# DETERMINATION REPORT

## «COMPANY «MT-INVEST» LTD

# DETERMINATION OF THE

## "CONDUCTION OF THE COMPLEX TECHNICAL AND TECHNOLOGICAL MODERNIZATION OF AN ENTERPRISE WHICH IS AIMED AT THE REDUCTION OF ENERGY CONSUMPTION AND THE IMPLEMENTATION OF THE UTILIZATION SYSTEM OF ORGANIC WASTE FROM SUGAR PRODUCTION ON PJSC «RISE-MAKSYMKO»"

## REPORT NO. UKRAINE-DET/0366/2011

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BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-det/0366/2011

DETERMINATION REPORT

| Date of first issue: 26/12/2011 | Organizational unit: Bureau Veritas Certification Holding SAS |
|---|---|
| Client: «Company «MT-Invest» LTD | Client ref.: Falendysh Yaroslav |

Summary:
Bureau Veritas Certification has made the determination of the «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD located in Yasenivtsi village, Dubno town, Kremenets town, Chervonozavodske town, 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 determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent will revise its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

| Report No.: UKRAINE-det/0366/2011 | Subject Group: JI |
|---|---|
| Project title: Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko» | |
| Work carried out by: Kateryna Zinevych – Team Leader, Lead Verifier, Technical Specialist<br>Sergiy Kustovskyy – Team Member, Verifier<br>Iuliia Pylnova – Team Member, Technical Specialist<br>Denis Pishchalov – Team Member, Financial Specialist | |
| Work verified by: Ivan Sokolov - Internal Technical Reviewer | |
| Work signed by: Ivan Sokolov – Operational Manager | |
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# 1 INTRODUCTION

«Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» (hereafter called "the project") in Yasenivtsi village, Dubno town, Kremenets town, Chervonozavodske town, 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 derminated in order to confirm that the project design, as documented, is sound and reasonable, and meet 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 emissions reductions units (ERUs).

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

## 1.2 Scope

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

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

## 1.3 Determination team

The determination team consists of the following personnel:

Kateryna Zinevych
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier, Technical Specialist

Sergiy Kustovskyy
Bureau Veritas Certification Team Member, Climate Change Verifier

Iuliia Pylnova
Bureau Veritas Certification Team Member, Technical Specialist

Denis Pishchalov
Team Member, Bureau Veritas Certification Financial Specialist

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

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

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

## 2.1 Review of Documents

The Project Design Document (PDD) submitted by «Company «MT-Invest» LTD and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by a Accredited Independent Entity were reviewed.

PDD «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD version 01 was submitted on 18/08/2011.

To address Bureau Veritas Certification corrective action, forward action and clarification requests, «Company «MT-Invest» LTD revised the PDD and resubmitted it as version 05 of 20/03/2012 which is deemed final.

The determination findings presented in this report relate to the project as described in the PDD version 01 dated 18/08/2011, version 02 dated 16/09/2011, version 04 dated 10/02/2012 and version 05 dated 20/03/2012.

## 2.2 Follow-up Interviews

On 16/01/2012 and 17/01/2012 Bureau Veritas Certification performed on-site visit interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of «Company «MT-Invest» LTD and PJSC «Rise-Maksymko» were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

| Interviewed organization | Interview topics |
|---|---|
| PJSC «Rise-Maksymko»<br>Zolochivskiy sugar plant<br>Dubenskiy sugar plant<br>Kremenetskiy sugar plant<br>Lokhvytskiy sugar plant | ➢ Implementation schedule<br>➢ Project management organisation<br>➢ Evidence and records on reconstruction and new equipment and its operation<br>➢ Environmental Impact Assessment<br>➢ Project monitoring responsibilities<br>➢ Monitoring equipment<br>➢ Quality control and quality assurance procedures<br>➢ Environmental impacts affected<br>➢ Local authorities and public opinion |
| CONSULTANT<br>«Company «MT-Invest» LTD | ➢ Applicability of methodology<br>➢ Baseline and Project scenarios<br>➢ Barriers analysis<br>➢ Additionality justification<br>➢ Common practice analysis<br>➢ Monitoring plan<br>➢ Conformity of PDD to JI requirements |

## 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 Action Requests (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The JI requirements have not been met;
(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

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

# 3 PROJECT DESCRIPTION

The main goal of the Joint Implementation project «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» is the implementation of the programme of complex technical and technological modernization of four sugar plants exploited by PJSC «Rise-Maksymko», the implementation of the utilization system of secondary products of sugar production, which includes both technical and organizational measures.

The proposed project is aimed at the emission reduction of:

(1) Carbon dioxide from natural gas combustion
(2) Carbon dioxide from coal combustion
(3) Carbon dioxide due to electricity consumption from Ukrainian power system
(4) Limestone decomposition while calcination
(5) Methane due to pulp decomposition in landfills and pulp silos of PJSC «Rise-Maksymko».

In general, project is aimed at the reduction of antropogenic emission due to reduction of energy demand for plants' operation, implementation of measures that lead to reduction of limestone decomposition necessity by improvement of juice purity and implementation of measures that lead to elimination of necessity of pulp transportation to landfills due to adaptation of pulp pressing, drying and granulating systems.

**The situation at the moment of the project initiation**

There are four sugar plants exploited by PJSC «Rise-Maksymko»:

1. Chervonozavodska branch of PJSC "Rise-Maksymko" (**hereinafter - Lokhvytskiy sugar plant**);
2. Kremenetska branch of PJSC "Rise-Maksymko" (**hereinafter - Kremenetskiy sugar plant**);
3. Agricaltural enterprise "Niva" Ltd. (**hereinafter - Dubenskiy sugar plant**);
4. "Zolochivtsukor" Ltd. (**hereinafter - Zolochivskiy sugar plant**).

Each plant uses heat and electric power that are generated at the object on Combined Heat and Power (CHP) and purchased electric power. CHP provides the plants with heat and electric power necessary for sugar production process. Before project initiation plants were operating using the technologies existing in Ukraine now. These technologies allow sugar production with average performance indicators and correspond with common practice in Ukraine.

Pulp is the secondary product of sugar production. Existing systems of pulp processing allow only the production of damp pulp humidity of which is higher than 80%. It does not allow the transportation of pulp for long distances that makes difficult it's saling to distanced agricultural enterprises. That is why beneficial use of only a small part of pulp produced for own demand by plants of PJSC "Rise-Maksymko" is possible. The main part of pulp produced at all plants passes the storage period in beet silos and than is transferred to the landfills belonging to PJSC "Rise-Maksymko". There the landfill gas evolves due to putrefaction. The landfill gas contains methane that is greenhouse gas.

Baseline scenario foresees the continuation of existing equipment exploitation in the same conditions as it was before the project implementation and the practice of pulp processing as it was before the project will also continue. The equipment used before the project implementation can operate for the whole crediting period in case of regular maintenance activities. Pulp processing does not directly affect on sugar production. Considering the mentioned above, the plants can be operational in the absence of the proposed scheme of investment during the crediting period.

**Project scenario**

Project scenario is aimed at saving/reduction of natural gas, coal, electricity and limestone demand, elimination of necessity of pulp transportation to landfills and reduction of consumption of refining agent on the basis of limestone which is necessary for sugar production. Saving

of electricity and heat directly corresponds with decrease of fuel consumption demand of CHP facilities and reduction of purchased electricity amount. Maximization of efficiency of energy resources using through the optimization of heat systems on the plants will allow to reduce fuel consumption on CHP. Emission reduction of greenhouse gases (GHG) appear also as the result of elimination of necessity of pulp transportation to landfiils due to implementation of deeper pressing, drying and granulating systems.

Implementation of biogas facilities that use pulp as fuel is planned on the plants. This measure is aimed at pulp utilization as well as plants' energy efficiency increasing. Biogas production using pulp will allow to abandon pulp transportation to landfills regardless of demand on it. Further using of biogas for electricity and heat production will allow to reduce plants' demand in electricity and fuel. In its turn, it will lead to greenhouse gases emission reduction.

Besides, increased purity of diffusion juice will lead to decreasing of demand in purification through lime milk using. Reduction of lime milk consumption for sugar production will allow to reduce coal and limestone consumption for production of refining agent on the plants.

Implementation of several less significant measures is planned. Among them are heat insulation improvement, implementation of frequency transformers, adoption of preliminary heating of diffusion juice through consumption of less energy-intensive resources, reconstruction and automation of CHP stations.

**Project history**

From 2000 plants that are included into the Project and PJSC "Rise-Maksymko" have been developing its energy efficiency programmes. This voluntary programs are aimed at the increasing of sugar plants efficiency through implementation of technologies that are in line with the best existing methods of raw materials and pulp processing. Possibility of investment receiving through emission reduction units (ERUs) selling was one of the key factors for sugar plants of PJSC "Rise-Maksymko" and the management of company considered it from the beginning of the project.

For Project initiation in accordance with Order №76 dated 01/09/2000 workgroup for reducing power consumption and utilization of organic waste, which appeared as a result of sugar production, was established at Dubenskiy sugar plant. Within the duties of this group are the consideration of possibility and provision of receiving of additional investments from Kyoto Protocol mechanism. This workgroup has participated as the coordinator of implementation of this project on Dubenskiy, Kremenetskiy and Zolochivskiy sugar plants This date is considered to be the date of project recognition as JI project.

Later, the similar groups were established on the other sugar plants included in project

From 2010 management of PJSC “Rise-Maksymko” decided to include all four plants into one project. For management and coordination of actions for project implementation by issuance of Order #315/1 dated 14/12/2010 the workgroup containing of the production personnel of PJSC “Rise-Maksymko” was created.

**General information on project framework.**

**Zolochivskiy sugar plant**

Zolochivskiy sugar plant was built in 1961. As for the history of the project, the target of sugar plant building in Lviv region was developed on the basis of resolution of Cabinet of Ministers of the USSR dated 09/02/1956 and order of the Minister of Industry of Food Products of the USSR dated 21/02/1956 #114.

It was foreseen the building of the plant with productivity of 25 thousand quintals of beets per day, containing separation workshop and pulp drying facility.

Industrial area of the plant is located on the lands of the village Yasenivtsi of Zolochiv district, Lviv region on the area of 15 ha at a distance of 1.2 km west of the station Zolochiv-Lviv.

**Dubenskiy sugar plant**

The company is located in Dubno, Rivenskiy region. It was built in 1960, in the years 1974-1979 workshops were fully reconstructed, making it possible to increase the daily processing of raw materials from 2.5 to 4.5 thousand tonnes. During this period, it was replaced outdated equipment with newer, progressive ones, it was built a new limestone branch with two furnaces, grocery shop, sugar drying, beet processing plant was reconstructed, juice cleaning department, TPP.

Raw zones of the plant are located in Dubno, Radyvyliv, Mlyniv, Demydivs'kyy, Zdolbunivska, Rivne District of the Rivne region, Brody district of the Lviv region, where the stationary beet collection points are located.

Main product range of the Dubenskiy sugar plant: sugar, molasses (molasses), fresh pulp, dry pulp, granulated pulp, lime. The plant's production meets the requirements of the international standard ISO - 9001 - quality management system.

In 1982 the plant has mastered the scheme of the raw sugar processing. With particular intensity the works on reconstruction, technical modernization of the plant were carried out from 1987 to 1998. During this time the capacity increasing was about in 500 tonnes and reached 5 thousand tonnes of beets per day. In this period a significant progress took place not only in manufacturing but also in the social development of

the microdistrict. It was constructed a new juice cleaning plant and installed a new tract of raw material supply, introduced other advances in science and technology.

**Kremenetskiy sugar plant**

The company is located in the Kremenets town, Ternopil region. Construction of the Kremenetskiy sugar plant was started in autumn 1962.

November 3, 1965 the plant launching was held. In the first season 100 thousand tonnes of beets were processed and 8,1 thousand tonnes of sugar were produced.

In the season 1970-71 it were processed 547 thousand tonnes of beets and produced 67,273 tonnes of sugar.

In 1985 the group celebrated the 20th anniversary of the plant launching. During this period, it were processed almost 10 million tonnes of raw materials and produced 1 million 146 thousand tonnes of sugar.

It was built on a complete-import equipment of the English firm "Vikkers-Bukers." In 1982 twice received the red flag of the USSR Ministry of Food Industry and sectoral trade unions for the championship in the All-Union competition, had been cleared in September and November.

**Lokhvytskiy sugar plant**

Lokhvytskiy sugar plant was built in 1929 with a design production capacity of 2 tonnes of beets processing per day. The main technological and energy equipment for the plant was completely delivered by the Czech-German company "Erste-Bryuner."

In pre-war years by the technical reconstruction the plant power was brought up to 3.6 thousand tonnes of processed beets per day. During the war part of the most valuable equipment was dismantled and taken out of the occupied zone. The main building of the factory, railway station, steam boiler, water duck, some residential buildings were destroyed by the German army.

Its first postwar production season plant began in November 1945. Further by the reconstruction and technical upgrading production capacity was brought gradually to 9350 tonnes of beet processing per day.

At the plant is used a typical technological scheme of sugar production with continuous beet chips sugar removal, pulp pressing and return of all pulp pressing water to the diffusion installation.

