

**TÜV Rheinland (China) Ltd. (TÜV Rheinland)**

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# **VERIFICATION REPORT**

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**Verification of the  
Joint Implementation Small-scale Project**  
“Implementation of energy-efficient lighting system in  
the Donetsk Region with the use of Kyoto Protocol  
mechanism: replacement of incandescent lamps with  
energy-efficient ones at budget financed and social  
entities in the Kramatorsk town (under Track 2)”

**ITL Project ID: UA2000046**

**Initial and first periodic verification:  
07/02/2011 – 31/08/2012**

**Report No. 01 998 9105067097 – VR1  
Revision No. 02.1**

**Customer: Carbon Futures LLP**

## VERIFICATION REPORT

<u>Date of first issue:</u> 07/02/2013	<u>Project No:</u> 01 998 9105067097 ITL Project ID: UA2000046
<u>Executor:</u> TÜV Rheinland (China) Ltd. (TÜV Rheinland)	
<u>Customer:</u> Carbon Futures LLP	<u>Client ref.:</u> Artem Ruban

### Summary:

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed the initial and first periodic verification of emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” (ITL Project ID UA2000046) for the period from the 07/02/2011 till the 31/08/2012.

The purpose of verification is to assess the reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks generated by a JI SSC project and reported by the project participants through the monitoring report in accordance with paragraph 37 of the JI guidelines.

In our opinion, the emission reductions reported through the monitoring report, version 03 dated 07/02/2013 are fairly stated and are accurate and free of material errors, omissions, or misstatements.

During the monitoring period the project has been implemented in accordance with the Project design document version 03.3 dated 15/06/2012.

The GHG emission reductions were calculated correctly on the basis of the revised and determined monitoring plan, revision 01.1 dated 07/02/2013 provided in Annex 1 to the Monitoring Report version 03 dated 07/02/2013.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is able to verify that the emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” during the period from the 07/02/2011 till the 31/08/2012 amount to 10 074 tonnes of CO<sub>2</sub> equivalent.

<u>Report No.:</u> 01 998 9105067097 – VR1	<u>Subject Group:</u> JI SSC	
<u>Project title:</u> “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)”		
<u>Work carried out by:</u> Dr. Valery Yakubovsky – Team leader Ms. Ganna Zadniproiana – Auditor Mr. Dmytro Rakovich - Trainee		
<u>Work verified by:</u> Dr. Lixin Li – Technical Reviewer		
<u>Determination Report approved by:</u> Mr. Praveen N. Urs - DOE/ AIE Manager		
<u>Date of this revision:</u> 08/02/2013	<u>Revision No.:</u> 02.1	<u>Number of pages:</u> <b>57</b>

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## Abbreviations

CO <sub>2</sub>	Carbon Dioxide
AIE	Accredited Independent Entity
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CFLs	Compact florescent lamps
CL	Clarification Request
DOE	Designated operational entity
DVM	Determination and Verification Manual
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Greenhouse Gas
I	Interview
ICLs	Incandescent lamps
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LoA	Letter of Approval
LoE	Letter of Endorsement
MR	Monitoring report
PDD	Project Design Document
PE	Project Emissions
SD	Supporting documentation
SSC	Small-scale
t	tonne
UNFCCC	United Nations Framework Convention on Climate Change

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## 1. VERIFICATION OPINION

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has performed the initial and first periodic verification of the emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” (ITL Project ID UA2000046) for the period from the 07/02/2011 till the 31/08/2012.

The project participants are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emission reductions generated by the project.

It is responsibility of TÜV Rheinland (China) Ltd. (TÜV Rheinland) to express an independent verification opinion - conclusion on the verified amount of emission reductions generated by the project and reported by the project participants through the monitoring report, version 03 dated 07/02/2013.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) has assessed the monitoring report on the basis of the revised monitoring plan, revision 01.1 dated 07/02/2013 contained in Annex 1 to the monitoring report, version 03 dated 07/02/2013.

The verification included the assessment of:

- project implementation in accordance with the Project Design Document (PDD);
- compliance with the monitoring plan;
- calculation of emission reductions and expression of a conclusion with a reasonable level of assurance about whether the reported GHG emission reductions data are accurate and free of material errors, omissions, or misstatements;
- quality and management of data and verification that reported GHG emission reductions data is sufficiently supported by evidence.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) verification approach draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. TÜV Rheinland (China) Ltd. (TÜV Rheinland) planned and performed the verification by obtaining evidence and other information and explanations that TÜV Rheinland (China) Ltd. (TÜV Rheinland) considers necessary to give reasonable assurance that reported GHG emission reductions are fairly stated, accurate and free of material errors, omissions, or misstatements.

In TÜV Rheinland’s (China) Ltd. (TÜV Rheinland) opinion the GHG emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with

energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” (ITL Project ID UA2000046) for the period from the 07/02/2011 till the 31/08/2012 are fairly stated, accurate and free of material errors, omissions, or misstatements in the monitoring report, version 03 dated 07/02/2013.

The GHG emission reductions were calculated correctly on the basis of the revised monitoring plan, revision 01.1 dated 07/02/2013.

TÜV Rheinland (China) Ltd. (TÜV Rheinland) is able to verify that the emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” (ITL Project ID UA2000046) for the period from the 07/02/2011 till the 31/08/2012 amount to 10 074 tonnes of CO<sub>2</sub> equivalent.

## 2. INTRODUCTION

Carbon Futures LLP has commissioned TÜV Rheinland (China) Ltd. (TÜV Rheinland) to carry out the verification of the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” (hereinafter called “SSC project”) in the period from the 07/02/2011 till the 31/08/2012. This report contains the findings from the verification and conclusion on the verified amount of emission reductions.

### 2.1 Objective

The verification is the periodic independent review and ex post verification by an Accreditation Independent Entity (AIE) of the monitored reductions in GHG emissions that have occurred as a result of a small-scale Joint Implementation (JI) project activity during a defined verification period.

The purpose of verification is to assess the reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks generated by a JI project and reported by the project participants through the monitoring report in accordance with paragraph 37 of the JI guidelines.

The objective of this verification was to verify emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” for the period from the 07/02/2011 till the 31/08/2012. TÜV Rheinland (China) Ltd. (TÜV Rheinland) is an Accredited Independent Entity by Joint Implementation Supervisory Committee.

### 2.2 Scope

The scope of this verification is the assessment of:

- project implementation in accordance with the Project Design Document (PDD);
- compliance with the monitoring plan, including the revision of the monitoring plan;
- calculation of emission reductions and expression of a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data are accurate and free of material errors, omissions, or misstatements;
- quality and management of data and verification that reported GHG emission reductions data is sufficiently supported by evidence.



The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for corrective actions in order to provide for more accurate future monitoring and reporting.

### 2.3 JI SSC Project Description

The brief information regarding the SSC project activity is provided in table 1.

**Table 1 - JI SSC project brief information**

<b>Project Parties involved:</b>	1. Ukraine (host Party). 2. The Netherlands.
<b>Title of the project:</b>	Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)
<b>Type of JI activity:</b>	Small-scale
<b>ITL Project ID:</b>	UA2000046
<b>Baseline and monitoring methodology:</b>	JI specific approach with elements of an approved baseline CDM methodology AMS-II.J “Demand-side activities for efficient lighting technologies”, version 04.
<b>Project entity participant:</b>	Kramatorsk Town Council
<b>Other project participants:</b>	Carbon Futures LLP
<b>Location of the project:</b>	Kramatorsk Town, Donetsk Region, Ukraine
<b>Length of the crediting period:</b>	From 07/02/2011 to 31/12/2020
<b>Length of the part of crediting period within the first commitment period of the Kyoto Protocol:</b>	From 07/02/2011 to 31/12/2012
<b>Length of the part of the crediting period after the end of the first commitment period of the Kyoto Protocol:</b>	From 01/01/2013 to 31/12/2020
<b>Period verified in this report:</b>	From 07/02/2011 to 31/08/2012
<b>Period verified in previous verification report:</b>	Not applicable



The proposed project aims to replace traditional incandescent lamps (ICLs) with up-to-date compact florescent lamps (CFLs) in budget and social facilities of Kramatorsk Town, i.e. schools, kindergartens, hospitals, health centers, etc.

Under the project activity it was replaced:

- 22 061 pieces ICLs of 100 W;
- 1 600 pieces ICLs of 150 W.

Since 07/02/2011 all CFLs have been installed, and their operation is being monitored according to the monitoring plan.

GHG emission reductions in project scenario are reached by reduction of electricity consuming from Ukrainian power grid. In case of electricity consuming reduction from Ukrainian power grid the need of combusting of fossil fuels on Ukrainian power stations decreases. Therefore level of direct GHGs emissions on the power stations is decreased.

The project has been registered as Track 2 JI SSC project with the PDD version 03.3 dated 15/06/2012. The documentation on the project including the PDD, approvals by Parties involved, Determination Report is available at:

[http://ji.unfccc.int/JI\\_Projects/DB/GJ6O96DICUIL2VGA0GW7U3X6K4EEU/F/Determination/TUEV-RHEIN1331454384.25/viewDeterminationReport.html](http://ji.unfccc.int/JI_Projects/DB/GJ6O96DICUIL2VGA0GW7U3X6K4EEU/F/Determination/TUEV-RHEIN1331454384.25/viewDeterminationReport.html)

### 3. METHODOLOGY

The verification process has been carried out using internal procedures of TÜV Rheinland (China) Ltd. (TÜV Rheinland). In order to ensure transparency, a Verification protocol (Annex A to Verification report) was customized for the project, according to the Annex to “Joint Implementation Determination and Verification Manual”, version 01. The Verification protocol shows, in a transparent manner, criteria (requirements) and the results of verification.

