# VERIFICATION REPORT
# VINNYTSYAOBLENERGO PJSC

## VERIFICATION OF THE
# "REDUCTION OF PROCESS LOSSES IN POWER LINES VINNYTSYAOBLENERGO PJSC"

## REPORT NO. UKRAINE-VER/0396/2011
REVISION NO. 01

SECOND PERIODIC FOR PERIOD 01/01/2008-31/12/2011

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0396/2011

# VERIFICATION REPORT

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| Date of first issue:<br>13/04/2012 | Organizational unit:<br>Bureau Veritas Certification Holding SAS |
| Client:<br>*Vinnytsyaoblenergo PJSC* | Client ref.:<br>Mykola Nitsak |

Summary:
Bureau Veritas Certification has made the 2nd periodic verification of the "Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC", project of Vinnytsyaoblenergo PJSC located in Vinnytsa city and Vinnytsa Region, Ukraine, and applying JI specific approach, 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 verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the *following three phases: i) desk review of the monitoring report against 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 verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 922174 tonnes of CO2 equivalent for the monitoring period from 01/01/2008 to 31/12/2011 (267313 tonnes of CO2 from 01/01/2008-31/12/2008, 269346 tonnes of CO2 from 01/01/2009-31/12/2009, 201561 tonnes of CO2 from 01/01/2010-31/12/2010, 183953 tonnes of CO2 from 01/01/2011-31/12/2011)

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|---|---|---|
| Report No.:<br>UKRAINE-ver/0396/2012 | Subject Group:<br>JI | |
| Project title:<br>"Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC" | | |
| Work carried out by:<br>Oleg Skoblyk – Team Leader, Lead Verifier<br>Vyacheslav Yeriomin, Team Member, Verifier | | |
| Work reviewed by:<br>Ivan Sokolov – Internal Technical Reviewer<br>Daniil Ukhanov – Technical Specialist | | |
| Work approved by:<br>Ivan Sokolov - Operational Manager | | |
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Bureau Veritas Certification Holding SAS

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# 1 INTRODUCTION

Vinnytsyaoblenergo PJSC has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project ”Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC” (hereafter called “the project”) at Vinnytsa city and Vinnytsya Region, Ukraine.

This report summarizes the findings of the verification 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

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

## 1.3 Verification Team

The verification team consists of the following personnel:

| | |
|---|---|
| Oleg Skoblyk | |
| Bureau Veritas Certification | Team Leader, Climate Change Verifier |
| Vyacheslav Yeriomin | |
| Bureau Veritas Certification | Climate Change Verifier |

This verification report was reviewed by:

| | |
|---|---|
| Ivan Sokolov | |
| Bureau Veritas Certification, | Internal Technical Reviewer |
| Daniil Ukhanov | |
| Bureau Veritas Certification, | Technical Specialist |

# 2 METHODOLOGY

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

In order to ensure transparency, a verification 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 verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

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

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

## 2.1 Review of Documents

The Monitoring Report (MR) submitted by Vinnytsyaoblenergo PJSC and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report version(s) 02 and project as described in the determined PDD.

## 2.2 Follow-up Interviews

On 05/04/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Vinnytsyaoblenergo PJSC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

| Interviewed organization | Interview topics |
|---|---|
| Vinnytsyaoblenergo PJSC | Organizational structure<br>Responsibilities and authorities<br>Roles and responsibilities for data collection and processing<br>Installation of equipment<br>Data logging, archiving and reporting<br>Metering equipment control<br>Metering record keeping system, database<br>IT management<br>Training of personnel<br>Quality management procedures and technology<br>Internal audits and check-ups |
| CONSULTANT "EES" Ltd | Baseline methodology<br>Monitoring plan<br>Monitoring report<br>Excel spreadsheets |

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

The objective of this phase of the verification 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 GHG emission reduction calculation.

If the Verification Team, 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:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan;

(c) 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 Team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the verification.

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

# 3 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 6 Corrective Action Requests, 0 Clarification Requests, and 0 Forward Action Requests.

The number between brackets at the end of each section corresponds to the DVM paragraph.

## 3.1 Remaining issues and FARs from previous verifications

No FARs have been issued from previous verification.

## 3.2 Project approval by Parties involved (90-91)

The project has been approved by the Host Party (Letter of Approval #3700/23/7 issued by State Environment Investment Agency of Ukraine 21/12/2011) and the Sponsor Party (Letter of approval № DZKiOApek – 350-2/21931/11/TK issued by the Minister of Environment of Poland dated 16/05/2011)

The abovementioned written approval is unconditional.