**Short description of measures undertaken under the project activity.**

**Zolochivskiy sugar plant.**

| *Year* | *Modernization content* |
|---|---|
| 2003 | Pulp pellet GT-500 of the firm "Hranteks" establishing. 1 unit. |
| 2006 | Drum for pulp drying replacement, drum for pulp drying productivity of 100tn/year. |
| 2008 | Defecosaturation station automation |
| | Establishing of 2 pulp granulators GT-500 of the firm "Hranteks" – 2 units. |
| 2012 | Installation of biogas facility |

**Dubenskiy sugar plant.**

| *Year* | *Modernization content* |
|---|---|
| 2003 | Reconstruction of lime section (charge preparing, weighing devices replacement, partial automation) |
| | Reconstruction of defecosaturation with the equipment replacement. |
| | Reconstruction of transformer substation of washing and pulp drying sections with installation of two transformers TM-1000 |
| | Production and implementation of heat exchanger TSK-200 in technological process. |
| | Implementation of condensing facility |
| | Establishing of I product massecuite cookers CAI-6,4 and transition to the massecuite boiling with less potential |
| 2004 | The introduction of the deamonization system of the ammonia condensates for feed water using on diffusion facilities and deamonization vapor using for raw juice heating |
| | Improvement of the thermal scheme (using vapor of the IV frame of evaporationstation for raw juice heaters, steam contact heater connection to V frame of evaporation station.) |
| | Implementation of the purification scheme of firm “Aladis-Koloids” of the second category water with flocculent using (mahnoflok LT-25) |
| | Replacing of the periodic action III product centrifuges for the continuous centrifuge. 3 units ACWW-100 |
| 2005 | Establishing of the frequency converter “TVERD” with capacity of 350 kV on pump for the raw juice from a cold defector |
| | Modernization of the drying section of sugar production (polish production drying facilities implementation) |
| | Replacing of the III product periodic action centrifuges for the continuous centrifuge. 2 units. ACWW-1000 |
| | The introduction of the flue gas recycling system D-12.5 for pulp drying |

| | |
|---|---|
| 2006 | Reconstruction of limestone section in accordance with the method of engineer V.Naumenko:<br>1) broadening of lime kiln from 100 m2 (IPSh-100) to 150 m2 (IPSh-150) of loading capacity<br>2) reconstruction of unloading facilities for lime kilns (2 units) 3) automation of lime section using the computer technologies bycompany "Viol-2" . |
| | Defecosaturation automation. |
| | Pair pipelines isolation 450 m.l. |
| 2007 | Establishing of the frequency converters on the process. 5 units with productivity 200 kV |
| | Defecosaturation reconstruction |
| | Implementation of utilization system for heat power of massecuite steam produced by company "Energotekhnologiia" for raw juice heating |
| | Implementation of the I product centrifuges BMA –B – 1750- 2 units. |
| | Implementation of the III product centrifuges K-2300 – 1 units. |
| 2008 | Establishing of the deep streak presses of the firm Stord-2500- 2 units. |
| | Implementation of dry pulp granulation complex of the firm KALL |
| | Reconstruction of the beets cutting SCB12 – 4 units. |
| | Automation of diffusion apparatus DS – 10; DS – 12. Producer of the system company "Viol-2" |
| | Automation of the evaporation station |
| | Implementation of the I product centrifuges BMA 1750 W – 1 unit. |
| | Implementation of the II product centrifuges K 2300 – 1 unit. |
| 2009 | Establishing of the frequency converters 200 kV – 2 units. |
| | Implementation of the I product centrifuges BMA B-1750 – 1 unit. |
| | Implementation of the II, III product centrifuges K2300 – 2 units. |
| | Establishing of the ASCAE counter (electric power metering in hourly mode) |
| | Implementation of the pulp press water return scheme |
| | Establishing of the syrup filters, type «Borimex» - 6 units. |
| | Sugar plant building corps sheathing with metal profiles 8200 m² |
| 2010 | Implementation of the thick syrup filter «Borimex» - 6 units |
| | Boiler BKZ-50 transforation from coal to gas |
| 2011 | Establishing of the soft starters – 4 units. |
| | Establishing of the carbonation gas separators |
| | Replacement of the heating surface on the boiler BKZ -50-№2. |
| | Replacement of the steam communication with the installation of isolation materials |
| 2012 | Installation of biogas facility |

### Kremenetskiy sugar plant

| *Year* | *Modernization content* |
|---|---|
| 2003 | Defecosaturation automation |
| | Automation of kilns loading and charge preparation. |
| | Installation of III product centrifuges FPI. Replacement of affination mass centrifuge for new FKNO-1400. |
| 2004 | Implementation of coal separation scheme |
| 2005 | Implementation of pulp granulators “Grantex” |
| 2006 | Implementation of second stage of lime milk purification |
| | Complete replacement of lime milk fettling |
| 2007 | Installation of frequency transformers to electric motors of pumps |
| 2008 | Implementation of filters “Barimex” for syrup filtration |
| | Implementation of I product centrifuges VMA -1750- 2 units |
| | Implementation of pulp granulators “Grantex” |
| | Reconstruction of pulp drying section with recurring heat using from flue gases for pulp drying. |
| | First stage of reconstruction and automation of juice purifying section (defecosaturation). System of engineer Barakaev is implemented. |
| 2009 | Second stage of reconstruction and automation of juice purifying section (defecosaturation). System of engineer Barkaev is implemented. |
| | Installation of frequency transformers to electric motors of pumps – 5 units. |

### Lokhvitskiy sugar plant

| *Year* | *Modernization content* |
|---|---|
| 2001 | Granulation line construction in old pulp drying section |
| 2003 | Automation of defecosaturation station on the basis of microprocessor technical equipment |
| 2008 | Installation of pulp press «Stord-2500». |

| | |
|---|---|
| | Construction of pulp drying and granuling complex with the productivity of 340 tonnes of dry pulp per day and warehouse of dry and granular pulp with the capacity of 20 thousand tonnes. |
| 2010 | Modernization of feed water supply scheme to diffusion facility with pulp pressing water distribution. |
| | Installation of two pulp eliminators with withdrawal of pulp to pulp presses «Stord». |

Feasibility study development or development of detailed business plan for the whole project is not necessary. Taking in account the project's complexity and the number of measures undertaken in the project framework, feasibility study for the whole project is almost impossible. Instead of it, feasibility study for separate measures will be developed as the measures are implemented.

CARs (CAR01, CAR02, CAR04, CAR15), CLs (CL01, CL02, CL06) and their resolutions/conclusions applicable to project description are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

# 4 DETERMINATION CONCLUSIONS

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

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

The 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 15 Corrective Action Requests and 06 Clarification Requests.

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

After finishing JI project determination report, the PDD and Determination Report will be presented to State Environmental Investments Agency of Ukraine (SEIA) for receiving the Letter of Approval (LoA).

CARs (CAR03, CAR05), CL03 and their resolutions/conclusions applicable to project approvals by Parties involved are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

The project has no approvals by the Parties involved, therefore CAR05 remains pending. This CAR will be closed after report finalizing.

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

The participation of each project participant listed in the PDD will be authorized by Letter of Approval from appropriate party explicitly stating the name of the legal entity.

CAR05, CL03 and their resolutions/conclusions applicable to authorization of project participants by Parties involved are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

The project has no approvals by the Parties involved, therefore CAR05 remains pending. This CAR will be closed after report finalizing.

## 4.3 Baseline setting (22-26)

The PDD explicitly indicates that JI specific approach was the selected approach for identifying the baseline.

The baseline scenario has been established in accordance with Appendix B of the JI Guidelines and in accordance with the 'Guidance on Criteria for Baseline Setting and Monitoring' (Version 2) adopted at 18th Meeting of the JISC and used Methodological Tool "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 03.0.0).

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

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:

   a. Continuation of the existing situation;

   b. Implementation of the proposed project activity without registering it as a JI project.

(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:

- Complexity of production process
- Permanent change in price of electricity and natural gas in Ukraine.
- Long payback period (more than 15 years).

- Implementation of proposed poject requires significant annual capital investments and human resources.

- Ukraine has one of the lowest electricity tariffs in Europe. Therefore, it is really hard to invest the cost for the reconstruction or the rehabilitation of the equipment.

In order to establish the baseline scenario project participants has chosen the use of JI specific approach and "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 03.0.1).

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the identified JI specific approach and the baseline is identified appropriately.

CAR06 and its resolution/conclusion applicable to baseline setting are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

## 4.4 Additionality (27-31)

Barriers analysis and common practice analysis were used to demonstrate additionality of the project activity. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

The following additionality proofs are provided:

1. there are two alternative scenarios to the project activity identified;
2. the identified barriers would credibly prevent the implementation of the proposed project activity undertaken without being registered as a JI activity;
3. the common practice analyses carried out by the PP's, complementing barrier analysis.

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

CAR07 and its resolution/conclusion applicable to additionality are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

## 4.5 Project boundary (32-33)

The project boundary defined in the PDD, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants:

- CO2 emissions related to natural gas and coal burning in technological and generating equipment and limestone calcination.

(ii) Reasonably attributable to the project:
- CO2 emissions related to electric energy production for electrical grid and consumed by factory;
- CH4 emissions related to utilization of organic waste.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD.

The AIE determinated the project boundary by:
a) Detailed review of relevant documentation (list of all determinated documents provided in “Category 2 Document” below).
b) Interviews and observations during site visit to PJSC «Rise-Maksymko» dated 16/01/2012 (list of interviewed persons provided in “Persons interviewed” below).

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

CAR08 and its resolution/conclusion applicable to project boundary are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

## 4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 01/09/2000, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 25 years (300 months).

The PDD states the length of the crediting period in years and months, which is 22 years or 264 months, and its starting date as 01/01/2004, which is the date the first emission reductions or enhancements of net removals are generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

CLs (CL04, CL05) and their resolutions/conclusions applicable to crediting period are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

## 4.7 Monitoring plan (35-39)

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

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored.

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

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination.

(ii) Data and parameters that are monitored throughout the crediting period.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording depending on its kind. It is provided in comprehensive manner in Tables for the key-parameters in Section B.1 of the PDD.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate, such as:

**Project emissions**

$$PE_y = \sum PE_{y,i}$$ ,

where

$PE_y$ = greenhouse gases emissions according to the project scenario in year y, tCO2eq;

$PE_{y,i}$ = greenhouse gases emissions according to the project scenario of the sugar plant i in year y, tCO2eq;

*i* = indication of plant for which calculations are carried out;

*y* = year for which calculations are carried out.

$$PE_{y,i} = PE_{ELEC,y,i} + PE_{NG,y,i} + PE_{Coal,y,i} + PE_{CH4,y,i} + PE_{Calc,y,i}$$ ,

where

$PE_{y,i}$ = greenhouse gases emissions according to the project scenario of the sugar plant n in year y, tCO2eq;

$PE_{ELEC,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of electric power in year y, tCO2eq;

$PE_{NG,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of natural gas in year y, tCO2eq;

$PE_{Coal,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of coal in year *y*, tCO2eq;

$PE_{CH4,y\,i}$ = greenhouse gases emissions according to the project scenario associated with the utilization of pulp by its removal to the landfill in the year *y*, tCO2eq;

$PE_{Calc,y,i}$ = Project GHG emissions related with calcination of limestone in year *y,* tCO2eq;

*i* = indication of plant for which calculations are carried out;

*y* = year for which calculations are carried out.

Taking into account the fact that on Dubenskiy and Kremenetskiy plants were implemented measures aimed both at processing of pulp and reduction of energy resources consumption, while on Lokhvitskiy and Zolochivskiy sugar plants only measures aimed at pulp processing were implemented, it was decided to use different approaches for GHG emission reduction calculation on the plants.