The verification consists of the following three phases:

- I) a desk review of the monitoring report including analysis of the compliance of the monitoring plan with the monitoring methodology;
- II) follow-up interviews with project stakeholders including on site visit;
- III) the resolution of outstanding issues and the issuance of the final verification report and opinion.

The following subsections outline each step in more detail.

#### 3.1 Desk review

Project participants provided TÜV Rheinland (China) Ltd. (TÜV Rheinland) all the necessary documents for document review. The monitoring report version 03 dated 07/02/2013 and revised Monitoring plan, revision 01.1 dated 07/02/2013 have been assessed as part of the verification. In addition, the project’s Project Design Document (version 03.3 dated 15/06/2012) and project’s Determination Report (revision 02.3 dated 21/06/2012) were also reviewed. Supporting documents, such as, acts of provided services on replacement of the incandescent lamps by the compact fluorescent lamps, operation hours’ logs for “Philips” energy saving lamps, etc. were available during on site visit.

Information and formulae provided in the monitoring report was compared with PDD and revised monitoring plan and stated data sources.

To address TÜV Rheinland (China) Ltd. (TÜV Rheinland) corrective action and clarification requests, project participants revised the monitoring report and resubmitted it as version 03 dated 07/02/2013.

The verification findings presented in this report relate to the monitoring report version 03 dated 07/02/2013 and project as described in the PDD version 03.3 dated 15/06/2012.

The following table outlines the documentation reviewed during the verification. The documents provided by Carbon Futures LLP are indicated in table 2 below. The documents of Category 1 relate directly to the components of the project. The documents of Category 2 relate to the design and/or methodologies employed in the design or other reference documents.

**Table 2 - Documents reviewed during the verification**

No.	Title of the document
<b>Documents of Category 1</b>	
/1/	Monitoring report, version 01 dated 14/09/2012.
/2/	Monitoring report, version 03 dated 07/02/2013.
/3/	Revised Monitoring plan, revision 01.1 dated 07/02/2013.
/4/	Emission reduction calculation spreadsheet, document of MS Excel format.
/5/	PDD “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)”, version 03.3 dated 15/06/2012.
/6/	Determination report “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)”, Report No. 01 998 9105067097 –DR, revision No. 02.3 dated 21/06/2012.
/7/	Letter of Approval for JI project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town” #3236/23/6 dated 04/11/2011.
/8/	Written project approval by a Party involved in JI small-scale project, other than the host Party - “Declaration of Approval reference #2011JI55 on 02/02/2012, issued by “NL Agency” Ministry of Economic Affairs, Agriculture and Innovations”
/9/	“Joint implementation determination and verification manual”, version 01, JISC.
/10/	“Guidelines for users of the Joint implementation project design document form for SSC projects and the form for submission of bundled joint implementation SSC projects”, version 04.
/11/	“Guidance on Criteria for Baseline Setting and Monitoring”, version 03, JISC.
/12/	AMS-II.J methodology “Demand-side activities for efficient lighting technologies”, version 04.
/13/	“Provisions for Joint implementation SSC projects”, version 03, JISC.
/14/	Order # 75 of National Environmental Investment Agency of Ukraine “On Approval of Carbon Dioxide Specific Emission Factors in 2011” dated 12/05/2011.
/15/	Resolution # 1052 of National Electricity Regulatory Commission of Ukraine “On the order to determine consumers’ class” dated 13/08/1998.

No.	Title of the document
<b>Documents of Category 2</b>	
/16/	Reference # 13-11/EC dated 14/03/2011 on quantity of installed energy efficient lamps in the facilities of each type under realization of JI projects “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Slovyansk, Kramatorsk, Artemivsk, Torez, Yenakiive, Gorlivka towns”.
/17/	Transfer and Acceptance Acts of energy-efficient lamps from Innovation Center “Ecosystem” to Kramatorsk town council (4 pages).
/18/	Acts of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (Kramatorsk Town Council; 7 pages).
/19/	Transfer and Acceptance Act of energy-efficient lamps dated 18/01/2011 from Carbon Futures LLP to Innovation Center “Ecosystem”.
/20/	Acts for incandescent lamps utilization, Kramatorsk town (2 pages).
/21/	Transfer and acceptance act of failed energy-efficient lamps Philips dated 24/11/2011 from Kramatorsk town council to Innovation Center “Ecosystem”.
/22/	Contract #Л-1182 on disposal of fluorescent lamps and mercury-containing wastes from 24/10/2011.
/23/	The Letter # 774-01/13/4-12 dated 18 May 2012 obtained from State Agency on Energy Efficiency and Energy Saving of Ukraine.
/24/	“Working procedures”, developed by Innovation Center “Ecosystem”, agreed with Kramatorsk Town Council.
/25/	Minutes of the meeting headed by Counselor to the Mayor Rozmaritsyn D.A. on Philips energy efficient lamp monitoring in educational and healthcare facilities, dated 07/02/2011.
/26/	Protocols of internal check of the facility for compliance with requirements of the project “Implementation of Energy-Efficient Lighting System in Donetsk Region with the use of Kyoto Protocol Mechanism”.
/27/	Example of “Operation hours’ log”.
/28/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (248 lamps) dated 02/02/2011, Kramatorsk Town Council.
/29/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (5404 lamps) dated 04/02/2011, Kramatorsk Town Council.
/30/	Act of provided services on replacement of the incandescent lamps

No.	Title of the document
	by the compact fluorescent lamps dated 04/02/2011, culture and tourism department, Kramatorsk Town Council.
/31/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (200 lamps) dated 02/02/2011, School #6, Kramatorsk Town Council.
/32/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (130 lamps) dated 02/02/2011, School #6, Kramatorsk Town Council.
/33/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps dated 04/02/2011, educational department, Kramatorsk Town Council.
/34/	Act of provided services on replacement of the incandescent lamps by the compact fluorescent lamps (100 lamps) dated 04/02/2011, Kramatorsk Town Council.
/35/	The Town Mayor Order dated 17/01/2011 #3r "On a working group establishment to monitor the organization works to replace incandescent lamps for energy efficiency in budget entities", Kramatorsk Town Council.
/36/	The Town Mayor Order #17r dated 02/03/2011 "On amendments to the Town Mayor Order #3-p dated 17/01/2011", Kramatorsk Town Council.
/37/	Transfer and Acceptance Act of energy-efficient lamps, "Children's Medical Center", Kramatorsk Town Council.
/38/	The act of replacing failed energy saving lamps, educational department, Kramatorsk Town Council.
/39/	The act of replacing failed energy saving lamps dated 21/02/2011, educational department, Kramatorsk Town Council.
/40/	Transfer and Acceptance Act of energy-efficient lamps, Ambulance Station, Kramatorsk Town Council.
/41/	Minutes of meeting on information about purposes and tasks of determinators check of Log Books for recording of operating hours of energy-efficient lamps dated 11/05/2011, Kramatorsk Town Council.
/42/	The Log Book for recording of operating hours of energy-efficient lamps in facility School #25, 25 B. Khmelnytskogo Str., Kramatorsk Town Council.
/43/	A job description Deputy Director of administrative work Mayer Ludmila, School #25, Kramatorsk Town Council.
/44/	Photo of installed CFLs, School #25, Kramatorsk Town Council.
/45/	The Log Book for recording of operating hours of energy-efficient lamps in facility Nursery school #53, Kramatorsk Town Council.
/46/	Photo of installed CFLs, Nursery school #53, Kramatorsk Town Council.
/47/	Photo of installed CFLs, "Children's Medical Center", Kramatorsk



No.	Title of the document
	Town Council.
/48/	The Log Book for recording of operating hours of energy-efficient lamps in facility “Children's Medical Center”, 20 Voznesenskogo Str., Kramatorsk Town Council.
/49/	Photo of installed CFLs, City Library after M. Gorkogo, Kramatorsk Town Council.
/50/	The Log Book for recording of operating hours of energy-efficient lamps in facility City Library after M. Gorkogo, 16 G. Kantemyrivitsiv Str., Kramatorsk Town Council.
/51/	Order #19a/9 dated 07/02/2011 “On the appointment of responsible persons for use of energy saving lamps”, City Library after M. Gorkogo, Kramatorsk Town Council.
/52/	The aggregate data of number of operation hours of lamps in February 2011 (07/02/2011 – 28/02/2011), Kramatorsk town council, document of MS Excel format (4 files).
/53/	The aggregate data of number of operation hours of lamps in April 2011, Kramatorsk town council, document of MS Excel format (5 files).
/54/	The aggregate data of number of operation hours of lamps in July 2011, Kramatorsk town council, document of MS Excel format (4 files).
/55/	The aggregate data of number of operation hours of lamps in October 2011, Kramatorsk town council, document of MS Excel format (4 files).
/56/	The aggregate data of number of operation hours of lamps in February 2012, Kramatorsk town council, document of MS Excel format.
/57/	The aggregate data of number of operation hours of lamps in April 2012, Kramatorsk town council, document of MS Excel format.
/58/	The aggregate data of number of operation hours of lamps in July 2012, Kramatorsk town council, document of MS Excel format.

