VERIFICATION REPORT
EEA "NOVOSVIT"

VERIFICATION OF THE
GREENHOUSE GASES EMISSION REDUCTION DUE TO REPLACEMENT OF POWER, GENERATED BY THE TRADITIONAL FUEL FIRED POWER PLANTS, AS A RESULT OF REHABILITATION AND CONSTRUCTION OF THE SMALL HYDROPOWER PLANTS, OPERATED BY EEA "NOVOSVIT" AND "ENERGOINVEST", LTD.

(THIRD PERIODIC FOR THE PERIOD 01/01/2010-31/12/2010)

BUREAU VERITAS CERTIFICATION

REPORT NO. UKRAINE-VER/0298/2011

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VERIFICATION REPORT

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07/07/2011	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
EEA "Novosvit"	Kostyantyn Mandybura

Summary:

Bureau Veritas Certification has made the 3rd periodic verification of the "Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd." project of EEA "Novosvit" and "Energoinvest", Ltd. located in Vinnytsya, Khmelnytsky, Ternopil, Chernivtsi, Cherkasy, Ivano-Frankivsk and Lviv regions of Ukraine, and applying the 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 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 38304 tons of CO_2eq for the monitoring period from 01/01/2010 to 31/12/2010.

Report No.:	Subject Group:	
UKRAINE-ver/0298/2011	JI	
Project title: Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd.		
Work carried out by: Oleg Scoblyk – Team Leader, Lead Verifier Vyacheslav Yeriomin – Team Member, Verifier		
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer		
Work approved by: Flavio Gomes – Operational Manager		
Date of this revision: 26/07/2011	Rev. No.: 02	Number of pages: 33

Bureau Veritas Certification Holding SAS

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1 INTRODUCTION

EEA “Novosvit” and “Energoinvest”, Ltd has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA “Novosvit” and “Energoinvest”, Ltd.” (hereafter called “the project”) at Vinnytsya, Khmelnytsky, Ternopil, Chernivtsi, Cherkasy, Ivano-Frankivsk and Lviv regions in the western and central parts of 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 and monitoring plan 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

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 The Institute of Engineering Ecology and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology (if applicable) 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 versions 01, 02 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 30/06/2011 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 EEA

"Novosvit" and "Energoinvest", Ltd. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
EEA "Novosvit" and "Energoinvest", Ltd	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving and reporting Metering equipment control Metering record keeping system, database Training of personnel Quality management procedures and technology nternal audiys and check-ups
Institute of Engineering Ecology	Monitoring plan Monitoring report Deviations from PDD ERUs calculation model

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 AIE 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.

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 4 Corrective Action Requests and 2 Clarification 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

Due to the fact that the periods of conduction of three verifications overlap, the FAR is pending.

3.2 Project approval by Parties involved (90-91)

Written project approval by Host Party has been issued by The National Environmental Investment Agency of Ukraine (#1819/23/7 dated 13/07/2011). Letter of Approval by Netherlands Ministry of Economic Affairs #2010JI09 has been issued 13/04/2010 when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

The abovementioned written approval is unconditional.

3.3 Project implementation (92-93)

The project's main goal is the reduction of the greenhouse gases emissions from the thermal power plants which consume traditional fossil fuel by means of replacement of electric power generated by them to the state grid with the electric power generated by the small hydro power plants as a renewable, due to rehabilitation, renew and retrofit of existing obsolete small HPPs and building of the new ones.

The Supplier for this project is the External Economic Association "Novosvit", which at present operates 15 small hydropower plants with the installed capacity of 10 280 kW. The first three of them (Sandratska HPP, Gordashivska HPP and Bodnarivska HPP) were renovated in 1999-2000 by the Ukrainian Energy Consortium, the founder of the EEA "Novosvit",

and were then rented by EEA "Novosvit", these small HPP are not included in the project. The other 12 already rehabilitated/constructed are included in the project, as well as 9 HPPs that are planned for rehabilitation/construction, in total 21 small HPPs with total scheduled installed capacity of 13.360 MW.
Also, the EEA "Novosvit" is empowered to represent in this project the interests of company "Energoinvest" Ltd., which at present operates 11 already rehabilitated/constructed small hydropower plants with total installed capacity of 13.038 MW. Ten of these small HPPs are included in the project.

During the monitoring period Steblivska mini-HPP of EEA "Novosvit" was put into operation.

Thus, in frames of this project, the total installed capacity of the 22 small hydropower plants that are already rehabilitated/renovated, is 20.528 MW, and the total installed capacity of all 33 small hydropower plants included in the project at the present stage is planned to be 25.848 MW.