**Dubenskiy and Kremenetskiy sugar plants.**

$$PE_{ELEC,y,i} = EC_{PJ,y,i} \cdot EF_{CO2,ELEC,y}$$ ,

where

$PE_{ELEC,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of electric power by plant *i* in year *y*, tCO2eq;

$EC_{PJ,y\,i}$ = quantity of electric power consumed from power system of Ukraine according to the project scenario by plant *i* in year *y*, MWh;

$EF_{CO2,ELEC,y}$ = indirect greenhouse gases emissions caused by the electric power consumption of electric energy consumers in the Joint Energy Systems of Ukraine in year *y*, tCO2eq/ MWh;

*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$PE_{NG,y,i} = FC_{PJ,NG,y,i} \cdot NCV_{NG,y,i} \cdot EF_{CO2,NG} - EOUT_{y,i} \cdot CEF_{CO2,ELEC,y,i},$$

where
$PE_{NG,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of natural gas by plant *i* in year *y*, tCO2eq;
$FC_{PJ,NG,y\,i}$ = amount of natural gas consumed by plant *i* according to the project scenario in year *y*, ths $m^3$;
$NCV_{NG,y\,i}$ = net calorific value of natural gas consumed by plant *i* in the year *y*, GJ / ths $m^3$;
$EF_{CO2,NG}$ = emission factor for natural gas, tCO2eq/GJ;
$EOUT_{y,i}$ = Amount of electric power supplied to external consumers in year *y* by plant *i*, MWh;
$CEF_{CO2,ELEC,y,i}$ = Carbon emission factor of GHG emissions related to electric power generation by sugar plant *i* in year *y*, tCO2/MWh;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

For preliminary calculations the emission factor of indirect GHG emissions related to electric power generation in power systems of Ukraine was applied.For actual calculations this parameter will be calculated on the basis of production parameters of the enterprise.

$$PE_{Coal,y,i} = FC_{PJ,Coal,y,i} \cdot NCV_{Coal,y,i} \cdot EF_{CO2,Coal},$$

where
$PE_{Coal,y\,i}$ = greenhouse gases emissions according to the project scenario related to the consumption of coal by plant *i* in year *y*, tCO2eq;
$FC_{PJ,Coal,y\,i}$ = amount of coal consumed according to the project scenario by plant *i* in year *y*, t;
$NCV_{Coal,y\,i}$ = net calorific value of coal consumed by plant *i* in the year *y*, Gcal / t;
$EF_{CO2,Coal}$ = emission factor for coal, tCO2eq/GJ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$PE_{CH4,y,i} = \sum (MSW_{T,PJ,y,i} \cdot MSW_{F,PJ,y,i} \cdot MCF \cdot DOC \cdot DOC_F \cdot F \cdot \frac{16}{12} - R_y) \cdot (1 - OX) \cdot GWP_{CH4},$$

where
$PE_{CH4,y\,i}$ = greenhouse gases emissions according to the project scenario associated with the utilization of pulp by it's removal to the landfill in the year, tCO2eq;
$MSW_{T,PJ,y\,i}$ = amount of pulp selled off by plant *i* according to the project scenario in year *y*, t;
$MSW_{F,PJ,y\,i}$ = part of pulp generated by plant *i* transported to the landfill according to the project scenario in year *y*;
*MCF* = methane flow correction factor; (IPCC 2006)
*DOC* = Portion of pulp that is expected to decompose; (IPCC 2006 )

$DOC_F$ = Portion of pulp that decompose in practice; (IPCC 2006)
$F$ = Fraction of CH4 in landfill gas (typically 0.5); (1996 IPCC)
$\frac{16}{12}$ = factor of carbon conversion in methane;
$R_y$ = CH4 utilized in year *y*, t CH4;
$OX$ = oxidation factor (usually 0); (1996 IPCC);
$GWP_{CH4}$ = global warming potential of methane tCO2eq/tCH4; (According to the UNFCCC and the Kyoto Protocol);
*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$PE_{Calc,y,i} = LC_{y,i} \cdot CaCO_{3\,y,i} \cdot EF_{CaCO3} + LC_{y,i} \cdot MgCO_{3\,y,i} \cdot EF_{MgCO3},$$

where
$PE_{Calc,y,i}$ = project GHG emissions from calcination of limestone in year *y* at plant *i*, $tCO_2eq$;
$EF_{CaCO3}$ = GHG emission factor for $CaCO_3$ ($tCO_2/tCaCO_3$);
$CaCO_{3\,y,i}$ = content of $CaCO_3$ in the raw material limestone in project year *y* at plant *i*;
$LC_{y,i}$ = amount of limestone calcinated year *y* at plant *i* (t);
$EF_{MgCO3}$ = carbon dioxide emission factor for $MgCO_3$ ($tCO_2/tMgCO_3$);
$MgCO_{3\,y,i}$ = content of $MgCO_3$ limestone calcinated in year *y* at plant *i*;
*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

**Lokhvitskiy and Zolochivskiy plants.**

$$PE_{ELEC,y,i} = BPEC_{PJ,y,i} \cdot CEF_{CO2,ELEC,y,i},$$

where
$PE_{ELEC,y,i}$ = project GHG emissions in project scenario due to electric power consumption in year *y* by plant *i*, tCO2eq;
$BPEC_{PJ,y,i}$ = Amount of electric power consumed in project scenario in year *y* by plant *i* for pulp processing, MWh;
$CEF_{CO2,ELEC,y,i}$ = Carbon emission factor of GHG emissions related to electric power generation by sugar plants, tCO2/MWh;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

For preliminary calculations the emission factor of indirect GHG emissions related to electric power generation in power systems of Ukraine was applied. For actual calculations this parameter will be calculated on the basis of production parameters of the enterprise.

$$PE_{NG,y,i} = BPFC_{PJ,NG,y,i} \cdot NCV_{NG,y,i} \cdot EF_{CO2,NG},$$

where
$PE_{NG,y,i}$ = GHG emissions in project scenario related to natural gas consumption in year *y* by plant *i*, tCO2eq;
$BPFC_{PJ,NG,y,i}$ = Amount of electric power consumed in project scenario in year *y* by plant *i* for pulp production, ths $m^3$;
$NCV_{NG,y,i}$ = net calorfic value of natural gas consumed in year *y* by plant *i*, GJ/ ths $m^3$;
$EF_{CO2,NG}$ = GHG emission factor for natural gas, tCO2eq/GJ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$PE_{Coal,y,i} = BPFC_{PJ,Coal,y,i} \cdot NCV_{Coal,y,i} \cdot EF_{CO2,Coal},$$

where
$PE_{Coal,y,i}$ = GHG emissions in project scenario related to coal consumption in year *y* by plant *i*, tCO2eq;
$BPFC_{PJ,Coal,y,i}$ = amount of coal consumed in project scenario in year *y* by plant *i* for pulp processing, t;
$NCV_{Coal,y,i}$ = net calorfic value of coal consumed in year *y* by plant *i,* GJ/t;
$EF_{CO2,Coal}$ = GHG emission factor for coal, tCO2eq/GJ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$PE_{CH4,y,i} = \sum (MSW_{T,PJ,y,i} \cdot MSW_{F,PJ,y,i} \cdot MCF \cdot DOC \cdot DOC_F \cdot F \cdot \frac{16}{12} - R_y) \cdot (1 - OX) \cdot GWP_{CH4},$$

where
$PE_{CH4,y\,i}$ = greenhouse gases emissions according to the project scenario associated with the utilization of pulp by it's removal to the landfill in the year, tCO2eq;
$MSW_{T,PJ,y\,i}$ = amount of pulp selled off by plant *i* according to the project scenario in year *y*, t;
$MSW_{F,PJ,y\,i}$ = part of pulp generated by plant *i* transported to the landfill according to the project scenario in year *y*;
*MCF* = methane flow correction factor; (IPCC 2006)
*DOC* = Portion of pulp that is expected to decompose; (IPCC 2006)
$DOC_F$ = Portion of pulp that decompose in practice; (IPCC 2006)
*F* = Fraction of CH4 in landfill gas (typically 0.5); (1996 IPCC)
$\frac{16}{12}$ = factor of carbon conversion in methane;
$R_y$ = CH4 utilized in year *y*, t CH4;
*OX* = oxidation factor (usually 0); (1996 IPCC)
$GWP_{CH4}$ = global warming potential of methane tCO2eq/tCH4; (According to the UNFCCC and the Kyoto Protocol)
*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$PE_{Calc,y,i} = 0$,

where

$PE_{Calc,y,i}$ = project GHG emissions due to calcination of limestone in year *y* on plant *i*, $tCO_2eq$;

*i* = indication of the plant for which calculations are carried out;

*y* = year for which calculations are carried out.

**Baseline emissions**

$BE_y = \sum BE_{y,i}$ ,

where

$BE_y$ = greenhouse gases emissions according to the baseline scenario in year *y*, t CO2e;

$BE_{y,i}$ = greenhouse gases emissions according to the baseline scenario of the sugar plant *i* in year *y*, t CO2e

*i* = indication of plant for which calculations are carried out;

*y* = year for which calculations are carried out.

$$BE_{y,i} = BE_{ELEC,y,i} + BE_{NG,y,i} + BE_{Coal,y,i} + BE_{CH4,y,i} + BE_{Calc,y,i},$$

where

$BE_{y,i}$ = greenhouse gases emissions according to the baseline scenario of the sugar plant n in year *y*, tCO2eq;

$BE_{ELEC,y,i}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of electric power in year *y*, tCO2eq;

$BE_{NG,y,i}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of natural gas in year *y*, tCO2eq;

$BE_{Coal,y,}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of coal in year *y*, tCO2eq;

$BE_{CH4,y,i}$ = greenhouse gases emissions according to the baseline scenario associated with the utilization of pulp by its removal to the landfill in the year *y*, tCO2eq;

$BE_{Calc,y,i}$ = Baseline emissions related with calcination of limestone in year *y,* tCO2eq;

*i* = indication of plant for which calculations are carried out;

*y* = year for which calculations are carried out.

**Dubenskiy and Kremenetskiy sugar plants.**

$$BE_{ELEC,y,i} = EC_{BL,y,i} \cdot EF_{CO2,ELEC,y,i},$$

where
$BE_{ELEC,y,i}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of electric power by plant *i* in year *y*, tCO2eq;
$EC_{BL,y,i}$ = quantity of electric power consumed according to the baseline scenario by plant *i* in year *y*, MWh;
$EF_{CO2,ELEC,y}$ = emission factor for indirect greenhouse gases emissions caused by the electric power consumption of electric energy consumers in the Joint Energy Systems of Ukraine in year *y*, tCO2eq/ MWh;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$EC_{BL,y,i} = P_{y,i} \cdot \frac{SPB_{BL,i}}{SPB_{y,i}} \cdot \frac{EC_{BL,i}}{P_{BL,i}},$$

where
$EC_{BL,y,i}$ = amount of electric power consumed in baseline scenario by plant *i* in year *y*, MWh;
$P_{y,i}$ = amount of sugar production in year y by plant i, t;
$P_{BL,i}$ = average amount of sugar production in base period 2001-2003 by plant i, t;
$EC_{BL,i}$ = average amount of electric power consumed from energy system of Ukraine in base period 2001-2003 by the plant i, MWh;
$SPB_{BL,i}$ =average sugar content in beets in baseline period on the plant *i*, %;
$SPB_{y,i}$ = sugar content in beets in year *y* on plant *i*, %;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$BE_{NG,y,i} = FC_{BL,NG,y,i} \cdot \frac{NCV_{NG,BL,i}}{NCV_{NG,y,i}} \cdot NCV_{NG,y,i} \cdot EF_{CO2,NG},$$

where
$BE_{NG,y,i}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of natural gas by plant *i* in year *y*, tCO2eq;
$FC_{BL,NG,y,i}$ = amount of natural gas consumed by plant *i* according to the baseline scenario in year *y*, ths $m^3$;
$NCV_{NG,BL,i}$ = weighed average net calorific value of natural gas consumed in base period 2001-2003 by plant *i,* GJ/ths $m^3$;
$NCV_{NG,y,i}$ = net calorific value of natural gas consumed by plant *i* in the year *y*, GJ / ths $m^3$;
$EF_{CO2,NG}$ = GHG emission factor for natural gas, tCO2eq/GJ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$FC_{BL,NG,y,i} = \frac{P_{y,i}}{P_{BL,i}} \cdot \frac{SPB_{BL,i}}{SPB_{y,i}} \cdot (FC_{BL,NG,i} - \frac{EOUT_{BL,i} \cdot CEF_{CO2,ELEC,BL,i}}{NCV_{NG,BL,i} \cdot EF_{CO2,NG}}),$$

where
$FC_{BL,NG,y,i}$ = amount of natural gas consumed by plant *i* according to the baseline scenario in year *y*, ths $m^3$;
$P_{y,i}$ = amount of sugar production by sugar plant *i*in year *y*, t;
$P_{BL,i}$ = average amount of sugar production by sugar plant *i* in base period 2001-2003, t;
$FC_{BL,NG,i}$ = average amount of natural gas consumed in base period 2001-2003 by plant *i*, ths $m^3$;
$SPB_{BL,i}$ = average sugar content of beets in base period 2001-2003 on plant *i*, %;
$SPB_{y,i}$ = sugar content of beets processed in year *y* on plant *i* , %;
$NCV_{NG,BL,i}$ = weighed average net calorific value of natural gas in base period 2001-2003 on the plant *i*, GJ/ths $m^3$;
$EF_{CO2,NG}$ = GHG emission factor for natural gas, tCO2eq/GJ;
$EOUT_{BL,i}$ = average Amount of electric power supplied to external consumers in base period by plant *i*, MWh;
$CEF_{CO2,ELEC,BL,i}$ = Weighed average GHG emission factor of emissions related to electric power generation by sugar plant*i* in base period 2001-2003, tCO2eq/MWh ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

For preliminary calculations the emission factor of indirect GHG emissions related to electric power generation in power systems of Ukraine was applied.For actual calculations this parameter will be calculated on the basis of production parameters of the enterprise.