### 3.2 Interviews with project stakeholders

TÜV Rheinland (China) Ltd. (TÜV Rheinland) performed interviews during the on-site visit that took place on 06/02/2013 with project stakeholders to confirm selected information and to resolve issues identified in the document review. Interviewed representatives of Kramatorsk Town Council and Innovation Center “Ecosystem” are summarized in Table 3. The main topics of the interviews are summarized in Table 4.

**Table 3 - Persons interviewed**

No.	Name	Position	Organization
/1/	Rozmaritsyn Dmytro A.	Counselor to the Mayor	Kramatorsk Town Council
/2/	Borsuk Andrii M.	Secretary of the Town Council	Kramatorsk Town Council
/3/	Stupak Vsevolod O.	Specialist of priority development department	Kramatorsk Town Council
/4/	Danilkina Iryna L.	Executive Director	Innovation Center “Ecosystem”
/5/	Danilkin Dmytro V.	Project manager	Innovation Center “Ecosystem”
/6/	Maier Liudmyla V.	Deputy Director on economic part	School #25, Kramatorsk Town Council
/7/	Bohdanova Olga L.	Logistics manager	Nursery school #53, Kramatorsk Town Council
/8/	Yelpalova Svitlana M.	Secretary of “Children's Medical Center”	“Children's Medical Center”, Kramatorsk Town Council
/9/	Sharaban Larysa M.	Deputy Director on administrative and economic parts	City Library after M. Gorkogo, Kramatorsk Town Council

**Table 4 - Interview topics**

No.	Date	Interviewed organization	Interview topics
/1/	06/02/2013	Kramatorsk Town Council	<ul style="list-style-type: none"> <li>• Organizational structure;</li> <li>• Responsibilities and authorities;</li> <li>• Installation of equipment;</li> <li>• Data logging, archiving, and reporting;</li> <li>• Internal audits and check-ups.</li> </ul>
/2/	06/02/2013	Innovation Center	<ul style="list-style-type: none"> <li>• Monitoring plan;</li> <li>• Revision of the monitoring</li> </ul>



No.	Date	Interviewed organization	Interview topics
		“Ecosystem”	plan; • Monitoring report; • Roles and responsibilities for data collection and processing; • Reporting and calculation emission reductions. • Project management; • Training of personnel; • Data logging, archiving, and reporting; • Internal audits and check-ups.

### 3.3 Resolution of Clarification, Corrective and Forward Action Requests

Where TÜV Rheinland (China) Ltd. (TÜV Rheinland), in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;
- Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The verification of the project resulted in 25 Corrective action requests and 4 Clarification requests. There were no unresolved Forward action requests from determination of the project. TÜV Rheinland (China) Ltd. (TÜV Rheinland) made an objective assessment as to whether the actions taken by the project participants and presented in the Table 2 (Annex A to Verification report) satisfactorily resolve the issues raised and concluded its findings of the verification.

The final version of the Monitoring report (version 03 dated 07/02/2013) was revised based on raised corrective action requests and clarification requests by verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) that were satisfactory resolved.

### 3.4 Internal Technical Review

The Verification report including the verification findings underwent a technical review before requesting the publication according to paragraph 37 of the JI guidelines. The technical review was performed by an internal technical reviewer qualified in accordance with TÜV Rheinland (China) Ltd. (TÜV Rheinland) qualification scheme for JI project determination and verification.

### 3.5 Verification team

The verification team consists of the following personnel indicated in Table 5 below.

**Table 5 - Verification team**

<b>Name</b>	<b>Role</b>
Mr. Praveen N. Urs	DOE/ AIE Manager
Dr. Lixin Li	Technical Reviewer
Dr. Valery Yakubovsky	Team Leader
Ms. Ganna Zadnipriana	Auditor
Mr. Dmytro Rakovich	Trainee

## 4. VERIFICATION FINDINGS

This section summarizes the findings from the verification of the emission reductions generated by the JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town (under Track 2)” for the period from the 07/02/2011 till the 31/08/2012.

The considerations, findings and means of verification are provided below in accordance with the Determination and Verification Manual (DVM). All information indicated in the following subsections relates to the Monitoring Report version 03 dated 07/02/2013 (hereinafter called “Monitoring report”).

### 4.1 Project approval by Parties involved

In accordance with paragraphs 90 - 91 of the DVM the assessment of this area focuses on whether at least one written project approval by a Party involved in the JI project, other than the host Party(ies), has been issued by the DFP of that Party. It also should be assessed whether the written project approvals are unconditional.

A written project approval by the Ukraine (host Party) is available: The Letter of Approval for JI SSC project “Implementation of energy-efficient lighting system in the Donetsk Region with the use of Kyoto Protocol mechanism: replacement of incandescent lamps with energy-efficient ones at budget financed and social entities in the Kramatorsk town” #3236/23/6 dated 04/11/2011 (please refer to evidence document # /7/).

Written project approval by a Party involved in JI SSC project, other than the host Party (the Netherlands) was obtained and presented to the verification team – Declaration of Approval reference #2011JI55 on 02/02/2012, issued by “NL Agency” Ministry of Economic Affairs, Agriculture and Innovations (please refer to evidence document # /8/).

Letters of Approval are available at:

[http://ji.unfccc.int/JI\\_Projects/DB/GJ6O96DICUIL2VGA0GW7U3X6K4EE\\_UF/Determination/TUEV-RHEIN1331454384.25/viewDeterminationReport.html](http://ji.unfccc.int/JI_Projects/DB/GJ6O96DICUIL2VGA0GW7U3X6K4EE_UF/Determination/TUEV-RHEIN1331454384.25/viewDeterminationReport.html)

The written project approvals mentioned above are unconditional.

Identified problem areas for project approval, project participants’ responses and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report, Table 1 (refer to CARs 01, 02).

## 4.2 Project implementation

In accordance with paragraphs 92 - 93 of the DVM the assessment of this area focuses on whether the project has been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website. The status of operation of the project during the monitoring period also should be assessed.

The project has been implemented in accordance with the PDD version 03.3 dated 15/06/2012 (hereinafter called “PDD”) regarding which the determination has been deemed final (please refer to evidence document # /5/).

This SSC JI project is registered as Track 2 project. The description of this project is available in section 2.3. of this Verification report.

The lamp replacement under the project activity started on 05 January 2011 (according to the “Transfer and acceptance acts of energy-efficient lamps, Kramatorsk Town Council”; please refer to evidence document # /17/ in Table 2, section 3.1. of the Verification report) and was finished on 04 February 2011 (according to the “Acts of provided services on replacement of the incandescent lamps by the compact fluorescent lamps, Kramatorsk Town Council”; please refer to evidence document # /18/). Under the project activity it was installed 23 661 pieces of CFLs. The quantity of 20 W group of CFLs that is 22 061 pieces and 32 W group of CFLs that is 1 600 pieces was checked by verification team through the desk review (please refer to evidence documents # /16/, /18/, /19/). The starting date of monitoring is 07 February 2011. Therefore the project can be considered implemented.

According to the PDD and revised and determined monitoring plan, revision 01.1 dated 07/02/2013 contained in Annex 1 to the Monitoring report, no metering equipment is involved for data monitoring. All data used for calculating emission reductions was obtained by project participants through performing the periodic monitoring surveys that during chosen monitoring period (07/02/2011 – 31/08/2012) took place in February 2011, April 2011, July 2011, October 2011, February 2012, April 2012 and July 2012. The detailed information on periodic monitoring surveys is provided in section B of the Monitoring report.

The verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) can confirm, through the on-site visit and desk review that all physical features of the proposed JI SSC project activity including data collecting and storage systems have been implemented, the project is completely operational and has been implemented as described in the PDD (please refer to evidence documents # /17/- /20/, /28/ - /51/ in Table 2, section 3.1. of the Verification report).

The emission reductions generated by the JI SSC project reported for the period from 07/02/2011 till 31/08/2012 amount to 10 074 tCO<sub>2</sub>e. Taking into account that the monitoring period is 19 months (07/02/2011 - 31/08/2011), the annual average value of emission reductions generated by the JI SSC project is 6 363 tCO<sub>2</sub>e. This value is lower than the annual average of estimated emission reductions over the crediting period (07/02/2011 – 31/12/2012) estimated in the PDD that is 8 274 tCO<sub>2</sub>e. The difference is explained due to the fact that the work hours for lighting devices decreased in spring and in summer that caused decreasing of results for emission reductions calculation. The source for the parameter “Average daily operating hours of the devices of the group of “i” devices” in the PDD was the monitoring in February, 2011. While LogBooks showed that work hours for lighting devices decreased in spring and in summer which caused decreasing results for calculation of emission reductions.

Identified problem areas for project implementation, project participants’ answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report, Table 1 (refer to CARs 03 – 12 and CLs 01, 02).

#### **4.3 Compliance with monitoring plan**

In accordance with paragraphs 94 - 98 of the DVM the assessment of this area focuses on whether the monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

The monitoring of the JI SSC project occurred in accordance with the revised and determined monitoring plan, revision 01.1 dated 07/02/2013 contained in Annex 1 to the Monitoring report.

For calculating the emission reductions key factors influencing the baseline emissions as well as risks associated with the project were taken into account, as appropriate. For more detailed information, please, refer to the determined and registered PDD, version 03.3 dated 15/06/2012.

All data sources used for calculating emission reductions are indicated in tables B.2. and B.3., section B.2.1. of the Monitoring Report. The number of operation hours of lamps was fixed in the operation hours’ log in each facility of the project. The aggregated data of number of operation hours of lamps were sent to verification team in supporting documents of MS Excel format (please refer to evidence documents # /52/- /58/ in Table 2, section 3.1. of the Verification report).