## 3.3 Project implementation (92-93)

The implementation status of the project is described in following table

| № | Name of activities | Measurement unit | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 5 | 6 | 7 | 8 |
| | Replacing PL wire by a wire with a bigger section | | | | | |
| | To PL-10kV<br>To PL-0,4 kV | km<br>km | 89<br>162 | 125<br>190 | 63<br>266 | 80<br>394,2 |
| 2 | Replacement of overloaded | pcs | 40 | 38 | 40 | 43 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | and installation of additional power transformers | | | | | |
| 3 | Construction of PL-10kV;<br>PL-0,4 kV | km<br>km | 30,43<br>145,1 | 11,35<br>15,3 | 9,89<br>92,91 | 22,2<br>162,6 |
| 4 | Replacing the single-phase meters with high accuracy meters | pcs | 58669 | 54460 | 48769 | 48180 |
| 5 | Repair of electric meters | pcs | 25634 | 19715 | 24697 | 30270 |
| 6 | Replacement of steel wires on the PL-0,4kV by wires with biggest section of A and AC grade | km | 67 | - | - | - |
| 7 | Change of bare wire inputs into isolated wire inputs | pcs | 19996 | 19511 | 17727 | 21111 |
| 8 | Construction of unloading substations | pcs | 10 | 12 | 23 | 32 |
| 9 | Replacement and installation of meters in front of buildings | pcs | 19996 | 19511 | 17727 | 21111 |
| 10 | Replacement of worn-out oil switches with vacuum ones | pcs | 95 | 99 | 76 | 173 |
| 11 | Change of the cable lines 10-0,4 kV | km | 14,06 | 17,73 | 11,291 | 26,1 |
| 12 | Installation of 3 –phase multifunctional meters | pcs | 4768 | 1834 | 3713 | 3387 |
| 13 | Change of inputs of 110kV with rigid insulation | pcs. | 9 | 6 | 6 | 3 |
| 14 | Introduction of ASKOE | | 8 | 32 | 19 | 56 |

It was assessed by Bureau Veritas verification team during the site visit that the project has been implemented in accordance with the PDD regarding which the determination has been deemed final.

Project equipment has been installed with minor deviations from the schedule and is fully operational.

CAR01-CAR03 and their resolution/conclusion on project implementation concerning in the APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL.

## 3.4 Compliance of the monitoring plan with the monitoring methodology (94-98)

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.

For calculating the emission reductions or enhancements of net removals, key factors, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account.

Key monitoring activities are clearly described in the monitoring report and no deviations from monitoring algorithm were detected. The monitoring points including parameters monitored, monitoring equipment and information concerning its calibration interval are clearly described in the section B of the Monitoring Report and completely corresponds with determined PDD.

Data sources used for calculating emission reductions, such as approved by Ministry of Fuel and Power reporting forms 1B-TPL Power losses, 8111 Electric and heat energy balance and technical-economic calculation, 46 electricity net supply, yearly reports on investment programmes realisation are clearly identified, reliable and transparent.

Emission factor for electric energy transportation are selected by carefully balancing Accuracy and reasonableness, and appropriately justified of the choice. Values of Emission Factor for electric power transportation were accepted in compliance with State Environmental Investment Agency of Ukraine Orders.

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.

CAR04 and its resolution/conclusion applicable to compliance of the monitoring plan with the monitoring methodology concerning in the APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

## 3.5 Revision of monitoring plan (99-100)

"Not applicable"

## 3.6 Data management (101)

The detailed data management system has been implemented on "Vinnytsyaoblenergo" PJSC to record and keeps required information. The monitored data flow for each parameter to be monitored is described in the section C.1 of the Monitoring Report. Operational information and reporting department is responsible to monitoring data preparation.

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures.

The function of the monitoring equipment, including its calibration status, is in order. Metering equipment involved in the project activity are periodically calibrated by State Enterprise "Vinnytsyastandartmetrologiya". Data on electric energy flow are periodically checked by PJSC "Vinnytsyaoblenergo".

The evidence and records used for the monitoring are maintained in a traceable manner.

The data collection and management system for the project is in accordance with the monitoring plan. The data monitored and required for ERUs calculation will be kept during two years after last ERUs transfer.

CAR05, CAR06 and their resolution/conclusion applicable to data management concerning in APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

## 3.7 Verification regarding programmes of activities (102-110)

"Not applicable"

# 4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 2nd periodic verification of Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC" Project in Vinnytsya city and Vinnytsya Region, Ukraine, which applies JI specific approach. The verification 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 verification consisted of the following three phases: i) desk review of the monitoring report against 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 verification report and opinion.

The management of Vinnytsyaoblenergo PJSC is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan indicated in the final PDD version 3.0. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 02 for the reporting period as indicated below. Bureau Veritas Certification confirms that the

project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. For ease of calculation of emission reductions in the Excel file «VIN-1BTWE-2008-2011-31-01-2012-Km-ok-KP», all the values with the quotient of one hundred are rounded to integers. Therefore, when summing the values of ERUs, which are listed in Tables № № 5,6 of Monitoring Report there may be minor differences.
Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2008 to 31/12/2011

| | | |
|---|---|---|
| Baseline emissions | : 922174 | tonnes of CO2 equivalent. |
| Project emissions | : 0 | tonnes of CO2 equivalent. |
| Emission Reductions | : 922174 | tonnes of CO2 equivalent. |

From 01/01/2008 to 31/12/2008

| | | |
|---|---|---|
| Baseline emissions | : 267313 | tonnes of CO2 equivalent. |
| Project emissions | : 0 | tonnes of CO2 equivalent. |
| Emission Reductions | : 267313 | tonnes of CO2 equivalent |

From 01/01/2009 to 31/12/2009

| | | |
|---|---|---|
| Baseline emissions | : 269346 | tonnes of CO2 equivalent. |
| Project emissions | : 0 | tonnes of CO2 equivalent. |
| Emission Reductions | : 269346 | tonnes of CO2 equivalent |

From 01/01/2010 to 31/12/2010

| | | |
|---|---|---|
| Baseline emissions | : 201561 | tonnes of CO2 equivalent. |
| Project emissions | : 0 | tonnes of CO2 equivalent. |
| Emission Reductions | : 201561 | tonnes of CO2 equivalent |

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From 01/01/2011 to 31/12/2011

| | | |
|---|---|---|
| Baseline emissions | : 183953 | tonnes of CO2 equivalent. |
| Project emissions | : 0 | tonnes of CO2 equivalent. |
| Emission Reductions | : 183953 | tonnes of CO2 equivalent |

# 5 REFERENCES

**Category 1 Documents:**
Documents provided by Vinnytsyaoblenergo PJSC that relate directly to the GHG components of the project.