$$BE_{Coal,y,i} = FC_{BL,Coal,y,i} \cdot \frac{NCV_{Coal,BL,i}}{NCV_{Coal,y,i}} \cdot NCV_{Coal,y,i} \cdot EF_{CO2,Coal},$$

where
$BE_{Coal,y,i}$ = greenhouse gases emissions according to the baseline scenario related to the consumption of coal by plant *i* in year *y*, tCO2eq;
$FC_{BL,Coal,y,i}$ = amount of coal consumed by plant *i* according to the baseline scenario in year *y*, t;
$NCV_{Coal,BL\ i}$ = weighed average net calorific value of coal consumed in base period 2001-2003 by plant *i,* GJ/t;
$NCV_{Coal,y,i}$ = net calorific value of coal consumed by plant *i* in the year *y*, GJ / t;
$EF_{CO2,Coal}$ = GHG emission factor for natural gas, tCO2eq/GJ;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$FC_{BL,Coal,y,i} = P_{y,i} \cdot \frac{SPB_{BL,i}}{SPB_{y,i}} \cdot \frac{FC_{BL,Coal,i}}{P_{BL,i}},$$

where

$FC_{BL,Coal,y,i}$ = amount of coal consumed by plant *i* according to the baseline scenario in year *y*, t;
$P_{y,i}$ = amount of sugar production by sugar plant *i*in year *y*, t;
$P_{BL,i}$ = average amount of sugar production by sugar plant *i* in base period 2001-2003, t;
$FC_{BL,Coal,i}$ = average amount of coal consumed in base period 2001-2003 by plant *i*, t;
$SPB_{BL,i}$ =average sugar content in beets in baseline period 2001-2003 on the plant *i*, %;
$SPB_{y,i}$ = sugar content in beets processed in year *y* on plant *i*, %;
*i* = indication of plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$BE_{CH4,BL,y,i} = (MSW_{T,BL,y,i} \cdot MSW_{F,BL,i} \cdot MCF \cdot DOC \cdot DOC_F \cdot F \cdot \frac{16}{12} - R_{BL}) \cdot (1 - OX) \cdot GWP_{CH4},$$

where
$BE_{CH4,BL,y}$ = greenhouse gases emissions according to the baseline scenario associated with the utilization of pulp by it's removal to the landfill in the year, tCO2eq;
$MSW_{T,BL,y,i}$ = total amount of pulp transferred to landfills by plant *i* according to the baseline scenario in year *y*, t;
$MSW_{F,BL,i}$ = part of pulp generated by plant *i* transported to the landfill according to the baseline scenario;
*MCF* = methane utilized in baseline scenario; (2006 IPCC)
*DOC* = Portion of pulp that is expected to decompose; (2006 IPCC)
$DOC_F$ = Portion of pulp that decompose in practice; (2006 IPCC)
*F* = Fraction of CH4 in landfill gas; (1996 IPCC)
$\frac{16}{12}$ = factor of carbon conversion in methane;
*R* = CH4 utilized in year *y*, t CH4;
*OX* = oxidation factor, (1996 IPCC)
$GWP_{CH4}$ = global warming potential of methane tCO2eq/tCH4; (in accordance with decision of UNFCCC and Kyoto protocol)
*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$MSW_{T,BL,y,i} = MSW_{T,PJ,y,i},$$

where
$MSW_{T,BL,y,i}$ = amount of pulp transferred to landfills by plant *i* according to the baseline scenario in year *y*, t ;
$MSW_{T,PJ,y,i}$ = amount of pulp selled off by plant *i* according to the project scenario in year *y*, t;
*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

$$BE_{Calc,y,i} = P_{y,i} \cdot SLC_{BL,i} \cdot \frac{SPB_{BL,i}}{SPB_{y,i}},,$$

where

$BE_{Calc,y,i}$ = baseline carbon emissions from calcination of limestone per tonne of beet processed in project year y at plant i (tCO2eqq)

$P_{y,i}$ = amount of sugar production by sugar plant *i*in year *y*, t;

$SLC_{BL,i}$ = specific CO2 emission due to limestone calcination in base period 2001-2003 on plant *i*, t $CO_2$eq/t beets;

$SPB_{BL,i}$ =average sugar content in beets processed in baseline period 2001-2003 on the plant *i*, %;

$SPB_{y,i}$ = sugar content in beets processed in year *y* on plant *i*, %;

*i* = indication of plant for which calculations are carried out;

*y* = year for which calculations are carried out.

$$SLC_{BL,i} = \frac{LC_{BL,i} \cdot CaCO_{3\,BL,i} \cdot EF_{CaCO3} + LC_{BL,i} \cdot MgCO_{3\,BL,i} \cdot EF_{MgCO3}}{P_{BL,i}},$$

where

$SLC_{BL,i}$ = specific CO2 emission due to lime calcination in base period 2001-2003 on plant *i*, t $CO_2$eq/t beets;

$EF_{CaCO3}$ = carbon dioxide emission factor for $CaCO_3$, t $CO_2$eq/t $CaCO_3$;

$CaCO_{3\,BL,i}$ = weighed average $CaCO_3$ content in limestone calcinated in base period 2001-2003 on plant *i*;

$LC_{BL,i}$ = average amount of calcinated limestone in base period 2001-2003 on plant *i*, t;

$EF_{MgCO3}$ = carbon dioxide emission factor for $MgCO_3$, t $CO_2$eq/t $MgCO_3$;

$MgCO_{3\,BL,i}$ = weighed average $MgCO_3$ content in limestone calcinated in base period 2001-2003 on plant *i*;

*i* = indication of the plant for which calculations are carried out.

**Lokhvitskiy and Zolochivskiy plants.**

$$BE_{ELEC,y,i} = 0,$$

where

$BE_{ELEC,y,i}$ = GHG emission in baseline scenario due to electric power consumption in year *y*, tCO2eq;

*i* = indication of the plant;

*y* = year for which calculations are carried out.

$$BE_{NG,y,i} = 0,$$

where

$BE_{NG,y,i}$ = GHG emission in baseline scenario due to natural gas consumption in year *y* by plant *i*, tCO2eq;

*i* = indication of the plant;

*y* = year for which calculations are carried out.

$BE_{Coal,y,i} = 0$,

where

$BE_{Coal,y,i}$ = GHG emission in baseline scenario due to coal consumption in year *y* by plant *i*, tCO2eq;

*i* = indication of the plant;

*y* = year for which calculations are carried out.

$$BE_{CH4,BL,y,i} = (MSW_{T,BL,y,i} \cdot MSW_{F,BL,i} \cdot MCF \cdot DOC \cdot DOC_F \cdot F \cdot \frac{16}{12} - R_{BL}) \cdot (1 - OX) \cdot GWP_{CH4},$$

where

$BE_{CH4,BL,y}$ = greenhouse gases emissions according to the baseline scenario associated with the utilization of pulp by it's removal to the landfill in the year, tCO2eq;

$MSW_{T,BL,y,i}$ = total amount of pulp transferred to landfills by plant *i* according to the baseline scenario in year *y*, t;

$MSW_{F,BL,i}$ = part of pulp generated by plant *i* transported to the landfill according to the baseline scenario;

*MCF* = methane utilized in baseline scenario; (2006 IPCC)

*DOC* = Portion of pulp that is expected to decompose; (2006 IPCC)

$DOC_F$ = Portion of pulp that decompose in practice; (2006 IPCC)

*F* = Fraction of CH4 in landfill gas; (1996 IPCC)

$\frac{16}{12}$ = factor of carbon conversion in methane;

*R* = CH4 utilized in year *y*, t CH4;

*OX* = oxidation factor, (1996 IPCC)

$GWP_{CH4}$ = global warming potential of methane tCO2eq/tCH4; (in accordance with decision of UNFCCC and Kyoto protocol)

*i* = indication of the plant for which calculations are carried out;

*y* = year for which calculations are carried out.

$MSW_{T,BL,y,i} = MSW_{T,PJ,y,i}$,

where

$MSW_{T,BL,y,i}$ = amount of pulp transferred to landfills by plant *i* according to the baseline scenario in year *y*, t ;

$MSW_{T,PJ,y,i}$ = amount of pulp selled off by plant *i* according to the project scenario in year *y*, t;

*i* = indication of the plant for which calculations are carried out;

*y* = year for which calculations are carried out.

$BE_{Calc,y,i} = 0$,

where

$BE_{Calc,y,i}$ = GHG emissions in baseline scenario due to lime calcination in project year *y* on plant *i*, t $CO_2$eq;

*i* = indication of the plant for which calculations are carried out;
*y* = year for which calculations are carried out.

**Emission reduction**

Emission reduction is calculated according to the formula:

$$ER_y = BE_y - PE_y,$$

Where
$ER_y$ = emission reduction in year *y*, tCO2e;
$BE_y$ = baseline GHG emissions in year *y*, tCO2e;
$PE_y$ = GHG emissions from the project activity in year *y*, tCO2e;
*y* = year for which calculations are carried out.

The monitoring plan presents the quality assurance and control procedures for the monitoring process. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

Data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The roles and responsibilities of the persons involved to monitoring process are described in full in section D.3 of PDD and demonstrated on the Scheme of data collection for Monitoring Report.

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

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

CARs (CAR09-CAR13) and their resolutions/conclusions applicable to monitoring plan are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

## 4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential indirect external leakage of CO2, CH4, N2O generated by fuel production and its transportation and appropriately explains that they are neglected.

No issues applicable to leakage were found.

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

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

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are:

| Year | Greenhouse gases project emission (tonnes of CO2equivalent) |
|---|---|
| 2004 | 66553 |
| 2005 | 70023 |
| 2006 | 97186 |
| 2007 | 101688 |
| **Total 2004-2007:** | 335450 |
| **Average number of reduction 2004-2007:** | 83863 |
| 2008 | 87714 |
| 2009 | 55936 |
| 2010 | 70049 |
| 2011 | 112252 |
| 2012 | 113933 |
| **Total 2008-2012:** | 439884 |
| **Average number of reduction 2008-2012:** | 87977 |
| 2013 | 113933 |
| 2014 | 113933 |

| | |
|---|---|
| 2015 | 113933 |
| 2016 | 113933 |
| 2017 | 113933 |
| 2018 | 113933 |
| 2019 | 113933 |
| 2020 | 113933 |
| 2021 | 113933 |
| 2022 | 113933 |
| 2023 | 113933 |
| 2024 | 113933 |
| 2025 | 113933 |
| **Total 2013-2025:** | 1481129 |
| **Average number of reduction 2013-2025:** | 113933 |
| **Total 2004-2025:** | 2256463 |
| **Average number of reduction 2004-2025:** | 102567 |

(b) No leakage is expected during the project activity;

(c) Emissions for the baseline scenario (within the project boundary), which are:

| **Year** | **Greenhouse gases baseline emission (tonnes of CO2 equivalent)** |
|---|---|
| 2004 | 178931 |
| 2005 | 497972 |
| 2006 | 891146 |
| 2007 | 1131634 |
| **Total 2004-2007:** | 2699683 |
| **Average number of reduction 2004-2007:** | 674921 |
| 2008 | 1030302 |
| 2009 | 879496 |
| 2010 | 877990 |
| 2011 | 1196322 |
| 2012 | 1196322 |
| **Total 2008-2012:** | 5180432 |
| **Average number of reduction 2008-2012:** | 1036086 |
| 2013 | 1196322 |
| 2014 | 1196322 |
| 2015 | 1196322 |
| 2016 | 1196322 |
| 2017 | 1196322 |

| | |
|---|---|
| 2018 | 1196322 |
| 2019 | 1196322 |
| 2020 | 1196322 |
| 2021 | 1196322 |
| 2022 | 1196322 |
| 2023 | 1196322 |
| 2024 | 1196322 |
| 2025 | 1196322 |
| **Total 2013-2025:** | 15552186 |
| **Average number of reduction 2013-2025:** | 1196322 |
| **Total 2004-2025:** | 23432301 |
| **Average number of reduction 2004-2025:** | 1065105 |

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are:

| **Year** | **Estimated emission redactions (tonnes of CO2 equivalent)** |
|---|---|
| 2004 | 112378 |
| 2005 | 427949 |
| 2006 | 793960 |
| 2007 | 1029946 |
| **Total 2004-2007:** | 2364233 |
| **Average number of reduction 2004-2007:** | 591058 |
| 2008 | 942588 |
| 2009 | 823560 |
| 2010 | 807941 |
| 2011 | 1084070 |
| 2012 | 1082389 |
| **Total 2008-2012:** | 4740548 |
| **Average number of reduction 2008-2012:** | 948109 |
| 2013 | 1082389 |
| 2014 | 1082389 |
| 2015 | 1082389 |
| 2016 | 1082389 |
| 2017 | 1082389 |
| 2018 | 1082389 |
| 2019 | 1082389 |
| 2020 | 1082389 |
| 2021 | 1082389 |
| 2022 | 1082389 |

| | |
|---|---|
| 2023 | 1082389 |
| 2024 | 1082389 |
| 2025 | 1082389 |
| **Total 2013-2025:** | 14071057 |
| **Average number of reduction 2013-2025:** | 1082389 |
| **Total 2004-2025:** | 21175838 |
| **Average number of reduction 2004-2025:** | 962538 |

Emission reductions estimation after the first commitment period

The estimates referred to above are given:

(a) On a periodic basis;

(b) From 01/01/2004 to 31/12/2025, covering the whole crediting period;

(c) On a source-by-source basis;

(d) For CO2

(e) In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formula used for calculating the estimates referred above, which is

$$ER_y = BE_y - PE_y,$$

Where
$ER_y$ = emission reductions in year $y$, tCO2e;
$BE_y$ = baseline emissions in year $y$, tCO2e;
$PE_y$ = project emissions in year $y$, tCO2e;
$y$ = year of provided calculations.

is consistent throughout the PDD.

Data sources used for calculating the estimates referred to above, such as:

- Statistic data on fuel and energy consumtion of factory and factory production
- Dafault values

are clearly identified, reliable and transparent.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

No issues applicable to estimation of emission reductions or enhancements of net removals were found.

## 4.10 Environmental impacts (48)

Collection, handling and transfer of waste for utilization is carried out in accordance with the law of Ukraine “On waste”.

The legal foundation for handling waste are the current legal and normative acts on environmental safety.