The emission factor used to calculate emission reductions is selected in accordance with the registered PDD. The choice of this emission factor



is appropriately justified in the PDD and in general accuracy and reasonableness are carefully balanced.

The calculation of emission reductions is done based on conservative assumptions and the most plausible scenarios in a transparent manner. The calculation of the baseline emissions is based on the JI specific approach with elements of an approved baseline CDM methodology AMS-II.J “Demand-side activities for efficient lighting technologies”, version 04 in accordance with the registered PDD.

The calculation of emission reductions is done by subtracting the project emissions from the baseline emissions. The detailed calculation of GHG emission reductions for chosen monitoring period (07/02/2011 – 31/08/2012) is provided in supporting documentation of MS Excel format (please refer to evidence document # /4/).

With regard to the monitoring result of a JI SSC project, the verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) determined that relevant threshold for this JI SSC project is not exceeded during the monitoring period (07/02/2011 – 31/08/2012) on an annual average basis. The type of small-scale project activity is II. So, the project has to be: Energy efficiency improvement project which reduce energy consumption, on the supply and/or demand side, by up to 60 gigawatt hours (GWh) per year (or an appropriate equivalent). The energy savings for monitoring period (07/02/2011 – 31/08/2012) is 8.21 GWh per 19 months. The annual energy savings of the project activity is estimated to be about 5.19 GWh/year. Thus, the JI SSC project does not exceed the threshold level that is 60 GWh/year.

Identified problem areas for compliance with monitoring plan, project participants’ answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report, Table 1 (refer to CARs 13 – 21 and CLs 03 - 04).

#### **4.4 Revision of monitoring plan**

If the project participants submitted to the AIE a revised monitoring plan, in accordance with paragraphs 99 - 100 of the DVM the assessment of this area focuses on whether the correct and complete justification for the proposed revision is provided, and whether the proposed revision improves the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

During the first monitoring period (07/02/2011 – 31/08/2012) the original monitoring plan described in the registered PDD version 03.3 dated 15/06/2012 was revised by the project participants. The project participants submitted the revised monitoring plan, revision 01.1 dated 07/02/2013 (please refer to evidence document # /3/) for the

determination of proposed revisions in respect of improvement the accuracy and completeness of information of the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. The revised monitoring plan is presented as Annex 1 to the Monitoring report. The revision of the approved monitoring plan and appropriate justification for it are described below.

In accordance with the method of GHG emissions monitoring provided in the section D.1. of the registered PDD, the electricity consumption was calculated in baseline scenario and project scenario only for different group of devices (20 W or 32 W). This method did not allow to calculate emissions separately for different types of facilities or time period. With aim to increase accuracy of calculation specified method was used. Thus, the revision of the approved monitoring plan allows calculating electricity consumption for different:

- the group of “i” devices (i.e. 20 W and 32 W CFLs);
- the type of day (workday or non-workday) - “j”;
- the season - “k” (winter, spring, summer, and autumn);
- the type of building - “l”.

The project participants provided an appropriate justification for the proposed revision:

- the corrections of the approved monitoring plan allow increasing accuracy of calculation of GHG emissions reduction under the project and baseline scenario;
- the corrections of the approved monitoring plan do not require the introduction of any additional forms, LogBooks, etc., because all existed forms contained necessary fields for calculation by proposed method.

The proposed revision of monitoring plan improves the accuracy and applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. Thus, the determination of the verification team concerning the revised monitoring plan, revision 01.1 dated 07/02/2013 submitted by the project participants is positive. The verification of emission reductions generated by the JI SSC project for the period from the 07/02/2011 till the 31/08/2012 is based on the revised monitoring plan.

Identified problem areas for revision of monitoring plan, project participants’ answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report, Table 1 (refer to CARs 22 - 25).



## 4.5 Data Management

In accordance with paragraph 101 of the DVM the assessment of this area focuses on the quality of the information using standard auditing techniques provided in the monitoring report by assessing whether the data and their sources are clearly identified, reliable and transparent.

Data collection procedure is carried out in accordance with the monitoring plan, including the quality control and quality assurance procedures and has been checked by the verification team through the desk review and project site visit. The monitoring plan was revised and determined, revision 01.1 dated 07/02/2013. The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The quantity of replaced ICLs ( $Q_{BL,ijkl}$ ) and installed CFLs ( $Q_{PJ,ijkl}$ ) under the project activity in each kind of facility and their rated power ( $P_{i,PJ}$ ,  $P_{i,BL}$ ) was checked by verification team according to “Acts of provided services on replacement of the incandescent lamps by the compact fluorescent lamps”, “Act for incandescent lamps utilization” and “Reference # 13-11/EC dated 14/03/2011 on quantity of installed energy efficient lamps in the facilities of each type” (please refer to evidence documents # /16/, /18/, /19/, /20/ in Table 2, section 3.1. of the Verification report).

The number of operation hours of lamps ( $OD_{ijkl}$ ) was fixed in the operation hours’ log in each facility of the project. At each facility a responsible person or manager carries out a specific task of the project implementation monitoring and required protection. To ensure proper quality of records in operation hours’ log, the personnel responsible for operation time logging, lamp keeping and removal was trained. Internal checks of sites are performed by Special working groups (SWGs) to ensure the proper project implementation (please refer to evidence documents # /24/ - /27/).

The number of days of monitoring period for each group of devices was checked according to calendar and public holidays during chosen monitoring period taking into account the work schedule of the facility type.

Fraction of CFLs in local public buildings within budget funding ( $F_{CFL,y}$ ) was assessed according to the presented by project participants Letter # 774-01/13/4-12 dated 18 May 2012 obtained from State Agency on Energy Efficiency and Energy Saving of Ukraine (please refer to evidence document # /23/).

The value of emission factor ( $EF_{CO_2,ELEC,y}$ ) was obtained from Order # 75 of National Environmental Investment Agency of Ukraine “On

Approval of Carbon Dioxide Specific Emission Factors in 2011” dated 12/05/2011 (please refer to evidence document # /14/).

The evidence and records used for the monitoring are maintained in a traceable manner. Verification team has got access to all necessary data on monitoring system and emission reductions and received necessary evidence during on site visit (please refer to evidence documents # /28/ - /51/ in Table 2, section 3.1. of the Verification report).

The data collection and management system for the project is in accordance with the monitoring plan as described in the revised monitoring plan, revision 01.1 dated 07/02/2013.

Identified problem areas for data management, project participants’ answers and conclusions of TÜV Rheinland (China) Ltd. (TÜV Rheinland) are described in Annex A to the Verification Report, Table 1 (refer to CARs 23, 24, 25 and CL 04).

#### **4.6 Assessment of data and calculation of greenhouse gas emission reductions**

The verification team of TÜV Rheinland (China) Ltd. (TÜV Rheinland) verified that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the defined formulae from revised monitoring plan, revision 01.1 dated 07/02/2013.

According to the Monitoring report and GHG emission reductions calculation spreadsheet of MS Excel format the emissions for the project scenario, emissions for the baseline scenario and emission reductions for chosen monitoring period (07/02/2011 – 31/08/2012) are provided in table 6.

**Table 6 - Results for emission reductions for monitoring period**

<b>Monitoring Period:</b>	<b>07/02/2011 – 31/08/2012</b>
Emissions for the project scenario, tCO <sub>2</sub> e	2 542
Leakage, tCO <sub>2</sub> e	0
Emissions for the baseline scenario, tCO <sub>2</sub> e	12 616
Emission reductions, tCO <sub>2</sub> e	10 074