/1/ Project design document "Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC" version 3.0 dated 01/11/2011
/2/ Monitoring Report "Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC" version 01 dated 29/09/2011
/3/ Monitoring Report "Reduction of Process Losses in Power Lines Vinnytsyaoblenergo PJSC" version 02 dated 31/01/2012
/4/ ERUs calculation Excel file "VIN-1BTWE-2008-2011-31-01-2012-Km-ok-KP.xls"
/5/ Letter of Approval № 3700/23/7, issued by the State Environmental Investment Agency of Ukraine 21/12/2011
/6/ Letter of Approval № DZKiOApek – 350-2/21931/11/TK issued by the Minister of Environment of Poland dated 16/05/2011

**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/ The methodology of technical power losses amount determination, in 150-0,38 kV tension power grids power supply company for the indirect carbon dioxide emissions estimation
/12/ Agreement No.000557 on conducting of verification (calibration) of

measurement devices dated 14.02.2011

/13/ Agreement No.11-01-03 on taking, repair, calibration and shipment of measurement devices dated 10.01.2011

/14/ Agreement No.1500-46 on purchase and sale of electric measurement devices dated 04.01.2011

/15/ Agreement No.84 on purchase of services of the metrological activities conducting dated 24.02.2011

/16/ Bill for electric power consumption in 03/2011 for L.Paziyk

/17/ Block diagram of the organization of PJSC "Vinnytsiaoblenergo" service of merology

/18/ Certificate for apparatus for testing №230/76 for apparatus for testing of transformer oil УИМ-90 м №809 dated 29.05.2009

/19/ Certificate №1825 for electrotechnical laboratory ЕТЛ-35кп Ford №915 dated 12.10.2009

/20/ Certificate №230/02 dated 11.01.2011 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№222

/21/ Certificate №230/03 for stationary high-voltage facility based on apparatus АИМТИ-60 №11842 with transformers АИМТИ-60 №11842 and НОМ-10-66 У2 №6392 dated 14.01.2009

/22/ Certificate №230/04 for stationary high-voltage facility based on apparatus АИМТИ-60 №11842 with transformers АИМТИ-60 №11842 and НОМ-10-66 У2 №6392 dated 12.01.2011

/23/ Certificate №230/10 for high-voltage stationary testing facility АИИ-70 Reg.№2118 dated 10.02.2010

/24/ Certificate №230/10 for movable facility ИПУ-60 №248 being part of ИПК-10 №248 on motor vehicle ГАЗ-66 №033-46 ВІ, dated 02.02.2011

/25/ Certificate №230/10 for movable facility ИПУ-60 №519 being part of ИПК-10 №519 on motor vehicle ГАЗ-53 №039-94 ВІ, dated 10.01.2011

/26/ Certificate №230/104 for stationary testing facility АИИ-70 №1369 with transformers АИИ-70 №1283 and ОСМ 0,1-1УЗ dated 03.08.2009

/27/ Certificate №230/11 dated 11.02.2010 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№0228 being part of searching set ИПК-10 Reg.№228

/28/ Certificate №230/119 dated 25.10.2010 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№295 on motor vehicle "ГАЗ-66", state number 1665 АВ

/29/ Certificate №230/120 for high-voltage stationary testing facility АИИ-70 Reg.№2661 dated 25.12.2010

/30/ Certificate №230/137 for stationary high-voltage facility based on apparatus АИИ-70 №1413 with transformers АИИ-70 №1464 and НОМ6 УХЛ4 №0484

dated 24.11.2010

/31/ Certificate №230/139 for movable electrotechnic laboratory ЕТЛ-10 on motor vehicle ГАЗ-66, state №03994 ВІ dated 20.12.2010

/32/ Certificate №230/140 for stationary high-voltage facility based on apparatus АИИ-70 №1413 dated 20.12.2010

/33/ Certificate №230/192 for diode testing apparatus АИД-70 №558/558, consisting of: control box АИД-70 №558 and box ВН АИД-70 №558 dated 24.12.2009

/34/ Certificate №230/192 for diode testing apparatus АИД-70 №558/558, consisting of: control box АИД-70 №558 and box ВН АИД-70 №558 dated 24.12.2009

/35/ Certificate №230/35 for high-voltage stationary testing facility АИИ-70 Reg.№2324 dated 30.03.2010

/36/ Certificate №230/41 dated 07.04.2010 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№0449 being part of searching complex ИПК-10 Reg.№289 on motor vehicle ГАЗ-66, state number №04350 ВІ

/37/ Certificate №230/47 for high-voltage stationary testing facility АИИ-70 Reg.№1435 working place №2 dated 05.05.2010

/38/ Certificate №230/5 for high-voltage stationary testing facility for testing the protection devices "ЕЛ33-50", accounted №001 dated 23.06.2010

/39/ Certificate №230/5 for stationary high-voltage testing facility ЕВС-60, Reg.№9680 dated 13.01.2010

/40/ Certificate №230/52 for stationary testing facility АМИ-70 №5910 dated 22.04.2009

/41/ Certificate №230/53 dated 13.05.2010 for movable facility "ИПУ-60" №436 on motor vehicle "ГАЗ-66", state number 00861 ВІ