Production waste, depending on its physical, chemical and biological characteristics is divided into four classes of danger:

- I class - extremely high-risk waste;
- II class - high-risk waste;
- III class - medium-risk waste;
- IV class - low-risk waste.

Procedures for handling waste are described in Annex 3 of this document.

“Rise-Maxymko” PJSC has the necessary Environmental Impact Assessment of its activities in accordance with Ukrainian law.

In general the «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko» project will have positive effect on the environment. The following points will give detailed information on the positive effect on the environment:

1. The project implementation will reduce $CO_2$ emissions in the city of sites of sugar plants location due to more effective energy consumption. This will be achieved by implementing modern equipment and preproduction processes.

2. Due to lower fuel consumption, electricity and ecological technologies for the utilization of organic waste, the implementation of the project will reduce emissions of $SO_{x,}$ NOx, CO and $CH_4$ solid particles (co-products of combustion).

No transboundary environmental impacts isare expected from the implementation of this project.

**Impact on the aquatic environment**

Impact on the aquatic environment will be the same as in the baseline scenario. The existing technologies used in the production of sugar foresee the disposal of waste water through the drainage system with mandatory chemical control. All these actions are stipulated by the Water Code of Ukraine, State Standard GOST 28.74-82 “Rules of hygiene and quality control”, Construction rules and regulations SNiP 4630-92 that determine the maximum concentration for internal water objects. Disposal into open water objects will not be done.

Project implementation will have positive effect. It will allow the reducing of water consumption and, as a result, lead to the reduction of waste water discharge.

**Impact on ambient air**

Project implementation will have positive effect on air:

1) Reduction of the emissions of NOx, SOx, CO and solid particles due to the use of more environmentally clean technologies;

2) Reduced consumption of electric power will lead to lower emissions of the same pollutants into the air;

3) Will reduce the emission of CH4 through the implementation of ecological technologies for the utilization of organic waste.

**Effects on land use**

There will be no effect on land/soil.

The corresponding law on land use is stated in the Land Code of Ukraine. The National technological practice/standard: State Standard GOST 17.4.1.02-83 “Protection of nature, soil. Classificatioin of chemicals for pollution controlling”.

**Impact on biodiversity**

There will be no impact on biodiversity.

**Generation of waste, waste discharge and handling**

Generation of waste, waste discharge and handling are present. In the process of project implementation waste will be generated after the dismantling of outdated equipment, pipes etc. There will be construction waste as a result of dismantling of boilers and construction of boiler shops and others.

Collection, handling and transfer of waste for utilization of the enterprise's waste will be carried out in accordance with the law of Ukraine "On waste".

Handling procedures are described in Annex 3 of PDD.

Conclusions concerning the most significant environmental impacts from implementation of activities under this project are presented in the Environmental Impact Assessment (EIA), obtained according to state building norms of Ukraine A.2.2-1-2003:

- Permission #5610300000-3 for pollutants waste into the athmospheric air by stationary sources;
- Conclusion of the Sanitation and Epidemiological expertise № 02.01.-26/234 dated 12.05.2011;
- Addition to the permission #22 dated 13.09.2010. "List and amount of waste acceptable for disposal";
- Limits for generation and disposal of waste for 2011;
- Permission # 564030/22 dated 13.09.2010 for waste disposal in 2011;
- Agreement for exhausted wires delivery #A0505 dated 05.05.2011.

CAR14 and its resolution/conclusion applicable to environmental impacts are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 2) below.

### 4.11 Stakeholder consultation (49)

No stakeholders' comments were received.

### 4.12 Determination regarding small scale projects (50-57)

Not applicable

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

Not applicable

### 4.14 Determination regarding programmes of activities (65-73)

Not applicable

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

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

## 6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»" project of «Company «MT-Invest» LTD located in Yasenivtsi village, Dubno town, Kremenets town, Chervonozavodske town, 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.

Project participant/s used the "Combined tool to identify the baseline scenario and demonstrate additionality". In line with this tool, the PDD provides barrier 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 two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 04 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 05) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

# 7 REFERENCES

**Category 1 Documents:**
Documents provided by «Company «MT-Invest» LTD that relate directly to the GHG components of the project.

/1./ PDD «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD version 01 dated 18/08/2011.

/2./ PDD «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD version 02 dated 16/09/2011.

/3./ PDD «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD version 04 dated 10/02/2012.

/4./ PDD «Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko»» project of «Company «MT-Invest» LTD version 05 dated 20/03/2012.

/5./ Zolochiv_v.1.xls – greenhouse gases emission reduction calculation for Zolochivskiy sugar plant – excel file.

/6./ Dubno_v.1.xls – greenhouse gases emission reduction calculation for Dubenskiy sugar plant excel file

/7./ Kremenets_v.1.xls – greenhouse gases emission reduction calculation for Kremenetskiy sugar plant – excel file

/8./ Lohvytsi_v.1.xls – greenhouse gases emission reduction calculation for Lokhvitskiy sugar plant – excel file

/9./ TotalER_v.1.xls – calculation of total greenhouse gases emission reduction for JI project – excel file

/10./ Letter of Endorsement №3601/23/7 issued by State ecological investment agency of Ukraine dated 13.12.2011.

**Category 2 Documents:**

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

/1/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006

/2/ Joint Implementation Project Design Document Form, version 01

/3/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.

/4/ JISC Guidance on criteria for baseline setting and monitoring. Version 02.

/5/ “Combined tool to identify the baseline scenario and demonstrate additionality” (Version 03.0.0)

/6/ Glossary of Joint Implementation Terms, Version 03.

/7/ Decree #43 on approval of indexes of specific carbon dioxide emissions in the year 2010 issued by NEIA dated 28.03.2011.

/8/ Decree #62 on approval of indexes of specific carbon dioxide emissions in the year 2008 issued by NEIA dated 15.04.2011.

/9/ Decree #63 on approval of indexes of specific carbon dioxide emissions in the year 2009 issued by NEIA dated 15.04.2011.

/10/ Decree #75 on approval of indexes of specific carbon dioxide emissions in the year 2011 issued by NEIA dated 12.05.2011.

/11/ Agreement № 23 TP
10 Jun 2009
The implementation of complex works on the introduction of the automation of boiler BKZ-75-39-FB (without protection) on the thermal power plant of the Chervonozavodska branch of PJSC “Rise-Maksymko”

/12/ Agreement № 23 TP

02 Jul 2011
The implementation of complex engineering works and the delivery of the equipment for the automation of the boiler BKZ-75-39-FB (regulation) on the thermal power plant of the Chervonozavodska branch of PJSC “Rise-Maksymko”

/13/ Act № 01-0000820
30 Nov 2010
The introduction of the intellectual property rights object into economic circulation as part of intangible assets (the software for automation of boiler #2 (regulation)

/14/ Act № 01-0000750
16 Nov 2010
The introduction of the intellectual property rights object into economic circulation as part of intangible assets (the software for automation of boiler #4)

/15/ Act № 01-0000679
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (dry pulp granulator)

/16/ Act № 01-0000575
22 Sept 2010
Commissioning of the fixed assets (sandfilter)

/17/ Act № 01-0000402
16 Jul 2010
Commissioning of the fixed assets (gas pressure regulator AGID-200N)

/18/ Act № 01-0000308
22 Jun 2010
Commissioning of the fixed assets (pump SVN 80/32)

/19/ Act № 01-0000820
30 Nov 2010
The introduction of the intellectual property rights object into economic circulation as part of intangible assets (the software for automation of boiler #4 (control)

/20/ Act № 01-0000689
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (press for pulp STORD-2500)

/21/ Act № 01-0000040
31 Mar 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (drain and carbonation sump 5-tiered)

/22/ Act 01-0000010
30 Apr 2010
Commissioning of the fixed assets manufactured by economic means (reservoir patochnyy FAR-10000 cubic meters. (2008)

/23/ Act № 01-0000664

30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (vacuum apparatus Noton-800)

/24/ Act № 01-0000561
31 Oct 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (vacuum apparatus 111 product VAT-800)

/25/ Act № 01-0000687
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (pump for massecuite (Italy)

/26/ Act № 01-0000699
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (VMA V2200 Centrifuge)

/27/ Act № 01-0000698
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (chamber-membrane filter-press XZG210/1500.210m. sq. km.)

/28/ Act № 01-0000681
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (slurry mixer)

/29/ Act № 01-0000694
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (floatable platform for unloading heavy machines #2)

/30/ Act № 01-0000482
30 Sept 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (floatable platform for unloading heavy machines #2)

/31/ Act № 01-0000680
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (elevator for wet sugar)

/32/ Act № 01-0000696
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (conveyor for raw sugar)

/33/ Act № 01-0000702
31 Dec 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (elevator for dry sugar Q-100 tons / hour)

/34/ Act № 01-0000686
30 Sept 2008

Commissioning of the fixed assets manufactured by economic means (multitubes drying apparatus for sugar)

/35/ Act № 01-0000672
31 Dec 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (building for drying pulp, 4,1724,8. m)

/36/ Act № 01-0000165
30 Sept 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (water tower)

/37/ Act № 01-0000050
31 Mar 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (the main pipeline of cold water from the Sula river)

/38/ Act № 01-0000442
31 Dec 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (lime milk mixer)

/39/ Act № 01-0000019
31 Mar 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (barometric condenser RH-PKO-2,4)

/40/ Act № 01-0000429
30 Sept 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (penstock of industrial outflows)

/41/ Act № 01-0000696
31 Dec 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (gas roaster of the "Trubostroy" system)

/42/ Act № 01-0000250
30 Sept 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (rotary apparatus RT-ETI)

/43/ Act № 01-0000204
30 Sept 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (lime milk mixer)

/44/ Act № 01-0000197
30 Sept 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (steam boiler BKZ-75-39)

/45/ Act № 01-0000682
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (sugar conveyor (Vimec)

/46/ Act № 01-0000346
30 Jun 2008
Commissioning of the fixed assets manufactured by economic means (scrubber (air exhaust filter from the sugar drying drum)

/47/ Act № 01-0000655
29 Sept 2008
Commissioning of the fixed assets manufactured by economic means

/48/ Act № 01-0000403
14 Jul 2010
Commissioning of the fixed assets (apple squeezer СЯ-10)

/49/ Act № 01-0000681
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (ammonia water collector)

/50/ Act № 01-0000564
11 Sept 2007
Acceptance and delivery (internal displacement) of the fixed assets manufactured by economic means (floatable platform for unloading heavy machinery)

/51/ Act № 01-0000699
30 Sept 2008
Commissioning of the fixed assets manufactured by economic means (centrifuge VMA V2200)

/52/ Act № 01-0000381
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (tray feeder L-3)

/53/ Act № 01-0000381
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (gas roaster of the "Turbostroy" system)

/54/ Act № 01-0000444
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (massecuite distributor of III product)

/55/ Act № 01-0000381
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (tray feeder P-2)

/56/ Act № 01-0000402
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (steam boiler BKZ-75-35)

/57/ Act № 01-0000361
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets

(automation battery of cartridge filters)

/58/ Act № 01-0000443
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (barometric condenser f1800mm. cascade type)

/59/ Act № 01-0000443
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (klerovochny mixer with propeller stirrer)

/60/ Act № 01-0000443
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (barometric condenser type RH-PKO-2,4)

/61/ Act № 01-0000444
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (massecuite distributor III product (I prod)

/62/ Act № 01-0000361
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (juice vacuum receiver and washing vertical cylinder)

/63/ Act № 01-0000412
31 Dec 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (service water pipe)

/64/ Act № 01-0000429
30 Sept 2008
Acceptance and delivery of the repaired, reconstructed and modernized facilities (penstock of industrial outflows)

/65/ Act № 01-0000226
30 Sept 2007
Acceptance and delivery of the repaired, reconstructed and modernized facilities (pump 100-63 ASKM with #55 kW engine)

/66/ Act № 01-0000443
29 Sept 2006
Acceptance and delivery (internal displacement) of the fixed assets (vacuum apparatus 111 imported product)

/67/ The reference of the PJSC "Rise-Maksymko
01 Sept 2011
Types of equipment and registration numbers

/68/ The reference of the PJSC "Rise-Maksymko
2001-2005
Activities made on the basis of design documentation

/69/ The reference №17 of the “Rise-Maksymko” Kremenetsk branch
15 Sept 2011
According to the registration book of the fixed assets of property facilities, implemented measures (equipment, complex, systems,

mechanisms) meet registration numbers

/70/ Act №11
the III quarter of 2008
Acceptance and delivery (internal displacement) of the fixed assets (granulator equipment )

/71/ Act №10
the II quarter of 2008
Acceptance and delivery (internal displacement) of the fixed assets (pulp press Stord, 2 items )

/72/ Act №9
the III quarter of 2008
Acceptance and delivery (internal displacement) of the fixed assets (centrifuge K 2300)

/73/ Act №8
the IV quarter of 2010
Acceptance and delivery (internal displacement) of the fixed assets (beetrod EUB-12, railway scorching oven, centrifuge AUVV)

/74/ Act №7
the IV quarter of 2010
Acceptance and delivery (internal displacement) of the fixed assets (boiler, beetrod EUB-12, elevator EDS-700, centrifuge FPN, 2 items)

/75/ Act №6
the IV quarter of 2010
Acceptance and delivery (internal displacement) of the fixed assets (1st carbonation boiler, beetrod EUB-12, elevator EDO-700)

