for emissions of polluting substances into the atmospheric air by stationary sources at 26.12.2007, which will remain valid till	

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		25.12.2012.	
Clarification Request (CL) 16 Please, prove or confirm with appropriate documents (newspaper articles) that no negative comments were received.	Table 2, G.1.1	The realisation of the project has been supported by local authorities and Zaporizhzhya regional state administration issued to JSC 'Motor Sich' a Letter of award for the best energy saving project in Zaporizhzhya region in 2009.	According to the provided information, issue is closed.
Clarification Request (CL) 17 Please, describe current situation. In the PDD about the completeness of first stage of the project is mentioned in the future tense and stated its approximate date of completeness as March 2010, and documents dated September 2010 (p. 3).	Table 2, A.2.2	Corrected. The Act on the readiness-state of the finished constructional object for the cogeneration unit has been issued on the August 4th, 2010.	Issue is closed based on appropriate corrections.
Clarification Request (CL) 18 Please, clarify why is there no mentioned the efficiency for second cogeneration unit (p. 10).	Table 2, A.2.2	Corrected. The efficiency of the second unit has been added.	Issue is closed.
Clarification Request (CL) 19 Second unit will be commissioning in the first quarter 2011 and will not work a whole year. Please, clarify why the	Table 2, E.1.3	The second unit was expected to be commissioned in January 2011 and thus expected emission reductions for 2011 and 2012 are equal.	According to the provided explanation, issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
emission reductions for 2011 and 2012 are equal (p. 11, tables on the p. 36).			
Clarification Request (CL) 20 Please, explicitly explain the statements: «no excess heat from the cogeneration system is provided to another user» и «Heat energy generated within the project is partly supplied for ensuring heating and hot water supply of the residential buildings» (p. 13).	Table 2, A.2.2	The statement «no excess heat from the cogeneration system is provided to another user» is one of the applicability conditions of CDM approved methodology AM0014 "Natural gas-based packaged cogeneration". The statement «Heat energy generated within the project is partly supplied for ensuring heating and hot water supply of the residential buildings» describes the situation within the project, which does not meet the applicability condition mentioned above.	Issue is closed.
Corrective Action Request (CAR) 39 Please, correct deviation in calculation (table p. 38).	Table 2, E.1.3	Corrected.	Issue is closed due to amendments.
Corrective Action Request (CAR) 40 Current JI project is small scale project. Please, use PDD form for small scale JI project.	Table 2, A.2.1	The PDD is presented in the form for small scale JI project.	Issue is closed.
Corrective Action Request (CAR) 41 IPCC Guidelines for National Greenhouse Gas Inventories (2006) is not approved.	Table 2, B.1.1	The PDD was corrected according to the requirements of 1996 IPCC Guidelines for National Greenhouse Gas Inventories.	Issue is closed based on required corrections.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please use 1996 IPCC Guidelines for National Greenhouse Gas Inventories.			

APPENDIX B: VERIFIERS CV'S

Work carried out by:

Oleg Skoblyk, Specialist (Power Management)
Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environmental Department Project Manager

Oleg Skoblyk has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University" with specialty Power Management. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Oleg Skoblyk has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 19 JI projects.

Olena Manziuk, M.Sci. (Environmental science)
Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department specialist
Project Manager of JI/CDM Project

She has graduated from National University of "Kyiv-Mohyla Academy" with the Master Degree in Environmental Science. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Also, Olena has completed training intensive course on Clean Development Mechanism (CDM) /Joint Implementation (JI), and is involved in the verification of 8 JI projects.

Denis Pishchalov (economics)
Team member, Financial Specialist
Bureau Veritas Ukraine Specialist in economics

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service

Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

The determination report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Internal Technical Reviewer, Climate Change Lead Verifier
Bureau Veritas Ukraine Acting Chief Executive

Mr. Sokolov has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Cours and he was involved in the determination/verification over 50 JI/CDM projects.