/42/ Certificate №230/57 dated 18.06.2010 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№293 being part of searching complex ИПК-10 Reg.№0293 on motor vehicle ГАЗ-66, state №04391 ВІ

/43/ Certificate №230/59 for movable electrotechnical laboratory ЕТЛ-10 on motor vehicle ГАЗ-53, state №06118 ВІ dated 24.06.2010

/44/ Certificate №230/60 for movable electrotechnical laboratory ЕТЛ-10 "Seba Dynatronic" on motor vehicle "Mersedes 308", state №06119 ВІ dated 24.06.2010

/45/ Certificate №230/60 for movable electrotechnical laboratory ЕТЛ-10 №820 on motor vehicle Газель, state №АВ 10-47 ВА dated 24.06.2010

/46/ Certificate №230/62 dated 01.07.2010 for movable high-voltage testing-burning facility "ИПУ-60", Reg.№292 being part of testing-searching set "ИПК-10", Reg.№292 on motor vehicle "ГАЗ-66", state number 03616 ВІ

/47/ Certificate №230/65 for movable electrotechnic laboratory ЕТЛ-10 №127 on motor vehicle ГАЗ-66, state №АВ 5265 АВ dated 16.06.2010

/48/ Certificate №230/66 for movable electrotechnic laboratory ЕТЛ-10-02М on motor vehicle УАЗ-3741, state №10251 ВТ dated 16.06.2010

/49/ Certificate №230/67 for movable electrotechnic laboratory ЕТЛ-35-02М №22 on motor vehicle ГАЗ-66, state №№АВ 5263 АВ dated 16.06.2010

/50/ Certificate №230/68 for movable electrotechnic laboratory ЕТЛ-35-02М №127 on motor vehicle ГАЗ-66, state №АВ 2345 АВ dated 16.06.2010

/51/ Certificate №230/69 for movable facility ИПУ-60 №353 being the part of ИПК-10 №353 on motor vehicle ГАЗ-66, n/n, dated 16.06.2010

/52/ Certificate №230/72 dated 07.07.2010 for movable high-voltage testing-burning facility "ИПУ-10", Reg.№504 being part of testing-searching set "ИПК-10", Reg.№504 in motor vehicle "УАЗ-3962", state number АВ 3212 ВВ

/53/ Certificate №230/77 for stationary testing facility АИИ-70 Reg.№2767 dated 13.07.2010

/54/ Certificate №230/88 for high-voltage stationary testing facility based on apparatus АИД-70У2 Reg.№10298/340 dated 22.06.2009

/55/ Certificate №230/91 for stationary testing facility АИИ-70 №8121 with transformer АИИ-70М №1291 dated 06.07.2009

/56/ Certificate №230/94 for stationary testing facility АИИ-70 №6236 with transformers АИИ-70 №8482 and ОСМ 1-0,4У3 dated 08.07.2009

/57/ Certificate №ЕТЛ 108/11 for device of demand for automats УПА-10М Reg.№030311 dated 16.03.2011

/58/ Certificate of attestation №ПУ-0002/09 of electric metering laboratory of SU "Current network of Yampil" of OJSC "SC Vinnytsiaoblenergo" dated 15.01.2009

/59/ Certificate of attestation №ПУ-0027/09 of electric metering laboratory of Sutyn workshop of transformers repair of SU "Vinnytsiaenergonaladka" of OJSC "SC Vinnytsiaoblenergo" dated 25.03.2009

/60/ Certificate of attestation №ПУ-0030/09 of electric metering laboratory of SU "Current network of Kalynivka" of OJSC "SC Vinnytsiaoblenergo" dated 26.03.2009

/61/ Certificate of attestation №ПУ-0031/10 of electric metering laboratory of SU "Current network of Orativ" of OJSC "SC Vinnytsiaoblenergo" dated 12.03.2010

/62/ Certificate of attestation №ПУ-0036/08 of electric metering laboratory of SU "Current network of Tomashpil" of OJSC "SC Vinnytsiaoblenergo" dated 26.03.2008

/63/ Certificate of attestation №ПУ-0036/10 of electric metering laboratory of SU "Current network of Mogylev-Podilskyy" of OJSC "SC Vinnytsiaoblenergo"

dated 22.03.2010

/64/ Certificate of attestation №ПУ-0040/10 of electric metering laboratory of SU "Current network of Tulchynka" of OJSC "SC Vinnytsiaoblenergo" dated 31.03.2010

/65/ Certificate of attestation №ПУ-0043/11 of electric metering laboratory of SU "Current network of Illintsi" of OJSC "SC Vinnytsiaoblenergo" dated 23.03.2011

/66/ Certificate of attestation №ПУ-0045/09 of electric metering laboratory of SU "Current network of Pogrebysche" of OJSC "SC Vinnytsiaoblenergo" dated 15.04.2009

/67/ Certificate of attestation №ПУ-0046/11 of electric metering laboratory of SU "Bar current network" of PJSC "Vinnytsiaoblenergo" dated 25.11.2011

/68/ Certificate of attestation №ПУ-0053/08 of electric metering laboratory of SU "Current network of Lityn" of OJSC "SC Vinnytsiaoblenergo" dated 12.05.2008

/69/ Certificate of attestation №ПУ-0054/08 of electric metering laboratory SU "Current network of Zhmerynka" of OJSC "SC Vinnytsiaoblenergo" dated 16.05.2008