/76/ The reference of the agricultural enterprise “Niva” Ltd.
According to the registration book of the fixed assets of property facilities, implemented measures (equipment, complex, systems, mechanisms) meet registration numbers

/77/ Act №9
the IV quarter of 2007
Acceptance and delivery (internal displacement) of the fixed assets (frequency converter, 2 items; accumulator)

/78/ Act №7
the III quarter of 2007
Acceptance and delivery (internal displacement) of the fixed assets (resistor, frequency converter, 2 items)

/79/ Act №6
the IV quarter of 2007
Acceptance and delivery (internal displacement) of the fixed assets (centrifuge BMN II, centrifuge BMW I)

/80/ Act №4
the III quarter of 2007
Acceptance and delivery (internal displacement) of the fixed assets (frequency converter, controller, 2 items)

/81/ Act №1

the III quarter of 2007
Acceptance and delivery (internal displacement) of the fixed assets (pregranulator)

**Persons interviewed:**

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

/1/ Vasily Ker'yachenko - Chief Engineer, Dubenskiy sugar factory

/2/ Igor Zolotar - Chief Energy Engineer, Dubenskiy sugar factory

/3/ Kuzmuk Andrei - Heat Engineer, Dubenskiy sugar factory

/4/ Redko Victor - Chief Engineer, Kremenetskiy sugar factory

/5/ Nikolai Volchalyuk - Chief Energy Engineer, Kremenetskiy sugar factory

/6/ Anatoly Polishchuk - Heat Engineer, Kremenetskiy sugar factory

/7/ Nikolai Zarechny - Chief Engineer, Zolochivskiy sugar factory

/8/ Roman Nedelskyy - Chief Energy Engineer, Zolochivskiy sugar factory

/9/ Vyshinsky Igor - Heat Engineer, Zolochivskiy sugar factory

/10/ Olexandr Lukyanov - Chief Energy Engineer, Lokhvytskiy sugar factory

/11/ Leonid Harkavin - Technical Director, Lokhvytskiy sugar factory

/12/ Anatoly Yevtushenko - Head of CHP, Lokhvytskiy sugar factory

/13/ Evgen Zuravliov – Director on Ecology projects

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## APPENDIX A: DETERMINATION PROTOCOL

**Table 1 Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)**

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| **General description of the project** | | | | |
| **Title of the project** | | | | |
| - | Is the title of the project presented? | Conduction of the complex technical and technological modernization of an enterprise which is aimed at the reduction of energy consumption and the implementation of the utilization system of organic waste from sugar production on PJSC «Rise-Maksymko» | OK | OK |
| - | Is the sectoral scope to which the project pertains presented? | Scope #3:Energy demand<br>Scope #13: Waste handling and disposal<br><br>Corrective Action Request (CAR) 15:<br>The proposed project activity not related to the scope #2. Please correct. | CAR15 | OK |
| - | Is the current version number of the document presented? | PDD version number: 05 | OK | OK |
| - | Is the date when the document was completed presented? | Data of Completion: 20/03/2012 | OK | OK |
| **Description of the project** | | | | |
| - | Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the:<br>a) Situation existing prior to the starting date of the project;<br>b) Baseline scenario; and<br>c) Project scenario (expected outcome, | Corrective Action Request (CAR) 01:<br>Please use in the PDD font size provided «JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM» - version 01. | CAR01 | OK |

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| | including a technical description)? | | | |
| - | Is the history of the project (incl. its JI component) briefly summarized? | Yes, brief description of project history provided. | OK | OK |
| **Project participants** | | | | |
| - | Are project participants and Party(ies) involved in the project listed? | Project participants and parties listed in the table in section A.3 of PDD.<br>Parties Project: Ukraine (host country). | OK | OK |
| - | Is the data of the project participants presented in tabular format? | Corrective Action Request (CAR) 02:<br>Table A.3 in the PDD must be submitted in a format that provided in the version 04 of the "Guidelines for users of the JI PDD form". | CAR02 | OK |
| - | Is contact information provided in Annex 1 of the PDD? | Corrective Action Request (CAR) 03:<br>"Company "MT-Invest" Ltd. Is not Project Participant. Please exclude information about it from Annex 1. | CAR03 | OK |
| - | Is it indicated, if it is the case, if the Party involved is a host Party? | Yes, Ukraine is a host Party | OK | OK |
| **Technical description of the project** | | | | |
| **Location of the project** | | | | |
| - | Host Party(ies) | Ukraine | OK | OK |
| - | Region/State/Province etc. | The project is located in Lviv region, Rivne region, Ternopil region, Poltava region | OK | OK |
| - | City/Town/Community etc. | Yasenivtsi village, Dubno town, Kremenets town, Chervonozavodske town | OK | OK |
| - | Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page) | Clarification Request (CL) 06:<br>In PDD indicated only the coordinates of cities of plants location. Please specify geographic coordinates of plants. | CL06 | OK |
| **Technologies to be employed, or measures, operations or actions to be implemented by the project** | | | | |
| - | Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation | List and brief description of mesures to be implemented by the project provided in section A.4.2 of PDD. | OK | OK |

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| | schedule described? | | | |
| **Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances** | | | | |
| - | Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page) | Corrective Action Request (CAR) 04:<br>Clarification how anthropogenic GHG emission reductions are to be achieved is not provided. Please correct. | CAR04 | OK |
| - | Is it provided the estimation of emission reductions over the crediting period? | Clarification Request (CL) 01:<br>Please include in this section refer to the corresponding «Excel» file with the calculations.<br><br>Clarification Request (CL) 02:<br>Please number the tables with information of the estimates (calculations) of emission reductions. | CL01<br><br>CL02 | OK<br><br>OK |
| - | Is it provided the estimated annual reduction for the chosen credit period in tCO2e? | Yes, the estimated annual reduction for the chosen credit period in tCO2e is provided. | OK | OK |
| - | Are the data from questions above presented in tabular format? | Yes. | OK | OK |
| **Estimated amount of emission reductions over the crediting period** | | | | |
| - | Is the length of the crediting period Indicated? | Yes, leight of crediting period is 22 years (264 months). | OK | OK |
| - | Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided? | Yes, estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided in section A.4.3.1 of PDD. | OK | OK |
| **Project approvals by Parties** | | | | |
| 19 | Have the DFPs of all Parties listed as “Parties involved” in the PDD provided written project approvals? | Clarification Request (CL) 03:<br>Section A.5 PDD must specify the names of DFPs (parties involved) that will approve the project. | CL03 | OK |
| 19 | Does the PDD identify at least the host Party as a “Party involved”? | Yes, Ukraine is the Host Party. | OK | OK |
| 19 | Has the DFP of the host Party issued a written project approval? | Corrective Action Request (CAR) 05:<br>No Letters of Aapproval of the project issued by the parties involved. | CAR05 | |

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| 20 | Are all the written project approvals by Parties involved unconditional? | See CAR05 above. | OK | OK |
| **Authorization of project participants by Parties involved** | | | | |
| 21 | Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through:<br>− A written project approval by a Party involved, explicitly indicating the name of the legal entity? or<br>− Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity? | See CAR05 above. | OK | OK |
| **Baseline setting** | | | | |
| 22 | Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline?<br>− JI specific approach<br>− Approved CDM methodology approach | PDD describes the JI specific approach used to identify the baseline scenario.<br><br>Corrective Action Request (CAR) 06:<br>Please provide date of baseline setting according required format DD/MM/YYYY. | CAR06 | OK |
| **JI specific approach only** | | | | |
| 23 | Does the PDD provide a detailed theoretical description in a complete and transparent manner? | Yes, the PDD provide a detailed theoretical description in a complete and transparent manner. | OK | OK |
| 23 | Does the PDD provide justification that the baseline is established:<br>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?<br>(b) Taking into account relevant national and/or sectoral policies and circumstance? | In the PDD in a reasonable way showed that the baseline was determined by compiling a listing and description of real scenarios of future scenarios based on conservative assumptions and subsequent selection the most attractive of these scenarios. | OK | OK |

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| | − Are key factors that affect a baseline taken into account?<br>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors?<br>(d) Taking into account of uncertainties and using conservative assumptions?<br>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?<br>(f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate? | | | |
| 24 | If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above? | To determine the baseline scenario and demonstrate additionality used "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 03.0.0). | OK | OK |
| 25 | If a multi-project emission factor is used, does the PDD provide appropriate justification? | For baseline emissions calculations were used CO2 emission factor for the projects of reducing electricity consumption from Ukraine electricity network, emission factor for natural gas and global warmig potential of methane. All factors are justified. | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 26 (a) | Does the PDD provide the title, reference number and version of the approved CDM methodology used? | N/A | OK | OK |
| 26 (a) | Is the approved CDM methodology the most | N/A | OK | OK |

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| | recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)? | | | |
| 26 (b) | Does the PDD provide a description of why the approved CDM methodology is applicable to the project? | N/A | OK | OK |
| 26 (c) | Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology? | N/A | OK | OK |
| 26 (d) | Is the baseline identified appropriately as a result? | N/A | OK | OK |
| **Additionality** | | | | |
| **JI specific approach only** | | | | |
| 28 | Does the PDD indicate which of the following approaches for demonstrating additionality is used?<br>(a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals;<br>(b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality;<br>(c) Application of the most recent version of | In section B.1 of the PDD was provided the analysis of project additionality, which aims to demonstrate that the project scenario is not part of the specified baseline, and that the project will achieve GHG emissions reductions against to baseline. The analysis was performed based on the latest version of “Combined tool to identify the baseline scenario and demonstrate additionality” (Version 03.0.0), which was approved by the CDM Executive Board and fully applied to JI projects. | OK | OK |

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| | the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board". | | | |
| 29 (a) | Does the PDD provide a justification of the applicability of the approach with a clear and transparent description? | Barriers analysis and common practice analysis which applied are widely used for additionality demonstration of the project activity. | OK | OK |
| 29 (b) | Are additionality proofs provided? | Yes, justification of additionality provided in section B.1 of PDD. | OK | OK |
| 29 (c) | Is the additionality demonstrated appropriately as a result? | Corrective Action Request (CAR) 07:<br>In the PDD does not specify how the registration of this project as JI project will help overcome identified barriers. | CAR07 | OK |
| 30 | If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method? | All explanations, descriptions and analyses made in accordance with the "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 03.0.0). | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 31 (a) | Does the PDD provide the title, reference number and version of the approved CDM methodology used? | N/A | OK | OK |
| 31 (b) | Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project? | N/A | OK | OK |
| 31 (c) | Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology? | N/A | OK | OK |
| 31 (d) | Are additionality proofs provided? | N/A | OK | OK |
| 31 (e) | Is the additionality demonstrated appropriately as a result? | N/A | OK | OK |
| **Project boundary (applicable except for JI LULUCF projects)** | | | | |
| **JI specific approach only** | | | | |

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| 32 (a) | Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are:<br>(i) Under the control of the project participants?<br>(ii) Reasonably attributable to the project?<br>(iii) Significant? | Corrective Action Request (CAR) 08:<br>Determinated monitoring plan includes calculations of GHG emissions associated with utilizations of organic waste in project scenario. But these emissions are absence in table 4 of PDD. Please correct or explain. | CAR08 | OK |
| 32 (b) | Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above? | Yes, the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above. | OK | OK |
| 32 (c) | Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate? | Yes, project boundary represented in scheme form on Pic. 3.1 and Pic. 3.2 and in tabular form in Table 4. | OK | OK |
| 32 (d) | Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified? | See CAR06 above. | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 33 | Is the project boundary defined in accordance with the approved CDM methodology? | N/A | OK | OK |
| **Crediting period** | | | | |
| 34 (a) | Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began? | 01/09/2000 - in accordance with the Order #76 workgroup for reducing power consumption and utilization of organic waste, which appeared as a result of sugar production, was established at Dubenskiy sugar plant. Within the duties of this group are the consideration of possibility and provision of receiving of additional investments from Kyoto Protocol mechanism. This date is considered to be the date of project recognition as JI project. | OK | OK |
| 34 (a) | Is the starting date after the beginning of 2000? | Yes. | OK | OK |
| 34 (b) | Does the PDD state the expected operational | 25 years (300 months) | OK | OK |

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| | lifetime of the project in years and months? | | | |
| 34 (c) | Does the PDD state the length of the crediting period in years and months? | 22 years (264 months) | OK | OK |
| 34 (c) | Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project? | Yes, starting date of the crediting period is after the date the first emission reductions are generated. | OK | OK |
| 34 (d) | Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project? | Clarification Request (CL) 04:<br>Please specify that the crediting period of ERUs generating started after the beginning of 2008 and continuing over the life cycle. | CL04 | OK |
| 34 (d) | If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval?<br>Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012? | Clarification Request (CL) 05:<br>Please specify that crediting period extension beyond 2012 requires approval by the Host country. | CL05 | OK |
| **Monitoring plan** | | | | |
| 35 | Does the PDD explicitly indicate which of the following approaches is used?<br>− JI specific approach<br>− Approved CDM methodology approach | JI specific approach was used. | OK | OK |
| **JI specific approach only** | | | | |
| 36 (a) | Does the monitoring plan describe:<br>− All relevant factors and key characteristics that will be monitored?<br>− The period in which they will be monitored?<br>− All decisive factors for the control and reporting of project performance? | Corrective Action Request (CAR) 09:<br>In calculations was used constant NCV 8.0 Gcal/ths $m^3$. But analysis of documentation showed that NCV of natural gas is variable value. Please correct or clarify. | CAR09 | OK |
| 36 (b) | Does the monitoring plan specify the indicators, constants and variables used that are reliable, | Yes, the monitoring plan specified the indicators, constants and variables used that are reliable, valid and provide | OK | OK |