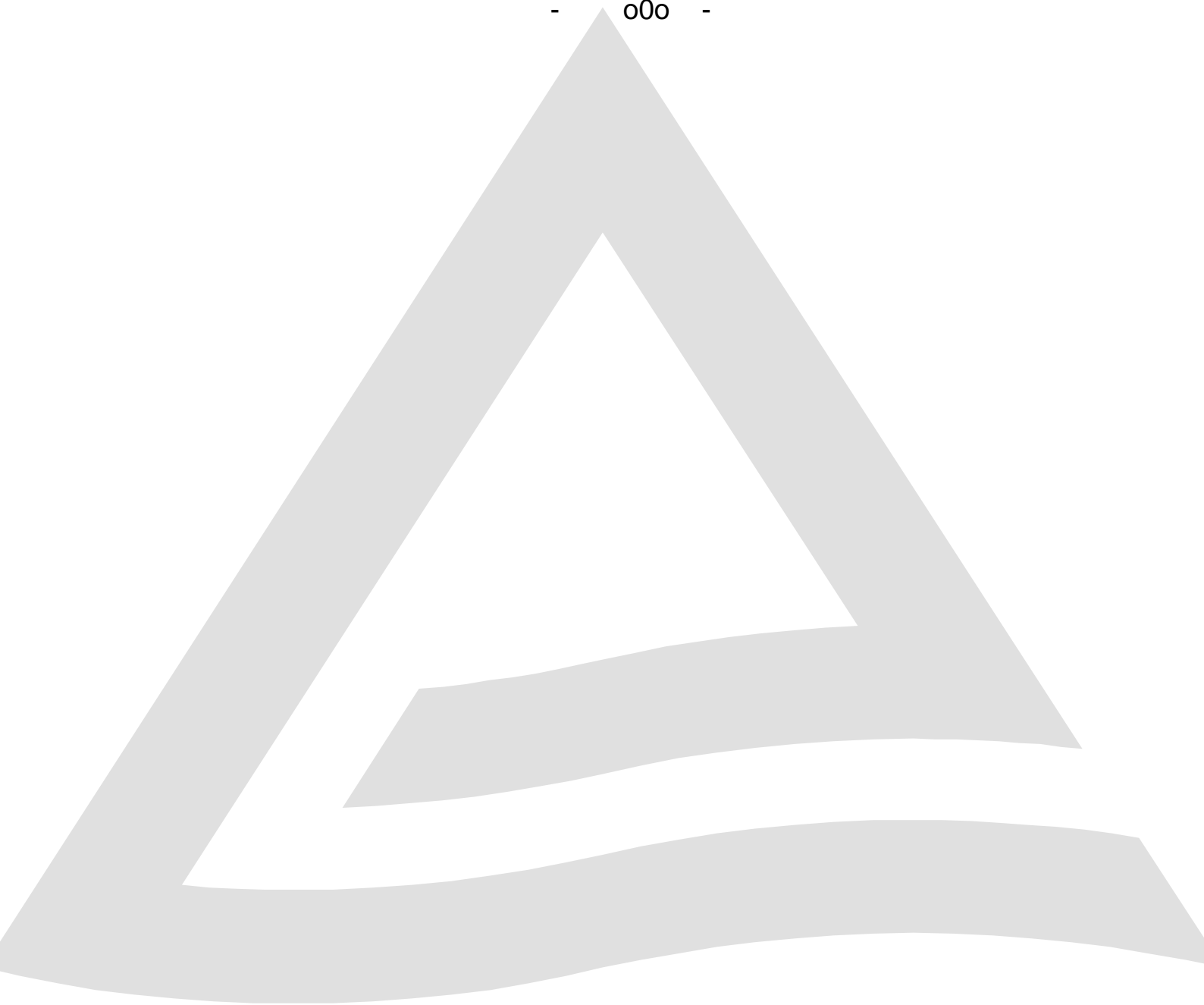
The emission reductions generated by the JI SSC project during the period from the 07/02/2011 till the 31/08/2012 amount to 10 074 tCO<sub>2</sub>e. Emission reductions during 2011 year (07/02/2011 - 31/12/2011) are 6 040 tCO<sub>2</sub>e, 2012 year (01/01/2012 – 31/08/2012) – 4 034 tCO<sub>2</sub>e.

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#### **4.7 Remaining issues, CARs, FARs from previous determination/verification**

There were no pending issues remained from determination of the JI SSC project.

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## ANNEX A - VERIFICATION PROTOCOL

Table 1 - Requirements Checklist

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
<b>1. Project approvals by Parties Involved</b>				
1. 1. Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	90	<p>A written project approvals by Parties involved are available on the verification stage:</p> <p>Letter of approval was obtained from the host Party (Ukraine) - Letter of Approval # 3236/23/6, issued by the State Environmental Investment Agency of Ukraine as of 04/11/2011.</p> <p>Written project approval by a Party involved in JI small-scale project, other than the host Party was obtained – Declaration of Approval reference #2011JI55 on 02/02/2012, issued by “NL Agency” Ministry of Economic Affairs, Agriculture and Innovations.</p>	<p>The relevant information on written project approvals by Parties involved in the JI project is absent in Monitoring report.</p> <p><b>CAR 01.</b> Please indicate the relevant information on project approvals by Parties Involved in the Monitoring report.</p> <p><b>CAR 02.</b> Please provide an official translation in English for project approvals by Parties involved.</p>	<p><b>OK</b> <b>OK</b></p>
1. 2. Are all the written project approvals by Parties involved unconditional?	91	The written project approvals by Parties involved are unconditional.	Please refer to <b>CAR 01.</b>	<b>OK</b>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
<b>2. Project implementation</b>				
<p>2.1. Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?</p>	<p>92</p>	<p>The project has been implemented in accordance with the PDD version 03.3 dated 15/06/2012 regarding which the determination has been deemed final. This SSC JI project is registered as Track 2 project. The description of this SSC project is available in section 2.3. of this Verification report. Under the project activity it was installed: - 22 061 pieces CFLs of 20 W; - 1 600 pieces CFLs of 32 W. The relevant evidence documents were provided to verification team.</p>	<p>The information provided in Monitoring Report needs to be clarified and specified. <b>CAR 03.</b> Please indicate the exact time separately for starting and closing dates of the chosen monitoring period in the appropriate section of the Monitoring report. <b>CAR 04.</b> Please indicate the JI registration number and ITL project ID in the appropriate section of the Monitoring report. <b>CAR 05.</b> The most recent version of the “Guidance on criteria for baseline setting and monitoring” should be applied. Please make necessary corrections through all the Monitoring report. <b>CAR 06.</b> Please indicate the description of index “I” in “<math>\sum_{i,j,k,l=1}^n</math>” parameter definition mentioned in tables A.1.and</p>	<p><b>OK</b> <b>OK</b> <b>OK</b> <b>OK</b> <b>OK</b> <b>OK</b> <b>OK</b> <b>OK</b></p>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
			<p>A.3., section A.4.2. of the Monitoring Report.</p> <p><b>CAR 07.</b> The “Report of acceptance of work on replacement” indicated in section B.1. of the Monitoring Report is absent in supporting documents (SD-3). Please provide this document.</p> <p><b>CAR 08.</b> Please indicate through all the Monitoring report the same name of the company “Innovation Center “Ecosystem”.</p> <p><b>CAR 09.</b> Please include in the Monitoring Report the information about the utilization process of the failed CFLs and provide the documental evidence of it.</p> <p><b>CAR 10.</b> There are minor mistakes in some sections of the Monitoring Report. Please correct the following:</p> <ul style="list-style-type: none"> <li>- Please indicate the full name of “ICLs” in the first sentence of section A.2.</li> </ul>	

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
			- Please correct “Wt” indicated in section A.2. - - Please define uniform term for CFL through all the Monitoring Report (remove “bulb”). <b>CL 01.</b> Please provide the clarification of the difference between the amounts of emission reductions indicated in PDD version 03.3 dated 15/06/2012 regarding which the determination has been deemed final and Monitoring report.	
2.2. What is the status of operation of the project during the monitoring period?	93	The main project activities are indicated in table A.5. of the Monitoring report. The proposed project aims to replace traditional incandescent lamps (ICLs) with up-to-date compact florescent lamps (CFLs) in budget and social facilities of Kramatorsk Town, i.e. schools, kindergartens, hospitals, health centers, etc. The total variable number of ICLs	<b>CAR 11.</b> Please indicate in section A.2. of the Monitoring Report the total number of installed CFLs in budget and social facilities of Kramatorsk covered by the project and GHGs emission reduction resulting from the project scenario. <b>CAR 12.</b> Please indicate in section A.4.1. of the Monitoring Report the chosen approach	<b>OK</b> <b>OK</b> <b>OK</b>



CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		made up: 22 061 pieces - 100W, 1 600 pieces - 150W. Since 07/02/2011 all CFLs have been installed.	regarding the baseline setting. <b>CL 02.</b> Please provide confirmation of the starting and final dates of the lamp replacement indicated in table A.5., section A.5. of the Monitoring report.	
<b>3. Compliance with monitoring plan</b>				
3.1. Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final?	94	The monitoring of the project is occurred not completely in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final. Revision to the monitoring plan contained in the PDD version 03.3 dated 15/06/2012 regarding which the determination has been deemed final is presented as Annex 1 to the Monitoring Report.	<b>CAR 13.</b> January is indicated as the winter representative month in table B.1, section B.1. of the Monitoring report. However according to the registered PDD version 03.3 dated 15/06/2012, February is the winter representative month. Please correct the necessary.	<b>OK</b>
3.2. For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) of DVM, influencing the baseline emissions or net removals and the activity level of	95 (a)	For more detailed information, please, refer to section B.1. of the determined and registered PDD version 03.3 dated 15/06/2012.	For calculating the emission reductions key factors, e.g. those listed in 23 (b) (i)-(vii) (DVM), influencing the baseline emissions as well as risks associated with the project	<b>OK</b>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?			were taken into account, as appropriate.	
3.3. Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	95 (b)	<p>All data sources used for calculating emission reductions are indicated in tables B.2. and B.3. of the Monitoring Report.</p> <p>The number of operation hours of lamps was fixed in the operation hours' log in each facility of the project.</p> <p>The aggregated data from operation hours' log were sent to verification team in supporting documents in the form of Excel documents.</p> <p>However, some references to the source data need further information or adjustments in accordance with the registered PDD version 03.3 dated 15/06/2012.</p>	<p><b>CAR 14.</b> It is indicated through all the Monitoring report that “j=2” is used for parameter “Average daily operating hours of the devices of the group of “i” baseline devices during <u>non-workday</u>”, while in the supporting documents with monitoring data and Excel spreadsheet it is indicated as “<u>weekend</u>”. Please make necessary corrections.</p> <p><b>CAR 15.</b> The parameters names and abbreviations indicated in sections B.2.1. and B.2.2. differ from ones specified in other sections of the Monitoring report. Please make the appropriate corrections.</p> <p><b>CAR 16.</b> Please specify the average daily operating hours during workdays and non-</p>	<p><b>OK</b> <b>OK</b> <b>OK</b></p>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
			workdays in table B.4. in section B.2.2. of the Monitoring Report.	
3.4. Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	95 (c)	The choice of the emission factor used for calculating the emission reductions is appropriately justified in the registered PDD version 03.3 dated 15/06/2012 and in general accuracy and reasonableness is carefully balanced.	<p>Some sources and references for the emission factor need to be updated in order to provide greater transparency for their choice.</p> <p><b>CAR 17.</b> Please correct the abbreviation of “Carbon Emission Factor” indicated in table B.3., section B.2.2. of the Monitoring Report in accordance with the appendix B to “Guidance on criteria for baseline setting and monitoring”, version 03.</p> <p><b>CAR 18.</b> Please specify the source of Electricity consumption carbon emission factor for Ukraine indicated in the table B.3., section B.2.2. of the Monitoring Report.</p>	<p><b>OK</b></p> <p><b>OK</b></p>
3.5. Is the calculation of emission reductions or enhancements of net removals calculated based on conservative assumptions and the	95 (d)	The calculation of emission reductions is done based on conservative assumptions and the most plausible scenarios in a	<b>CAR 19.</b> Please indicate in the table B.4., section B.2.2. of the Monitoring Report the correct values of “Average daily	<p><b>OK</b></p> <p><b>OK</b></p> <p><b>OK</b></p> <p><b>OK</b></p>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
<p>most plausible scenarios in a transparent manner?</p>		<p>transparent manner.            The calculation of the baseline emissions is based on the JI specific approach with elements of an approved baseline CDM methodology AMS-II.J “Demand-side activities for efficient lighting technologies”, version 04 in accordance with the registered PDD version 03.3 dated 15/06/2012.            The calculation of emission reductions is done by subtracting the project emissions from the baseline emissions.            The calculation of GHG emission reductions for Monitoring Period is provided in supporting documentation.</p>	<p>operating hours” for June-August 2011, “Others” and “Medicine” type of buildings according to the supporting documents with monitoring data.  <b>CAR 20.</b> Please provide the documental evidence for number of CFLs installed under the project activity separately for each type of buildings indicated in tables A.1., A.3. and B.2. of the Monitoring Report.  <b>CL 03.</b> Please clarify how were estimated the dates of non-workdays and how was calculated the amount of workdays and non-workdays for all types of buildings indicated in section A.4.2. of the Monitoring Report.</p>	<p><b>OK</b>  <b>OK</b>  <b>OK</b>  <b>OK</b></p>
<p><b>4. Applicable to JI SSC projects only</b></p>				
<p>4.1. Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring</p>	<p>96</p>	<p>The relevant information on the threshold level of JI SSC project is absent in the Monitoring Report.</p>	<p><b>CAR 21.</b> Please provide the information on threshold level of JI SSC project and whether</p>	<p><b>OK</b></p>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?			it was exceeded during the monitoring period on an annual average basis in the Monitoring report.	
<b>5. Revision of monitoring plan</b> <i>Applicable only if monitoring plan is revised by project participants</i>				
5.1. Did the project participants provide an appropriate justification for the proposed revision?	99 (a)	Intended deviations to the monitoring plan are described in Annex 1 to the Monitoring Report.	The presented information in Annex 1 to the Monitoring Report is not sufficient. <b>CAR 22.</b> Please provide the detailed description and appropriate justification of the accepted amendments in monitoring plan in Annex 1 to the Monitoring Report. <b>CAR 23.</b> Please include in Annex 1 to the Monitoring Report the tables for all data and parameters. <b>CAR 24.</b> Please indicate in Annex 1 to the Monitoring Report quality assurance and quality control measures for intended deviations to the monitoring plan.	OK OK OK OK

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
			<b>CAR 25.</b> Please describe in Annex 1 to the Monitoring Report the operational and management structure that will be applied in implementing the revised monitoring plan.	
5.2. Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	99 (b)	Intended deviations to the monitoring plan are described in Annex 1 to the Monitoring Report.	Please refer to <b>CAR 22, CAR 23, CAR 24, CAR 25.</b>	<b>OK OK OK OK</b>
<b>6. Data management</b>				
4.1. Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	101 (a)	Data collection procedure is carried out in accordance with the monitoring plan, including the quality control and quality assurance procedures and has been checked by the verification team through the desk review and on site visit. The revised monitoring plan is presented in Annex 1 to the Monitoring Report.	<b>CL 04.</b> It is indicated in section C.1.2. of the Monitoring Report that staff involved in the project implementation and checks was trained according to the guidelines. Please indicate the full name of this document with reference in the appropriate section of MR.	<b>OK</b>

CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
4.2. Is the function of the monitoring equipment, including its calibration status, is in order?	101 (b)	<p>According to the registered PDD version 03.3 dated 15/06/2012 and revised monitoring plan no metering equipment was involved for data monitoring. All data used for calculating emission reductions was obtained by project participants through performing the periodic monitoring surveys</p> <p>The number of operation hours of lamps was fixed in the operation hours' log in each facility of the project.</p> <p>At each facility a responsible person or manager carries out a specific task of the project implementation monitoring and required protection. Internal checks of sites are performed by Special working groups (SWGs) to ensure the proper project implementation.</p>	Please refer to <b>CAR 23.</b>	<b>OK</b>
4.3. Are the evidence and records used for the monitoring maintained in a traceable manner?	101 (c)	The evidence and records used for the monitoring are maintained in a traceable manner. Verification team has got access to all necessary data on monitoring system and emission reductions	Please refer to <b>CAR 24.</b>	<b>OK</b>



CHECKLIST QUESTION	DVM paragraph	Draft Conclusion	Action requested to project participants	Final Conclusion
		and received necessary evidence on site visit.		
4.4. Is the data collection and management system for the project in accordance with the monitoring plan?	101 (d)	The data collection and management system for the project is in accordance with the monitoring plan as described in the registered PDD version 03.3 dated 15/06/2012 and revised monitoring plan presented in Annex 1 to the Monitoring Report.	Please refer to <b>CAR 25.</b>	<b>OK</b>

**Table 2 - Resolution of CARs, CLs and FARs**

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
1.	<b>CAR 01.</b>	Please indicate the relevant information on project approvals by Parties involved in the Monitoring report.	Table 1, checklist question 1.1.	<p><u>Response 1:</u>            In new chapter A.2 (Information about registration and approval of the small-scale project:), it is indicated information on approving:            Letter of approval was obtained from the Host party (Ukraine) - Letter of Approval # 3236/23/6, issued by the State Environmental Investment Agency of Ukraine as of 04/11/2011.            Letter of approval was obtaining from the part- investor (the Netherlands) – Letter of Approval, issued by NL Agency of Ministry of Economic Affairs, Agriculture and Innovations as of 02/02/2012.</p> <p><u>Response 2:</u>            1) The correct reference number and the date of the “Declaration of Approval” by the Netherlands</p>	<p><u>Conclusion 1:</u>            The information on project approvals by Parties involved was added to the section A.2. of the MR. However it requires additional corrections.            1) Please indicate in section A.2. of the MR the correct reference number and the date of the “Declaration of Approval” by the Netherlands according to the evidence document.            2) Please correct the following information indicated in section A.2. of the MR : “Host party” → “host Party”; “№” → “#”</p> <p><u>Conclusion 2:</u>  <b>The issue is closed</b></p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				were indicated. 2) “Host party” and “No” were corrected to “host Party” and “#”.	based on appropriate corrections in section A.2. of the MR version 03 dated 07/02/2013.
2.	<b>CAR 02.</b>	Please provide an official translation in English for project approvals by Parties involved.	Table 1, checklist question 1.1.	<u>Response 1:</u> Translation letter of approval is provided with version 2 of Monitoring Report.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on provided document to the MR version 02 dated 07/02/2013.
3.	<b>CAR 03.</b>	Please indicate the exact time separately for starting and closing dates of the chosen monitoring period in the appropriate section of the Monitoring Report.	Table 1, checklist question 2.1.	<u>Response 1:</u> In version 2 of Monitoring Report instead of period of time (07/02/2011 - 31/08/2012), it is separately indicated date of starting and date of finishing of monitoring period.  <u>Response 2:</u> The exact time for starting and closing dates was indicated and word combination was changed.	<u>Conclusion 1:</u> The issue is not closed. Please indicate the exact time for starting and closing dates (e.g. 00:00 for starting date and 24:00 for closing date) of the chosen monitoring period in section A.4. of the MR. Also please change the word combination “Date of the start of monitoring” → “starting date of monitoring period”.

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					<u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate corrections in section A.4. of the MR version 03 dated 07/02/2013.
4.	<b>CAR 04.</b>	Please indicate the JI registration number and ITL project ID in the appropriate section of the Monitoring Report.	Table 1, checklist question 2.1.	<u>Response 1:</u> In new chapter A.2 ( Information about registration and approval of the small-scale project:), it is indicated information on registration number: the registration number of the small-scale project is JI0288, ITL project ID is UA2000046.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate additions in section A.2. of the MR version 02 dated 07/02/2013.
5.	<b>CAR 05.</b>	The most recent version of the “Guidance on criteria for baseline setting and monitoring” should be applied. Please make necessary corrections through all the Monitoring Report.	Table 1, checklist question 2.1.	<u>Response 1:</u> Last version (version - 03) applied in version 2 of Monitoring Report,	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate corrections in the MR version 02 dated 07/02/2013.
6.	<b>CAR 06.</b>	Please indicate the description of index “I” in “ $\sum_{j,k,l=1}^n$ ” parameter definition mentioned in tables A.1. and A.3., section A.4.2. of	Table 1, checklist question 2.1.	<u>Response 1:</u> In tables A.1. and A.3., it was indicated that parameter “I” is the type of building.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate additions in tables A.1.