/70/ Certificate of attestation №ПУ-0055/07 of electric metering laboratory of SU "Current network of Shargorod" of OJSC "SC Vinnytsiaoblenergo" dated 12.07.2007

/71/ Certificate of attestation №ПУ-0077/08 of electric metering laboratory of SU "Current network of Nemyriv" of OJSC "SC Vinnytsiaoblenergo" dated 25.06.2008

/72/ Certificate of attestation №ПУ-0095/09 of electric metering laboratory of SU "Current network of Pischanka" of OJSC "SC Vinnytsiaoblenergo" dated 06.07.2009

/73/ Certificate of attestation №ПУ-0097/10 of electric metering laboratory of SU "Current network of Khmilnyk" of OJSC "SC Vinnytsiaoblenergo" dated 24.06.2010

/74/ Certificate of attestation №ПУ-0111/09 of electric metering laboratory of SU "Vinnytsia high-voltage current network" of OJSC "SC Vinnytsiaoblenergo" dated 22.07.2009

/75/ Certificate of attestation №ПУ-0116/08 of electric metering laboratory of SU "Current network of Kryzhopil" of OJSC "SC Vinnytsiaoblenergo" dated 27.08.2008

/76/ Certificate of attestation №ПУ-0131/08 of electric metering laboratory of SU "Current network of Tyvrivsk" of OJSC "SC Vinnytsiaoblenergo" dated 05.08.2008

/77/ Certificate of attestation №ПУ-0131/10 of electric metering laboratory of metrology service of OJSC "SC Vinnytsiaoblenergo"

/78/ Certificate of attestation №ПУ-0135/09 of electric metering laboratory of SU

"Current network of Chechelnyk" of OJSC "SC Vinnytsiaoblenergo" dated 07.09.2009

/79/ Certificate of attestation №ПУ-0136/09 of electric metering laboratory of SU "Current network of Lypovets" of OJSC "SC Vinnytsiaoblenergo" dated 07.09.2009

/80/ Certificate of attestation №ПУ-0141/10 of electric metering laboratory of SU "Current network of Trostianets" OJSC "SC Vinnytsiaoblenergo" dated 31.08.2010

/81/ Certificate of attestation №ПУ-0151/10 of electric metering laboratory of SU "Current network of Shargorod" of OJSC "SC Vinnytsiaoblenergo" dated 06.09.2010

/82/ Certificate of attestation №ПУ-0177/09 of electric metering laboratory of SU "Current network of Murovani Kurylivtsi" of OJSC "SC Vinnytsiaoblenergo" dated 26.10.2009

/83/ Certificate of attestation №ПУ-0205/09 of electric metering laboratory of SU "Current network of Chernivtsi" of OJSC "SC Vinnytsiaoblenergo" dated 15.12.2009

/84/ Certificate of attestation №ПУ-0216/10 of electric metering laboratory of SU "Gaisyn current network" of PJSC "Vinnytsiaoblenergo" dated 22.11.2010

/85/ Certificate of attestation №ПУ-0237/09 of electric metering laboratory of SU "Current network of Teplyk" of OJSC "SC Vinnytsiaoblenergo" dated 21.12.2010

/86/ Certificate of state metrological certification №05-0397 Dry-block calibrator of temperature EVM DB 350, Reg.№ТС210102010 dated 03.11.2010

/87/ Certificate of state metrological certification №29-0332 dated 17.02.2009 Tension transformer НОМ(э)-6/10 Reg.№002

/88/ Certificate of state metrological certification №29-0333 Tension transformer НОМ(э)-6/10 Reg.№801 dated 17.02.2009

/89/ Certificate series A №005209 of measurement devices type approval №UA-MI/1-1078-2009 dated 3.02.2009

/90/ Certificate series A №005210 of measurement devices type approval №UA-MI/1-1468-2009 dated 3.02.2009

/91/ Certificate series A №005710 of measurement devices type approval №UA-MI/1-2495-2010 dated 27.01.2010

/92/ Certificate series B №005134 of conformity of measurement devices to the approved type №UA-MI/2-2773-2009 dated 3.02.2009

/93/ Certificate series B №005222 of conformity of measurement devices to the approved type №UA-MI/2-2832-2009 dated 23.03.2009

/94/ Certificate series B №005661 of conformity of measurement devices to the

approved type №UA-MI/2-3156-2010 dated 27.01.2010

/95/ Certificate A004529 of approval of measurement devices type № UA-MI/1-1475-2007 dated 5.09.2007

/96/ Certificate A005209 of approval of measurement devices type № UA-MI/1-1078-2009 dated 3.02.2009

/97/ Certificate A005210 of approval of measurement devices type № UA-MI/1-1468-2009 dated 3.02.2009

/98/ Certificate A005501 of approval of measurement devices type № UA-MI/1-2495-2009 dated 6.09.2009

/99/ Certificate A01№644170 of state registration of juricial person PJSC "Vinnytsiaoblenergo" dated 05.03.2011

/100/ Dynamics of payment of OJSC "SC Vinnytsiaoblenergo" for the bought electric power from SC "Energorynok"

/101/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2002

/102/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2003

/103/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2004

/104/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2005

/105/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2006

/106/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2007

/107/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2008

/108/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2009

/109/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for 2010

/110/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for April 2009

/111/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for April 2010

/112/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for August 2009

/113/ Electricity balance structure and TEE for transfer in electricity supply networks