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| | valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored? | transparent picture of the emission reductions or enhancements of net removals to be monitored. | | |
| 36 (b) | If default values are used:<br>− Are accuracy and reasonableness carefully balanced in their selection?<br>− Do the default values originate from recognized sources?<br>− Are the default values supported by statistical analyses providing reasonable confidence levels?<br>− Are the default values presented in a transparent manner? | Corrective Action Request (CAR) 10:<br>Not all needed sources and references were provided. Please correct. | CAR10 | OK |
| 36 (b) (i) | For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified? | Yes. All procedures of selection and justification of necessary values are described. | OK | OK |
| 36 (b) (ii) | For other values,<br>− Does the monitoring plan clearly indicate the precise references from which these values are taken?<br>− Is the conservativeness of the values provided justified? | Corrective Action Request (CAR) 11:<br>Please specify who is responsible for providing actual value of CO2 emission factor for the projects of reducing electricity consumption by Ukraine consumers. | CAR11 | OK |
| 36 (b) (iii) | For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable? | Corrective Action Request (CAR) 12:<br>Please indicate in PDD that the data monitored and required for the project determination will be kept for two years after the last transfer of ERUs the project. | CAR12 | OK |
| 36 (b) (iv) | Are International System Unit (SI units) used? | No. | OK | OK |
| 36 (b) (v) | Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring? | Yes, value of beer production and CO2 emission factor for the projects of reducing electricity consumption by Ukrainian consumers used to calculate baseline emissions but are obtained through monitoring. | OK | OK |

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| 36 (b) (v) | Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan? | Yes, use of parameters, coefficients, variables, etc. is consistent between the baseline and monitoring plan. | OK | OK |
| 36 (c) | Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"? | Yes monitoring plan developed in line with "Guidance on criteria for baseline setting and monitoring". | OK | OK |
| 36 (d) | Does the monitoring plan explicitly and clearly distinguish:<br>(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination?<br>(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination?<br>(iii) Data and parameters that are monitored throughout the crediting period? | Yes, all relevant parameters are described (see section D.1 of PDD). | OK | OK |
| 36 (e) | Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording? | The table in section D.1.1 PDD defined time (regularity) of monitoring and information sources with respect to all parameters and data to be monitored. | OK | OK |
| 36 (f) | Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate? | In the PDD described and explained all the algorithms and formulas used to calculating emissions for the baseline and project scenarios. | OK | OK |

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| 36 (f) (i) | Is the underlying rationale for the algorithms/formulae explained? | Yes, all necessary algorithms and formulae are clearly described. | OK | OK |
| 36 (f) (ii) | Are consistent variables, equation formats, subscripts etc. used? | Yes, all variables, equation format, subscripts etc. used consistent. | OK | OK |
| 36 (f) (iii) | Are all equations numbered? | Yes. | OK | OK |
| 36 (f) (iv) | Are all variables, with units indicated defined? | Yes. | OK | OK |
| 36 (f) (v) | Is the conservativeness of the algorithms/procedures justified? | Yes, analysis of supporting document justified conservativeness of the algorithms/procedures of monitoring. | OK | OK |
| 36 (f) (v) | To the extent possible, are methods to quantitatively account for uncertainty in key parameters included? | The level of uncertainty of data specified in the table of quality control and quality assurance procedures (see Section D.2 PDD).<br><br>Taken into account that all used most of data and parameters are defined based on statistic data and results of measurements by calibrated measuring equipment with the relevant accuracy and crosschecked by energy resouces supplyer and state autorities their level of uncertainty is defined as low. | OK | OK |
| 36 (f) (vi) | Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured? | Yes. | OK | OK |
| 36 (f) (vii) | Are any parts of the algorithms or formulae that are not self-evident explained? | No, all algorithms and formulas clearly explained | OK | OK |
| 36 (f) (vii) | Is it justified that the procedure is consistent with standard technical procedures in the relevant sector? | Yes. | OK | OK |
| 36 (f) (vii) | Are references provided as necessary? | See CAR09 above. | OK | OK |
| 36 (f) (vii) | Are implicit and explicit key assumptions explained in a transparent manner? | Yes, all implicit and explicit assumptions explained in a transparent manner. | OK | OK |
| 36 (f) (vii) | Is it clearly stated which assumptions and procedures have significant uncertainty | Used assumptions and procedures not have significant uncertainty. | OK | OK |

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| | associated with them, and how such uncertainty is to be addressed? | | | |
| 36 (f) (vii) | Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided? | Uncertainty range was defined as low. | OK | OK |
| 36 (g) | Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project?<br>Does the monitoring plan provide a reference as to where a detailed description of the standard can be found? | All monitoring standards that used in proposed monitoring plan are commonly used in Ukraine for energy consumtion metering. | OK | OK |
| 36 (h) | Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner? | See CAR08 above. | OK | OK |
| 36 (i) | Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request? | The quality assurance and control procedures described in section D.2 of PDD. | OK | OK |
| 36 (j) | Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities? | Yes, the responsibilities and the authority regarding the monitoring activities are clearly identified in section D.3 of PDD. | OK | OK |
| 36 (k) | Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?<br>If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied? | Corrective Action Request (CAR) 13:<br>Section D.1.5 of the PDD requires from project participants to submit information about collection and archiving data on the environment impact as well as references to relevant norms of the host country. Please provide relevant data. | CAR13 | OK |
| 36 (l) | Does the monitoring plan provide, in tabular | Yes, all used parameters presented in sections D.1.1.1 and | OK | OK |

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| | form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations? | D.1.1.3 of PDD. | | |
| 36 (m) | Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project? | See CAR11 above. | OK | OK |
| 37 | If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above? | No any selected elements or combinations of approved CDM methodologies or methodological tools used in monitoring plan. | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 38 (a) | Does the PDD provide the title, reference number and version of the approved CDM methodology used? | N/A | OK | OK |
| 38 (a) | Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)? | N/A | OK | OK |
| 38 (b) | Does the PDD provide a description of why the approved CDM methodology is applicable to the project? | N/A | OK | OK |
| 38 (c) | Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in | N/A | OK | OK |

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| | accordance with the referenced approved CDM methodology? | | | |
| 38 (d) | Is the monitoring plan established appropriately as a result? | N/A | OK | OK |
| **Applicable to both JI specific approach and approved CDM methodology approach** | | | | |
| 39 | If the monitoring plan indicates overlapping monitoring periods during the crediting period:<br>(a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently?<br>(b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)?<br>(c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met?<br>(d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met? | There are no overlapping monitoring periods during the crediting period. | OK | OK |
| **Leakage** | | | | |
| **JI specific approach only** | | | | |
| 40 (a) | Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can | No leakage is expected in proposed project activity. | OK | OK |

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| | be neglected? | | | |
| 40 (b) | Does the PDD provide a procedure for an ex ante estimate of leakage? | No leakage is expected in proposed project activity. | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 41 | Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology? | N/A | OK | OK |
| **Estimation of emission reductions or enhancements of net removals** | | | | |
| 42 | Does the PDD indicate which of the following approaches it chooses?<br>(a) Assessment of emissions or net removals in the baseline scenario and in the project scenario<br>(b) Direct assessment of emission reductions | Assessment of emissions or net removals in the baseline scenario and in the project scenario was used. | OK | OK |
| 43 | If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emissions or net removals for the project scenario (within the project boundary)?<br>(b) Leakage, as applicable?<br>(c) Emissions or net removals for the baseline scenario (within the project boundary)?<br>(d) Emission reductions or enhancements of net removals adjusted by leakage? | Emissions for the project, baseline scenario and emission reductions were ex ante estimated. Results of estimations provided in section E of PDD and excel spreadsheets. | OK | OK |
| 44 | If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of:<br>(a) Emission reductions or enhancements of net removals (within the project boundary)?<br>(b) Leakage, as applicable?<br>(c) Emission reductions or enhancements of net removals adjusted by leakage? | N/A | OK | OK |
| 45 | For both approaches in 42<br>(a) Are the estimates in 43 or 44 given: | Yes, calculation of emission reductions presented in the PDD of the proposed project corresponds to all the | OK | OK |

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| | (i) On a periodic basis?<br>(ii) At least from the beginning until the end of the crediting period?<br>(iii) On a source-by-source/sink-by-sink basis?<br>(iv) For each GHG?<br>(v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?<br>(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?<br>(c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?<br>(d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?<br>(e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?<br>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?<br>(g) Are the estimates in 43 or 44 consistent throughout the PDD? | requirements of paragraph 45 of DVM. | | |