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		the Monitoring Report.			and A.3. in the MR version 02 dated 07/02/2013.
7.	<b>CAR 07.</b>	The “Report of acceptance of work on replacement” indicated in section B.1. of the Monitoring Report is absent in supporting documents (SD-3). Please provide this document.	Table 1, checklist question 2.1.	<u>Response 1:</u> Document is provided with version 2 of Monitoring Report.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on provided document to the MR version 02 dated 07/02/2013.
8.	<b>CAR 08.</b>	Please indicate through all the Monitoring report the same name of the company “Innovation Center “Ecosystem”.	Table 1, checklist question 2.1.	<u>Response 1:</u> In version 2 of Monitoring Report instead of short name “Ecosystem” full name of the company Innovation Center “Ecosystem” is used.  <u>Response 2:</u> Correction was made.	<u>Conclusion 1:</u> Please correct the company name indicated in section A.3. of the MR , namely “Centre” →“Center”.  <u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate corrections in the MR version 03 dated 07/02/2013.
9.	<b>CAR 09.</b>	Please include in the Monitoring Report the information about the utilization process of the failed CFLs and provide the	Table 1, checklist question 2.1.	<u>Response 1:</u> To section B.1. was added information on utilization lamps that are out of order. In	<u>Conclusion 1:</u> According to the provided document “Agreement on utilization” #L-1182 dated

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		documental evidence of it.		<p>particular, 348 items of failed CFLs were transferred from representatives of Town Council to Innovation Center "Ecosystem" (Transfer and Acceptance Act in supporting documents (SD-5)) and then transferred to Nikitrtut Ltd. for proper utilization (Agreement on utilization (SD-6)).</p> <p><u>Response 2:</u> It was indicated that failed CFLs were transferred to representatives of Carbon Futures for proper utilization on Nikitrtut Ltd. according to the Agreement on Utilization #L-1182 dated 24/10/2011 (SD-6).</p>	<p>24/10/2011 LLC “Carbon Futures Ukraine” is indicated as Customer. Please clarify the role of LLC “Carbon Futures Ukraine” in utilization process of the failed CFLs and add the relevant information to section B.1. of the MR.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in section B.1. of the MR version 03 dated 07/02/2013.</p>
10.	<b>CAR 10.</b>	<p>There are minor mistakes in some sections of the Monitoring Report. Please correct the following:</p> <ul style="list-style-type: none"> <li>- Please indicate the full name of “ICLs” in the first sentence of section A.2.</li> </ul>	Table 1, checklist question 2.1.	<p><u>Response 1:</u> Corrections are made.</p> <p><u>Response 2:</u> Corrections are made.</p>	<p><u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate corrections in the MR version 02 dated 07/02/2013. However due to additions</p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		<ul style="list-style-type: none"> <li>- Please correct “Wt” indicated in section A.2.</li> <li>- Please define uniform term for CFL through all the Monitoring Report (remove “bulb”).</li> </ul>			<p>in the MR version 02 dated 07/02/2013, <b>a new issue is raised.</b></p> <ul style="list-style-type: none"> <li>- Please indicate the value of leakages for the chosen monitoring period (<math>LE_y=0</math>) in table D.3. in section D.1.4. of the MR.</li> <li>- Please correct the following data unit indicated in table B.3, section B.2.2. of the MR: “kgCO<sub>2</sub>/kW·h” → “kgCO<sub>2</sub>/kWh”.</li> <li>- Please add in section C.3. of the MR the information on the QA/QC procedures to be applied during the monitoring period.</li> </ul> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate corrections in the MR version 03 dated</p>



No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					07/02/2013.
11.	<b>CAR 11.</b>	Please indicate in section A.2. of the Monitoring Report the total number of installed CFLs in budget and social facilities of Kramatorsk covered by the project and GHG emission reduction resulting from the project scenario.	Table 1, checklist question 2.2.	<u>Response 1:</u> It was indicated in section A.3 that under the project activity, It was replaced 23 661 pieces traditional ICLs (22 061 of 100W; 1 600 pieces of 150W) with up-to-date CFLs in facilities of Town Council, i.e. schools, kindergartens, hospitals, health centers, etc. Monitoring results were indicated in section A.5.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate additions in section A.3. of the MR version 02 dated 07/02/2013.
12.	<b>CAR 12.</b>	Please indicate in section A.4.1. of the Monitoring Report the chosen approach regarding the baseline setting.	Table 1, checklist question 2.2.	<u>Response 1:</u> In version 2 of Monitoring Report, it is indicated that the JI specific approach was used for setting of the baseline.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate additions in section A.5. of the MR version 02 dated 07/02/2013.
13.	<b>CAR 13.</b>	January is indicated as the winter representative month in table B.1, section B.1. of the Monitoring Report. However according to the registered PDD version 03.3 dated 15/06/2012, February is the winter representative month.	Table 1, checklist question 3.1.	<u>Response 1:</u> Correction is made.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate corrections in table B.1., section B.1. of the MR version 02 dated 07/02/2013.

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		Please correct the necessary.			
14.	<b>CAR 14.</b>	It is indicated through all the Monitoring Report that “j=2” is used for parameter “Average daily operating hours of the devices of the group of “i” baseline devices during <u>non-workday</u> , while in the supporting documents with monitoring data and Excel spreadsheet it is indicated as “ <u>weekend</u> ”. Please make necessary corrections.	Table 1, checklist question 3.3.	<u>Response 1:</u> In supporting documentation with monitoring data and calculation of emission reduction necessary corrections were made.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on provided updated supporting documentation with monitoring data and calculation of emission reductions provided to the MR version 02 dated 07/02/2013.
15.	<b>CAR 15.</b>	The parameters names and abbreviations indicated in sections B.2.1. and B.2.2. differ from ones specified in other sections of the Monitoring Report. Please make the appropriate corrections.	Table 1, checklist question 3.3.	<u>Response 1:</u> Correction is made.  <u>Response 2:</u> Corrections are made.	<u>Conclusion 1:</u> The issue is not closed. The parameters names and abbreviations should be the same through all the MR. Please make necessary corrections (please pay attention to the sequence of parameters' indexes).  <u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					corrections in the MR version 03 dated 07/02/2013.
16.	<b>CAR 16.</b>	Please specify the average daily operating hours during workdays and non-workdays in table B.4. in section B.2.2. of the Monitoring Report.	Table 1, checklist question 3.3.	<u>Response 1:</u> Correction is made.  <u>Response 2:</u> Correction are made.	<u>Conclusion 1:</u> Please correct the following in table B.4., section B.2.2. of the MR: “non workday” → “non-workday”.  <u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate corrections in section B.2.2. of the MR version 03 dated 07/02/2013.
17.	<b>CAR 17.</b>	Please correct the abbreviation of “Carbon Emission Factor” indicated in table B.3., section B.2.2. of the Monitoring Report in accordance with the appendix B to “Guidance on criteria for baseline setting and monitoring”, version 03.	Table 1, checklist question 3.4.	<u>Response 1:</u> Correction is made.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate corrections in table B.3., section B.2.2. of the MR version 02 dated 07/02/2013.
18.	<b>CAR 18.</b>	Please specify the source of Electricity consumption carbon	Table 1, checklist question 3.4.	<u>Response 1:</u> It was indicated that source of	<u>Conclusion 1:</u> Please correct the source

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		emission factor for Ukraine indicated in the table B.3., section B.2.2. of the Monitoring Report.		<p>information is Order of State Environmental Investment Agency on approving of specific emissions of carbon dioxide in 2011.</p> <p><u>Response 2:</u> Correction is made.</p>	<p>of Electricity consumption carbon emission factor for Ukraine indicated in the table B.3., section B.2.2. of the MR, namely “Order of <u>State</u> Environmental Investment Agency” → “Order of <u>National</u> Environmental Investment Agency”.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate corrections in section B.2.2. of the MR version 03 dated 07/02/2013.</p>
19.	<b>CAR 19.</b>	Please indicate in the table B.4., section B.2.2. of the Monitoring Report the correct values of “Average daily operating hours” for June-August 2011, “Others” and “Medicine” type of buildings according to the supporting documents with monitoring data.	Table 1, checklist question 3.5.	<u>Response 1:</u> Correction is made.	<u>Conclusion 1:</u> <b>The issue is closed</b> based on appropriate corrections in table B.4., section B.2.2. of the MR version 02 dated 07/02/2013.
20.	<b>CAR 20.</b>	Please provide the documental	Table 1, checklist	<u>Response 1:</u>	<u>Conclusion 1:</u>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		evidence for number of CFLs installed under the project activity separately for each type of buildings indicated in tables A.1., A.3. and B.2. of the Monitoring Report.	question 3.5.	In section A.3. it is indicated that breakdown of CFLs installed under the project activity separately for each type of facilities is confirmed by Innovation Centre “Ecosystem” (Installed CFLs in each type of facilities (SD-9)) and indicated in tables A.1., A.3., and B.2. of this Report.	<b>The issue is closed</b> based on provided document to the MR version 02 dated 07/02/2013.
21.	<b>CAR 21.</b>	Please provide the information on threshold level of JI SSC project and whether it was exceeded during the monitoring period on an annual average basis in the Monitoring Report.	Table 1, checklist question 4.1.	<u>Response 1:</u> To Monitoring Report new section A.8. “Threshold level of JI SSC project” was added.  <u>Response 2:</u> 1) Paragraph 12 was indicated.  2) The Excel spreadsheet was added to calculations.	<u>Conclusion 1:</u> The issue is not closed. 1) The paragraph 11 of Provisions for JI SSC Projects provided in section A.8. of the MR doesn’t defines that the project has to meet the thresholds as defined in paragraphs 7 and 8 of the same Provisions. Please indicate the correct reference to paragraph of “Provisions for Joint implementation SSC projects”, version 03.