154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for August 2010

/114/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for December 2009

/115/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for December 2010

/116/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for Fabruary 2009

/117/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for Fabruary 2010

/118/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for January 2009

/119/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for January 2010

/120/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for July 2009

/121/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for July 2010

/122/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for June 2009

/123/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for June 2010

/124/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for March 2009

/125/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for March 2010

/126/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for May 2009

/127/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for May 2010

/128/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for November 2009

/129/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for November 2010

/130/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for October 2009

/131/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for October 2010

/132/ Electricity balance structure and TEE for transfer in electricity supply networks

154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for September 2009

/133/ Electricity balance structure and TEE for transfer in electricity supply networks 154-0,38 kV of OJSC "SC Vinnytsiaoblenergo" for September 2010

/134/ Key personnel of OJSC "SC Vinnytsiaoblenergo"

/135/ Licence АГ №500286 given to PJSC "Vinnytsiaoblenergo" for electric power supply by local electricity supply networks dated 24.03.2011

/136/ Licence АГ №500287 given to PJSC "Vinnytsiaoblenergo" for electric power supply using adjusted tariff dated 24.03.2011

/137/ List of base units of PJSC "Vinnytsiaoblenergo" to which metrological control of the service of metrology is applicable

/138/ Manual for drawing, providing reports and analysis of the registering form of reporting 1B-TEE "Electricity balance structure and TEE for transfer in electricity supply networks"

/139/ Organization and technical activities on the reduction of TEE in the networks of OJSC "SC Vinnytsiaoblenergo" in December 2003

/140/ Organization and technical activities on the reduction of TEE in the networks of OJSC "SC Vinnytsiaoblenergo" in December 2004

/141/ Organization and technical activities on the reduction of TEE in the networks of OJSC "SC Vinnytsiaoblenergo" in December and 12 month of 2005

/142/ Photo of electrotechnical verification laboratory ЭТПЛ-35

/143/ Protocol No.3/2010 of special general meeting of OJSC "SC Vinnytsiaoblenergo" stockholders dated 10.11.2010

/144/ Purchase and sale agreement between SC "Energorynok" and OJSC "SC Vinnytsiaoblenergo" dated December 2010

/145/ Purchase and sale agreement between SC "Energorynok" and OJSC "SC Vinnytsiaoblenergo" dated Fabruary 2011

/146/ Sample of agreement for electric power supply of OJSC "SC Vinnytsiaoblenergo"

/147/ Sample of agreement for electricity usage of OJSC "SC Vinnytsiaoblenergo"

/148/ Sample of Annex 1 to the Agreement. Volume of electricity supplied to cunsomer

/149/ Sample of Annex 10 to the Agreement. List of places where electricity supply meters are installed

/150/ Sample of Annex 11 to the Agreement. Statement on consumpted electric power

/151/ Sample of Annex 2 to the Agreement. Statement on distribution of balance belonging of electrical supply networks and the operational responsibility of the parties

/152/ Sample of Annex 3 to the Agreement. Procedure of payment for the consumpted electric power

/153/ Sample of Annex 4 to the Agreement. Schedule of data recording of electric power accounting

/154/ Sample of Annex 5 to the Agreement. Procedure of payment for reactive electricity flow-over

/155/ Sample of Annex 6 to the Agreement. Procedure of participation of Consumer in the schedules of restriction and schedules of disconnection

/156/ Sample of Annex 7 to the Agreement. Accounting of electric power loses in the Consumer's networks

/157/ Sample of Annex 8 to the Agreement. Data on supply of electric power to the subconsumers

/158/ Sample of Annex 9 to the Agreement. List of workshops, departments of the cunsomer

/159/ Schedule of state verification on OJSC "SC Vinnytsiaoblenergo" in 2011

/160/ TEE reduction from introduction of OTZ (ОТЗ) in 2006

/161/ TEE reduction from introduction of OTZ (ОТЗ) in 2007

/162/ TEE reduction from introduction of OTZ (ОТЗ) in 2008

/163/ TEE reduction from introduction of OTZ (ОТЗ) in 2009

/164/ TEE reduction from introduction of OTZ (ОТЗ) in 2010

/165/ Verification certificat for standart metre №11-П/671 standard three-phase counter-wattmeter ЦЭ 6806 Reg.№0474 dated 06.08.2010

/166/ Verification certificat for standart metre №11-П/673 standard three-phase counter-wattmeter ЦЭ 6806 Reg.№991005 dated 06.08.2010

/167/ Verification certificat for standart metre №11-П/904 standard three-phase counter-wattmeter ЦЭ 6806 Reg.№990981 dated 15.09.2009

/168/ Verification certificat for standart metre №230/139 Facility for regulation and verification of electric power meters ЦУ 6800 Reg.№93035 dated 15.04.2010

/169/ Verification certificat for standart metre №230/279 Facility for regulation and verification of three-phase electric power meters of the type 013-В Reg.№103 dated 28.10.2009

/170/ Verification certificat for standart metre №230/29 Electric standard metre device ЕНF-3 Reg.№1154 dated 01.02.2011

/171/ Verification certificat for standart metre №230/339 А Facility for verification of electric power meters У1134М Reg.№037 dated 19.05.2009

/172/ Verification certificat for standart metre №230/339 Б Facility for verification of electric power meters У1134 Reg.№6501 dated 19.05.2009

/173/ Verification certificat for standart metre №230/478 Facility for regulation and verification of one-phase electric power meters УРПС-1ф-48 Reg.№23 dated 31.07.2009

/174/ Verification certificat for standart metre №230/479 Facility for verification of electric power meters of the type 013/D Reg.№39 dated 06.08.2009