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| | (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve? | | | |
| 46 | If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation? | Yes, the PDD include an illustrative ex ante emissions calculation. | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 47 (a) | Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology? | N/A | OK | OK |
| 47 (b) | Is the estimation of emission reductions or enhancements of net removals presented in the PDD:<br>− On a periodic basis?<br>− At least from the beginning until the end of the crediting period?<br>− On a source-by-source/sink-by-sink basis?<br>− For each GHG?<br>− In tones of $CO_2$ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?<br>− Are the formula used for calculating the estimates consistent throughout the PDD?<br>− Are the estimates consistent throughout the PDD?<br>− Is the annual average of estimated emission | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve? | | | |
| **Environmental impacts** | | | | |
| 48 (a) | Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party? | Corrective Action Request (CAR) 14:<br>There is no information on transboundary impacts in the PDD. | CAR14 | OK |
| 48 (b) | If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party? | No significant environmental impacts related to project implementation expected. Therefore separate environmental impact assessment is not required. | OK | OK |
| **Stakeholder consultation** | | | | |
| 49 | If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide:<br>(a) A list of stakeholders from whom comments on the projects have been received, if any?<br>(b) The nature of the comments?<br>(c) A description on whether and how the comments have been addressed? | Procedures of Ukraine did not require consultations with stakeholders for proposed project. However, information on implementation measures of reducing technological power consumtion provided in the media and in electronic media (see section G of PDD). No negative stakeholders' comments were received on company adress. | OK | OK |
| **Determination regarding small-scale projects (additional elements for assessment)** | | | | |
| 50 | Does the PDD appropriately specify and justify | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | the SSC project type(s) and category(ies) that fall under:<br>(a) One of the types and thresholds of JI SSC projects as defined in .Provisions for joint implementation small-scale projects.? If the project contains more than one JI SSC project type component, does each component meet the relevant threshold criterion?<br>(b) One of the SSC project categories defined in the most recent version of appendix B of annex II to decision 4/CMP.1, or an additional project category approved by the JISC in accordance with the relevant provision in “Provisions for joint implementation small-scale projects”? | | | |
| 51 | Does the SSC PDD confirms and shows that the proposed JI SSC project is not a debundled component of a large project by explaining that there does not exist a JI (SSC) project with a publicly available determination in accordance with paragraph 34 of the JI guidelines:<br>(a) Which has the same project participants; and<br>(b) Which applies the same technology/measure and pertains to the same project category; and<br>(c) Whose determination has been made publicly available in accordance with paragraph 34 of the JI guidelines within the previous 2 years; and<br>(d) Whose project boundary is within 1 km of the project boundary of the proposed JI SSC project at the closest point? | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| **Applicable to bundled JI SSC projects only** | | | | |
| 52 (a) | Do all projects in the bundle:<br>(i) Have the same crediting period?<br>(ii) Comply with the provisions for JI SSC projects defined in "Provisions for joint implementation small-scale projects", in particular the thresholds referred to in 50 (a) above?<br>(iii) Retain their distinctive characteristics (i.e. location, technology/measure etc.)? | N/A | OK | OK |
| 52 (b) | Does the composition of the bundle not change over time? | N/A | OK | OK |
| 52 (c) | Has the AIE received (from the project participants):<br>(i) Information on the bundle using the form developed by the JISC (F-JI-SSCBUNDLE)?<br>(ii) A written statement signed by all project participants indicating that they agree that their individual projects are part of the bundle and nominating one project participant to represent all project participants in communicating with the JISC?<br>(iii) Indication by the Parties involved that they are aware of the bundle in their project approvals referred to in 19 above? | N/A | OK | OK |
| 53 | If the project participants prepared a single SSC PDD for the bundled JI SSC projects, do(are) all the projects:<br>(a) Pertain to the same JI SSC project category?<br>(b) Apply the same technology or measure?<br>(c) Located in the territory of the same host Party? | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| 54 | If the project participants prepared separate SSC PDDs for the bundled JI SSC projects, do(are) all the projects:<br>(a) Have SSC PDDs been prepared for all JI SSC projects in the bundle?<br>(b) Does each SSC PDD contain a single JI SCC project in the bundle? | N/A | OK | OK |
| 55 | If the projects in the bundle use the same baseline, does the F-JI-SSC-BUNDLE provide an appropriate justification for the use of the same baseline considering the particular situation of each project in the bundle? | N/A | OK | OK |
| 56 | Does the PDD indicate which of the following approaches is used for establishing a monitoring plan?<br>(a) By preparing a separate monitoring plan for each of the constituent projects;<br>(b) By preparing an overall monitoring plan including a proposal of monitoring of performance of the constituent projects on a sample basis, as appropriate. | N/A | OK | OK |
| 56 (b) | If the approach 57 (b) above is used,<br>(i) Are all the JI SSC projects located in the territory of the same host Party?<br>(ii) Do all the JI SSC projects pertain to the same project category?<br>(iii) Do all the JI SSC projects apply the same technology or measure?<br>(iv) Does the overall monitoring plan reflect good monitoring practice appropriate to the bundled JI SSC projects and provide for collection and archiving of the data needed to calculate the emission reductions achieved by | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | the bundled projects? | | | |
| **Applicable to all JI SSC projects** | | | | |
| 57 | Is the leakage only within the boundaries of non-Annex I Parties considered? | N/A | OK | OK |
| **Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)** | | | | |
| 58 | Does the PDD appropriately specify how the LULUCF project conforms to:<br>(a) The definitions of LULUCF activities included in paragraph 1 of the annex to decision 16/CMP.1, applying good practice guidance for LULUCF as decided by the CMP, as appropriate?<br>(b) In the case of afforestation, reforestation and/or forest management projects, the definition of "forest" selected by the host Party, which specifies:<br>(i) A single minimum tree crown cover value (between 10 and 30 per cent)? and<br>(ii) A single minimum land area value (between 0.05 and 1 hectare)? and<br>(iii) A single minimum tree height value (between 2 and 5 metres)? | N/A | OK | OK |
| **JI specific approach only** | | | | |
| 59 | Baseline setting - in addition to 22-26 above Does the PDD provide an explanation how the baseline chosen:<br>− Takes into account the good practice guidance for LULUCF, developed by the IPCC?<br>− Ensures conformity with the definitions, accounting rules, modalities and guidelines under Article 3, paragraphs 3 and 4, of the Kyoto Protocol? | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| 60 | Project boundary - alternative to 32-33<br>(a) Does the project boundary geographically delineate the JI LULUCF project under the control of the project participants?<br>(a) If the JI LULUCF project contains more than one discrete area of land,<br>(i) Does each discrete area of land have a unique geographical identification?<br>(ii) Is the boundary defined for each discrete area?<br>(ii) Does the boundary not include the areas in between these discrete areas of land?<br>(b) Does the project boundary encompass all anthropogenic emissions by sources and removals by sinks of GHGs which are:<br>(i) Under the control of the project participants;<br>(ii) Reasonably attributable to the project; and<br>(iii) Significant?<br>(c) Does the project boundary account for all changes in the following carbon pools:<br>− Above-ground biomass;<br>− Below-ground biomass;<br>− Litter;<br>− Dead wood; and<br>− Soil organic carbon?<br>(c) Does the PDD provide:<br>(i) The information of which carbon pools are selected?<br>(ii) If one or more carbon pools are not selected, transparent and verifiable information that indicates, based on conservative assumptions, that the pool is not a source?<br>(d) Is the project boundary defined on the basis | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | of a case-by-case assessment with regard to the criteria in (b) above? | | | |
| 61 (a) | Project boundary - alternative to 32-33 (cont.) Are the delineation of the project boundary and the gases and sources/sinks included appropriately described and justified in the PDD? | N/A | OK | OK |
| 61 (b) | Project boundary - alternative to 32-33 (cont.) Are all gases and sources/sinks included explicitly stated, and the exclusions of any sources/sinks related to the baseline or the LULUCF project appropriately justified? | N/A | OK | OK |
| 62 | Monitoring plan - in addition to 35-39 Does the PDD provide an appropriate description of the sampling design that will be used for the calculation of the net anthropogenic removals by sinks occurring within the project boundary in the project scenario and, in case the baseline is monitored, in the baseline scenario, including, inter alia, stratification, determination of number of plots and plot distribution etc.? | N/A | OK | OK |
| 63 | Does the PDD take into account only the increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of GHGs outside the project boundary? | N/A | OK | OK |
| **Approved CDM methodology approach only** | | | | |
| 64 (a) | Does the PDD provide the title, reference number and version of the approved CDM methodology used? | N/A | OK | OK |
| 64 (a) | Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | within the grace period (was the methodology revised to a newer version in the past two months)? | | | |
| 64 (b) | Does the PDD provide a description of why the approved CDM methodology is applicable to the project? | N/A | OK | OK |
| 64 (c) | Are all explanations, descriptions and analyses made in accordance with the referenced approved CDM methodology? | N/A | OK | OK |
| 64 (d) | Are the baseline, additionality, project boundary, monitoring plan, estimation of enhancements of net removals and leakage established appropriately as a result? | N/A | OK | OK |
| **Determination regarding programmes of activities (additional/alternative elements for assessment)** | | | | |
| 66 | Does the PDD include:<br>(a) A description of the policy or goal that the JI PoA seeks to promote?<br>(b) A geographical boundary for the JI PoA (e.g. municipality, region within a country, country or several countries) within which all JPAs included in the JI PoA will be implemented?<br>(c) A description of the operational and management arrangements established by the coordinating entity for the implementation of the JI PoA, including:<br>− The maintenance of records for each JPA?<br>− A system/procedure to avoid double counting (e.g. to avoid including a new JPA that has already been determined)?<br>− Provisions to ensure that persons operating JPAs are aware and have agreed to their | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| | activity being added to the JI PoA?<br>(d) A description of each type of JPAs that will be included in the JI PoA, including the technology or measures to be used?<br>(e) The eligibility criteria for inclusion of JPAs to the JI PoA for each type of JPA in the JI PoA? | | | |
| 67 | *Project approvals by Parties involved - additional to 19-20*<br>Are all Parties partly or entirely within the geographical boundary for the JI PoA listed as "Parties involved" and indicated as host Parties in the PDD? | N/A | OK | OK |
| 68 | *Authorization of project participants by Parties involved - additional to 21*<br>Is the coordinating entity presented in the PDD authorized by all host Parties to coordinate and manage the JI PoA? | N/A | OK | OK |
| 69 | *Baseline setting - additional to 22-26*<br>Is the baseline established for each type of JPA? | N/A | OK | OK |
| 70 | *Additionality - additional to 27-31*<br>Does the PDD indicate at which of the following levels that additionality is demonstrated?<br>(a) For the JI PoA<br>(b) For each type of JPA | N/A | OK | OK |
| 71 | *Crediting period - additional to 34*<br>Is the starting date of the JI PoA after the beginning of 2006 (instead of 2000)? | N/A | OK | OK |
| 72 | *Monitoring plan - additional to 35-39*<br>Is the monitoring plan established for each technology and/or measure under each type of JPA included in the JI PoA? | N/A | OK | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
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| 73 | Does the PDD include a table listing at least one real JPA for each type of JPA? | N/A | OK | OK |
| 73 | For each real JPA listed, does the PDD provide the information of:<br>(a) Name and brief summary of the JPA?<br>(b) The type of JPA?<br>(c) A geographical reference or other means of identification?<br>(d) The name and contact details of the entity/individual responsible for the operation of the JPA?<br>(e) The host Party(ies)?<br>(f) The starting date of the JPA?<br>(g) The length of the crediting period of the JPA?<br>(h) Confirmation that the JPA meets all the eligibility requirements for its type, including a description of how these requirements are met?<br>(i) Confirmation that the JPA has not been determined as a single JI project or determined under a different JI PoA? | N/A | OK | OK |

## Table 2 Resolution of Corrective Action and Clarification Requests

| Draft report clarifications and corrective action requests by validation team | Ref. to checklist question in table 1 | Summary of project participant response | Determination team conclusion |
|---|---|---|---|
| Corrective Action Request (CAR) 01:<br>Please use in the PDD font size provided «JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM» - version 01. | - | PDD was corrected in line with «JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM» - version 01. See PDD v.04. | PDD version 04 was checked and recognized as satisfactory. Issue is closed. |
| Corrective Action Request (CAR) 02:<br>Table A.3 in the PDD must be submitted in a format that provided in the version 04 of the "Guidelines for users of the JI PDD form". | - | Table A.3 was corrected. See PDD v.04. | Issue is closed due to the amendments made in the PDD. |
| Corrective Action Request (CAR) 03:<br>"Company "MT-Invest" Ltd. Is not Project Participant. Please exclude information about it from Annex 1. | - | Information on "Company "MT-Invest" Ltd. excluded from Annex 1. | The issue is closed due to the corrections made. |
| Corrective Action Request (CAR) 04:<br>Clarification how anthropogenic GHG emission reductions are to be achieved is not provided. Please correct. | - | Relevant information provided in section A.4.3 of PDD version 04. | Based on the modifications made, CAR04 is closed. |
| Corrective Action Request (CAR) 05:<br>No Letters of Aapproval of the project issued by the parties involved. | Item 19 | Pending | Pending |
| Corrective Action Request (CAR) 06:<br>Please provide date of baseline setting according required format DD/MM/YYYY. | Item 22 | Corrected. | CAR06 is closed |

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| Corrective Action Request (CAR) 07:<br>In the PDD does not specify how the registration of this project as JI project will help overcome identified barriers. | Item 29 (c) | Description how the registration of this project as JI project will help overcome identified barriers provided in section B.1 of PDD v.02. | The response to CAR07 was found satisfactory. CAR07 is closed. |
| Corrective Action Request (CAR) 08:<br>Determinated monitoring plan includes calculations of GHG emissions associated with utilizations of organic waste in project scenario. But these emissions are absence in table 4 of PDD. Please correct or explain. | Item 32 (a) | Table 4 was corrected. See PDD version 02. | CAR08 is closed based on the amendments made in the PDD. |
| Corrective Action Request (CAR) 09:<br>In calculations was used constant NCV 8.0 Gcal/ths $m^3$. But analysis of documentation showed that NCV of natural gas is variable value. Please correct or clarify. | Item 36 (a) | According to statistic data Net calorific value is variable and variables in period 8000-8300 ccal/$m^3$ (8.0-8.3 Gcal/ths $m^3$). To simplify the ex-ante calculations and taking into account the statistics of the enterprise in the ex-ante calculations used $NCV_{NG,\ y}$ = 8.0 Gcal/ths $m^3$, which objectively reflects the low calorific value of natural gas consumed by the PJSC «Rise-Maksymko» sugar plants. | CAR09 is closed based on the provided information. |
| Corrective Action Request (CAR) 10:<br>Not all needed sources and references were provided. Please correct. | Item 36 (b) | Sources of data and parameters and relevant references were provided in section D of PDD version 02. | PDD version 02 was checked and recognized as satisfactory. Issue is closed. |
| Corrective Action Request (CAR) 11:<br>Please specify who is responsible for proniding actual value of CO2 emission factor for the projects of reducing electricity consumption by Ukraine consumers. | Item 36 (b) (ii) | "Company "MT-Invest" Ltd. is responsible for providing actual value of CO2 emission factor for the projects of reducing electricity consumption by Ukraine consumers. Relevant information was added to PDD version 02. | The issue is closed due to the corrections made. |

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| Corrective Action Request (CAR) 12:<br>Please indicate in PDD that the data monitored and required for the project determination will be kept for two years after the last transfer of ERUs the project. | Item 36 (b) (iii) | Relevant information was added to PDD version 02. | The issue is closed based on the corrections made in the PDD. |
| Corrective Action Request (CAR) 13:<br>Section D.1.5 of the PDD requires from project participants to submit information about collection and archiving data on the environment impact as well as references to relevant norms of the host country. Please provide relevant data. | Item 36 (k) | Relevant information added to section D.1.5 of PDD version 02. | Necessary corrections have been made. The issue is closed. |
| Corrective Action Request (CAR) 14:<br>There is no information on transboundary impacts in the PDD. | Item 48 (a) | No transboundary environmental impact is expected from the implementation of this project. Relevant information added to section F.1 of PDD version 02. | The issue is closed based on the corrections made in the PDD. |
| Corrective Action Request (CAR) 15:<br>The proposed project activity not related to the scope #2. Please correct. | - | Corrected. | The issue is closed based on the corrections made in the PDD. |
| Clarification Request (CL) 01:<br>Please include in this section refer to the corresponding «Excel» file with the calculations. | - | Relevant references added to PDD version 02. | CL01 is closed based on the amendments made in the PDD. |
| Clarification Request (CL) 02:<br>Please number the tables with information of the estimates (calculations) of emission reductions. | - | Tables were numbered. | Necessary corrections have been made. The issue is closed. |

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| Clarification Request (CL) 03:<br>Section A.5 PDD must specify the name DFPs (parties involved) that will approve the project. | Item 19 | State Environmental Investment Agency of Ukraine is DFP of Ukraine.<br>Sponsor Party wasn't determinated on this stage of Project.<br>Relevant information added to PDD. | CL03 is closed based on the amendments made in the PDD |
| Clarification Request (CL) 04:<br>Please specify that the crediting period of ERUs generating started after the beginning of 2008 and continuing over the life cycle. | Item 34 (d) | Relevant references added to section C.3 of PDD version 04. | PDD version 04 was checked and recognized as satisfactory. Issue is closed. |
| Clarification Request (CL) 05:<br>Please specify that crediting period extension beyond 2012 requires approval by the Host country. | Item 34 (d) | Relevant references added to section C.3 of PDD version 04. | Issue is closed due to the amendments made in the PDD. |
| Clarification Request (CL) 06:<br>In PDD indicated only the coordinates of cities of plants location. Please specify geographic coordinates of plants. | - | Corrected. See section A.4.1.4 of PDD. | Issue is closed. |