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					2) Please indicate the calculation of the threshold level of JI SSC project for chosen monitoring period in the Excel spreadsheet.  <u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in section A.8. of the MR version 03 dated 07/02/2013 and Excel spreadsheet.
22.	<b>CAR 22.</b>	Please provide the detailed description and appropriate justification of the accepted amendments in monitoring plan in Annex 1 to the Monitoring Report.	Table 1, checklist question 5.1.	<u>Response 1:</u> Description was added to section A.9.1.  <u>Response 2:</u> Corrections are made.	<u>Conclusion 1:</u> - Please indicate the title of Annex 1 of the MR in English. - Please indicate in Annex 1 to the MR the formulae for calculating electricity consumption in baseline scenario and project scenario (separately those ones from the PDD and the revised ones). - Please rename through

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					<p>all the Annex 1 the words “approach” → “method”, “corrections” → “revisions or deviations”.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in Annex 1 to the MR version 03 dated 07/02/2013.</p>
23.	<b>CAR 23.</b>	Please include in Annex 1 to the Monitoring Report the tables for all data and parameters.	Table 1, checklist question 5.1.	<p><u>Response 1:</u> Tables were added to Annex 1.</p> <p><u>Response 2:</u> Corrections are made.</p>	<p><u>Conclusion 1:</u> - All data and parameters according to the revised monitoring plan should be stated in in Annex 1 to the MR. - Please explicitly and clearly distinguish in Annex 1 to the MR : 1) data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout</p>



VERIFICATION REPORT – “IMPLEMENTATION OF ENERGY-EFFICIENT LIGHTING SYSTEM IN THE DONETSK REGION WITH THE USE OF KYOTO PROTOCOL MECHANISM: REPLACEMENT OF INCANDESCENT LAMPS WITH ENERGY-EFFICIENT ONES AT BUDGET FINANCED AND SOCIAL ENTITIES IN THE KRAMATORSK TOWN (UNDER TRACK 2)”

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					<p>the crediting period), and that are available already at the stage of determination regarding the PDD;</p> <p>2) 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 regarding the PDD;</p> <p>3) data and parameters that are monitored throughout the crediting period?</p> <p>- Please specify the title of section in Annex 1 to the MR, namely indicate “Data to be monitored <u>according to the revised monitoring plan</u>”.</p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					<p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in Annex 1 to the MR version 03 dated 07/02/2013.</p>
24.	<b>CAR 24.</b>	Please indicate in in Annex 1 to the Monitoring Report quality assurance and quality control measures for intended deviations to the monitoring plan.	Table 1, checklist question 5.1.	<p><u>Response 1:</u> Information was added to Annex 1.</p> <p><u>Response 2:</u> Corrections are made.</p>	<p><u>Conclusion 1:</u> - The QA/QC procedures to be applied for all data and parameters according to the revised monitoring plan should be stated in Annex 1 to the MR. - Please add to Annex 1 to the MR the reference on sections C.1.2. and C.2. of the MR that contain information on quality assurance and quality control measures.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in Annex 1 to the</p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
					MR version 03 dated 07/02/2013.
25.	<b>CAR 25.</b>	Please describe in in Annex 1 to the Monitoring Report the operational and management structure that will be applied in implementing the revised monitoring plan.	Table 1, checklist question 5.1.	<p><u>Response 1:</u> Description was added to Annex 1.</p> <p><u>Response 2:</u> Corrections are made.</p>	<p><u>Conclusion 1:</u> Please indicate in in Annex 1 to the MR the whole information on operational and management structure that will be applied in implementing the revised monitoring plan.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on appropriate additions in in Annex 1 to the MR version 03 dated 07/02/2013.</p>
26.	<b>CL 01.</b>	Please provide the clarification of the difference between the amounts of emission reductions indicated in PDD version 03.3 dated 15/06/2012 regarding which the determination has been deemed final and Monitoring Report.	Table 1, checklist question 2.1.	<p><u>Response 1:</u> According to PDD, annual amount of emission reduction is 8 274 tonnes of CO<sub>2</sub> equivalent per year. According to Monitoring report, emission reduction is 10 074 tonnes of CO<sub>2</sub> equivalent per 19 months</p>	<p><u>Conclusion 1:</u> The clarifications are not sufficient. Please explicitly state what values of parameters were improved due to more accurate method of calculation applied in the revised</p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				<p>which makes about 6 363 tonnes of CO<sub>2</sub> equivalent per year. The difference between figure in PDD and in Monitoring report is because of applying new more accurate approach of calculation.</p> <p><u>Response 2:</u></p> <p>According to PDD, annual amount of emission reduction is 8 274 tonnes of CO<sub>2</sub> equivalent per year. According to Monitoring report, emission reduction is 10 074 tonnes of CO<sub>2</sub> equivalent per 19 month which makes about 6 363 tonnes of CO<sub>2</sub> equivalent per year. The differences between figure in PDD and in Monitoring report are because the usage of lighting devices during the spring and summer is lower. The source for work hours in PDD was the monitoring in February,</p>	<p>monitoring plan.</p> <p><u>Conclusion 2:</u> The clarifications are sufficient. <b>The issue is closed.</b></p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				2011. While LogBooks showed that work hours for lighting devices decreased in spring and in summer which caused decreasing results for calculation of emission reductions.	
27.	<b>CL 02.</b>	Please provide confirmation of the starting and final dates of the lamp replacement indicated in table A.5., section A.5. of the Monitoring Report.	Table 1, checklist question 2.2.	<p><u>Response 1:</u> In notes of table 5 it was indicated that Source: Report of acceptance (SD-3).</p> <p><u>Response 2:</u> References for data in table A.5 were provided.</p>	<p><u>Conclusion 1:</u> The evidence document of the starting date of the lamp replacement was not provided. Please provide the relevant document. Also specify the sources for all activities in table A.5., section A.7. of the MR.</p> <p><u>Conclusion 2:</u> <b>The issue is closed</b> based on provided evidence documents and appropriate additions in section A.6. of the MR version 03 dated 07/02/2013.</p>
28.	<b>CL 03.</b>	Please clarify how were	Table 1, checklist	<u>Response 1:</u>	<u>Conclusion 1:</u>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
		<p>estimated the dates of non-workdays and how was calculated the amount of workdays and non-workdays for all types of buildings indicated in section A.4.2. of the Monitoring Report.</p>	<p>question 3.5.</p>	<p>For each type of facility (schools, kindergartens, medical facilities, and others), the amount of workdays and non-workdays was determined according to schedule of these institutions. Medicine facilities in Kramatorsk Town work 7 days a week. Schools and Others have 6 work days per week. Kindergartens work 5 days per week. Also, actual average daily operating hours transparently show work schedule of institutions.</p> <p><u>Response 2:</u></p> <p>Description of parameter <math>d_{ijkl}</math> (Number of days of monitoring period for group of devices; for workdays (j=1) and non-workdays (j=2); during the season (k); for the type of building (l) was added to Annex 1.</p>	<p>The clarification is not sufficient. Please clarify whether the public holidays were taken into account. Also clarify the amount of workdays and non-workdays for schools, kindergartens, and others facilities for June – August 2011 (68 workdays, 24 non-workdays). If facilities like school, kindergarten, and other have 5 day work week, then the amount of non-workdays for June – August 2011 will be 26 days.</p> <p><u>Conclusion 2:</u>  <b>The issue is closed</b> based on provided clarifications and appropriate additions in the MR version 03 dated 07/02/2013.</p>

No.	Type of request	Observation	Ref. to checklist question in table 1	Summary of project owner response	Verification team conclusion
				<p>In tables A.2. and A.4. it was indicated that holidays are December 31 – New Year; January 7 Christmas; March 8 - International Women's Day; April 24 in 2011 and April 15 in 2012 - Orthodox Easter in 2011; May 1 &amp; 2 - Labour Days; and May 9 - Victory Day; June 12 in 2011 and June 3 in 2012 - Holy Trinity Day (Triytsya) ; June 28 - Constitution Day; August 24 - Independence Day.</p>	
29.	<b>CL 04.</b>	<p>It is indicated in section C.1.2. of the Monitoring Report that staff involved in the project implementation and checks was trained according to the guidelines. Please indicate the full name of this document with reference in the appropriate section of MR.</p>	Table 1, checklist question 6.1.	<p><u>Response 1:</u>          In section C.1.2, reference to the document Minutes of the Meeting on Philips Energy Efficient Lamp Monitoring in Educational and Healthcare Facilities was provided.</p> <p><u>Response 2:</u>          The Log Filling Instructions and reference to this document was provided in section C.1.2.</p>	<p><u>Conclusion 1:</u>          Please indicate the full name of the “guidelines” indicated in section C.1.2. of the MR with reference on this document.</p> <p><u>Conclusion 2:</u>  <b>The issue is closed</b> based on appropriate additions in section C.1.2.of the MR version 03 dated 07/02/2013.</p>