/175/ Verification certificate for working measurement device №25-04/0231 Set of characteristics of electric alternating current network meters UNIGOR, containing devices METRA Hit 29S Reg.№SD2836/SD2846 dated 17.03.2011

/176/ Verification certificate for working measurement device №25-04/0249 Digital three-phase measurement device for low tension network Multis-L72 Reg.№020726108 dated 22.03.2011

/177/ Verification certificate for working measurement device №25-04/0250 Digital three-phase measurement device for low tension network Multis-L72 Reg.№020726092 dated 22.03.2011

/178/ Verification certificate for working measurement device №25-04/0416 network analyzer SMEMOBOX 300 smart Reg.№SD2836/SD2846 dated 22.03.2011

/179/ Verification certificate for working measurement device №29-10/0448 Conductivity box CA5018-5 Reg.№039 dated 09.03.2011

/180/ Verification certificate for working measurement device №29-11/0427 Conductivity box P5054/2 Reg.№543 dated 23.03.2011

/181/ Verification certificate for working measurement device №29-11/0428 Conductivity box P5054/2 Reg.№537 dated 23.03.2011

**Persons interviewed:**

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

/1/ Nitsak M.G. - General Manager
/2/ Martsenyuk O.A. - Director of Economy
/3/ Pentyuk I.K. - Financial Director
/4/ Yashchuk V.P. - Commercial Director
/5/ Drozdenko O.I. - Head VKU and TsP
/6/ Brigham V.P. - Head of ESR
/7/ Polishchuk V.G. - Head of TsODS
/8/ Taran V.M. - Head of SM
/9/ Buz'ko A.I. - Head of YuV
/10/ Kravets R.B. - Deputy Head of the YuV
/11/ Umanets N.I. - Head SZE
/12/ Prots R. – representative of Ltd «EES»

# APPENDIX A: VERIFICATION PROTOCOL

**VERIFICATION PROTOCOL**

**Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)**

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| **Project approvals by Parties involved** | | | | |
| 90 | 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? | Written project approval by the Ukraine #3700/23/7 dated 21/12/2011 has been issued by the State Environmental Investment Agency of Ukraine.<br>Written project approval by Party- buyer of GHG emission reductions has been issued (Letter of Approval № DZKiOApek – 350-2/21931/11/TK issued by the Minister of Environment of Poland dated 16/05/2011) | OK | OK |
| 91 | Are all the written project approvals by Parties involved unconditional? | All the written project approvals are unconditional | OK | OK |
| **Project implementation** | | | | |
| 92 | 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? | *CAR01*<br>Please indicate correct date and valid version of PDD throw all Monitoring Report<br>*CAR02*<br>The monitoring report indicates project implementation status in the *Table 1* in the section A.6. The determined PDD doesn't contain list of proposed measures. Please provide in the | CAR01<br><br>CAR02 | OK<br><br>OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | Monitoring Report reference to reliable and transparent source of these data. Also please explain, if planned actions for 2008-2011 years are different from implemented measures. | | |
| 93 | What is the status of operation of the project during the monitoring period? | The project equipment is in operation during the monitoring period. | OK | OK |
| **Compliance with monitoring plan** | | | | |
| 94 | Did the monitoring occur 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 has been occurred in accordance with the monitoring plan provided in the PDD which the determination has been deemed final and is available on the UNFCCC website. | OK | OK |
| 95 (a) | For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate? | Key factors influencing the baseline emissions and risks associated with the project activity level have been taken into account for emission reduction calculation. | OK | OK |
| 95 (b) | Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent? | *CAR04*<br>Please provide to AIE next sources to prove calculations reliability:<br>- number of residential users<br>- number of one- and three phase power | CAR04 | OK |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | | meters<br>- part of power meters with different quality class<br>- part of electronic and induction power meters | | |
| 95 (c) | 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? | Emission factor for electric power transmission is used for emission reduction calculation. Value of Emission factor is accepted from year to year by National Environmental Investment Agency Orders. | OK | OK |
| 95 (d) | Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner? | The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. | OK | OK |
| **Applicable to JI SSC projects only** | | | | |
| 96 | Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?<br>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 | Not applicable | Not applicable | Not applicable |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | period determined? | | | |
| **Applicable to bundled JI SSC projects only** | | | | |
| 97 (a) | Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE? | Not applicable | Not applicable | Not applicable |
| 97 (b) | If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report? | Not applicable | Not applicable | Not applicable |
| 98 | If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report?<br>Do the monitoring periods not overlap with those for which verifications were already deemed final in the past? | Not applicable | Not applicable | Not applicable |
| **Revision of monitoring plan** | | | | |
| **Applicable only if monitoring plan is revised by project participant** | | | | |
| 99 (a) | Did the project participants provide an appropriate justification for the proposed revision? | The monitoring plan has not been revised by project participants | Not applicable | Not applicable |
| 99 (b) | Does the proposed revision improve the accuracy and/or applicability of information collected compared to the | Not applicable | Not applicable | Not applicable |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans? | | | |
| **Data management** | | | | |
| 101 (a) | Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures? | The implementation of data collection procedures are in accordance with the monitoring plan contains in the determined PDD.<br>*CAR05*<br>Please provide in the section C.1 transparent scheme of data collection with indication of monitored parameters and responsible persons | CAR05 | OK |
| 101 (b) | Is the function of the monitoring equipment, including its calibration status, is in order? | The function of monitoring equipment including its calibration status is in order. Electric measuring equipment are calibrated by State Enterprise "Vinnytsyaderzhstandartmetrologiya" under approved plan | OK | OK |
| 101 (c) | Are the evidence and records used for the monitoring maintained in a traceable manner? | The evidences and records are used for the monitoring maintained in a traceable manner. | OK | OK |
| 101 (d) | Is the data collection and management system for the project in accordance with the monitoring plan? | *CAR06*<br>Please indicate that the data monitored and required to ERUs calculation will be kept two years after the last ERUs transfer. Also please provide to AIE relevant order | CAR06 | OK |
| **Verification regarding programs of activities (additional elements for assessment)** | | | | |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| 102 | Is any JPA that has not been added to the JI PoA not verified? | Not applicable | Not applicable | Not applicable |
| 103 | Is the verification based on the monitoring reports of all JPAs to be verified? | Not applicable | Not applicable | Not applicable |
| 103 | Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA? | Not applicable | Not applicable | Not applicable |
| 104 | Does the monitoring period not overlap with previous monitoring periods? | Not applicable | Not applicable | Not applicable |
| 105 | If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing? | Not applicable | Not applicable | Not applicable |
| **Applicable to sample-based approach only** | | | | |
| 106 | Does the sampling plan prepared by the AIE:<br>(a) Describe its sample selection, taking into<br>account that:<br>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is | Not applicable | Not applicable | Not applicable |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | reasonable, taking into account differences among the characteristics of JPAs, such as:<br>− The types of JPAs;<br>− The complexity of the applicable technologies and/or measures used;<br>− The geographical location of each JPA;<br>− The amounts of expected emission reductions of the JPAs being verified;<br>− The number of JPAs for which emission reductions are being verified;<br>− The length of monitoring periods of the JPAs being verified; and<br>− The samples selected for prior verifications, if any? | | | |
| 107 | Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation? | Not applicable | Not applicable | Not applicable |
| 108 | Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site | Not applicable | Not applicable | Not applicable |

| DVM Paragraph | Check Item | Initial finding | Draft Conclusion | Final Conclusion |
|---|---|---|---|---|
| | inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification? | | | |
| 109 | Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional) | Not applicable | Not applicable | Not applicable |
| 110 | If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing? | Not applicable | Not applicable | Not applicable |

**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 | Verification team conclusion |
|---|---|---|---|
| *CAR01*<br>Please indicate correct date and valid version of PDD throw all Monitoring Report | 92 | The correct date and version of the determined PDD has been indicated throw all Monitoring Report version 02 dated 31/01/2012 | The corrections of Monitoring Report were provided by the project developer. The issue is closed |
| *CAR02*<br>The monitoring report indicates project implementation status in the *Table 1* in the section A.6. The determined PDD doesn't contain list of proposed measures. Please provide in the Monitoring Report reference to reliable and transparent source of these data. Also please explain, if planned actions for 2008-2011 years are different from implemented measures. | 92 | All information on project implementation was provided from official and approved sources such as Reports on investment programs realization for relevant year. These Reports have been sent to National energetic Regulatory Commission of Ukraine (NERC), NJSC "Energy Company of Ukraine", Ministry of Fuel and Power of Ukraine. Soft copies of Reports were provided to AIE. | The information concerning in Reports is in line with the ERUs calculation Excel file. The issue is closed. |

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| *CAR03*<br>Please explain difference between ERU's calculation for 2011 indicated in the determined PDD and in the Monitoring Report | 92 | Since the determined PDD version 3.0 contains miscalculated ERUs for the period of 2008 – 2011 years, and the monitoring was conducted at the beginning of 2012, then according to "EES" Ltd there had been conducted calculations of ERUs for the year 2011 inclusive. The results of calculations for 2008-2011 years are listed in the Excel file «VIN-1BTWE-2008-2011-31-01-2012-Km-ok-KP.xls», and included in the report on monitoring. Therefore, the value of the ERUs for reductions for the year and an average value of the ERUs from 2012 to 2025 yy, in the determined PDD version 3.0 and in the Report of monitoring somewhat differ. | Corrections were found satisfactory.<br>The issue is closed. |
| *CAR04*<br>Please provide to AIE next sources to prove calculations reliability:<br>- number of residential users<br>- number of one- and three phase power meters<br>- part of power meters with different quality class<br>part of electronic and induction power meters | 95(b) | The sources of abovementioned parameters such as Reports on investment programs realization for relevant year, Reports on power metering system implementation (67 Form), Reports on electric energy thefts were provided to AIE | These data sources were found satisfactory. Concerning in *CAR04* data is in line with ERUs calculation Excel file.<br>The issue is closed. |

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| *CAR05*<br>Please provide in the section C.1 transparent scheme of data collection with indication of monitored parameters and responsible persons | 101 (a) | Corrections of monitoring scheme were provided. The data flow and responsible persons were indicated in the section C of Monitoring Report version 02 dated 31/01/2012. | Corrections were found satisfactory. The issue is closed. |
| *CAR06*<br>Please indicate that the data monitored and required to ERUs calculation will be kept two years after the last ERUs transfer. Also please provide to AIE relevant order | 101(d) | The Monitoring Report version 02 dated 31/01/2012 indicates that the data monitored and required for ERUs calculation will be kept during two years after the last ERUs transfer. Order on data keeping issued by "Vinnytsyaoblenergo" PJSC.has been provided to AIE | Correction of the monitoring report has been provided. The AIE obtaine relevant order issued by "Vinnytsyaoblenergo" PJSC.<br>The issue is closed |