Corrective Action Request #02

Please provide the JI registration number in the Monitoring Report

Response:

This project is being realized under the national procedure (Track 1) and thus has no JI registration

Corrective Action Request #03

Please explain in the Monitoring Report difference between emission reduction achieved during 3rd monitoring period and emission reduction indicated in the PDD

Response:
The differences between emission reductions indicated in the PDD for 2010, and achieved during 2010 and listed in the Monitoring Report # 55-M / 03 for the same year, are caused by the following reasons:
The amount of electricity generated by a HPP is dependent on the differences in operation conditions that are not under the control of a small HPP operator, for example on water levels on the upper and lower ponds. It is difficult to ex-ante foresee water levels and thus to predict exactly the amount of generated electricity.
2. In the PDD the value of GHG emission factor (CEF) was used according to the document "Ukraine – Assessment of new calculation of CEF" developed by Global Carbon and confirmed by TÜV SÜD: 0.807 t CO_2e/MWh for 2010. In the Monitoring Report the value of CEF was used

according to the recent Order of the National Environmental Investment Agency of Ukraine, that is: 1.067 t CO_2e/MWh for 2010 (Order No. 43 dated 28.03.2011).
3. Steblivska mini-HPP was planned to be put into operation, but renovation is delayed.

Clarification Request #01

Please indicate in the Monitoring Report if any equipment related to the project activity were installed during the monitoring period

Response:

No new generation equipment related to the project activity were installed during the monitoring period.
This information is added into the Monitoring Report version 02

Clarification Request #02

Please add in the geographical description more information on each Project HPPs.

Response:

This information is added into the Monitoring Report version 02.

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, key factors, 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 were taken into account, as appropriate.

Data sources used for calculating emission reductions or enhancements of net removals, such as paper logbooks at HPPs, daily and monthly reports of joined dispatcher centre, commissioning acts, electronic data on electricity producing are clearly identified, reliable and transparent.

Emission factors is selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

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

3.5 Revision of monitoring plan (99-100)

"Not applicable"

3.6 Data management (101)

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. In 2004, EEA «Novosvit» and «Energoinvest», Ltd. developed and implemented an automated system for commercial electric power accounting (ASCEPA). Created system is designed for automated collection, processing, storage, visualization and transfer of data on accounting cross-flows of active and reactive power and organization of multi-tariff commercial accounting of electric power and capacity. Data from HPPs are transferred to the joint dispatcher center of EEA "Novosvit" and "Energoinvest", Ltd. The ASCEPA provides the automatic control of the technical state of the measuring equipment. The collected data can be transmitted to the customer in the required format, with using the e-mail or through the local network with using the standard exchange protocol TCP/IP. Calculated values may be presented in the MS Excel format.
ASCEPA is recertified by State Enterprise "Enerhorynok" each 6 month.

The function of the monitoring equipment, including its calibration status, is in order. Periodical calibration of the measuring equipment at small HPPs was carried out by Vinnitsa regional state scientific-production center of standardization and metrology in compliance with actual Ukraine legislation.

The evidence and records used for the monitoring are maintained in a traceable manner. Data on electric producing is collected on HPPs in operational and electric producing logbooks. Daily data is transferred to the joint dispatcher center of EEA "Novosvit" and "Energoinvest", Ltd by phone and local network. Data in paper format is kept at HPPs in logbooks and at joint dispatcher centre in monthly reports.

The data collection and management system for the project is in accordance with the monitoring plan.

All collected data are transferred to Mr. Konstantyn Mandybura, who is responsible for data storage and archiving, filling the monitoring spreadsheets with input data.

The vice director of the Institute of Engineering Ecology, PhD Dmytro Paderno, is responsible for baseline and monitoring methodology development and application, and for development of the Monitoring Report.

Corrective Action Request #04
Please submit any document which indicates that the data monitored and required for ERUs calculation will be kept during two years after the end of crediting period.

Response:

The data monitored and required for ERUs calculation will be kept during two years after the end of crediting period, according to the Order # 13/11 dated 01.06.2011, on formation of the operational team and storage term of documents.
This Order was submitted to AIE by EEA "Novosvit"

3.7 Verification regarding programmes of activities (102-110)

"Not applicable"

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 3rd periodic, verification of the "Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd." Project in Ukraine, which applies the 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 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 EEA "Novosvit" and "Energoinvest", Ltd 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 and Verification Plan indicated in the final PDD version 07. 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. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2010 to 31/12/2010

Baseline emissions	: 38304	t CO_2 equivalents.
Project emissions	: 0	t CO_2 equivalents.
Emission Reductions	: 38304	t CO_2 equivalents.

5 REFERENCES

Category 1 Documents:
Documents provided by EEA "Novosvit" and "Energoinvest", Ltd. that relate directly to the GHG components of the project.

/1/ Project Design Document "Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd." version 07 dated 23 November 2010

/2/ Monitoring Report #_55M/03 "Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd." version 01 dated 23 June 2011

/3/ Monitoring Report#_55M/03 "Greenhouse gases emission reduction due to replacement of power, generated by the traditional fuel fired power plants, as a result of rehabilitation and construction of the small hydropower plants, operated by EEA "Novosvit" and "Energoinvest", Ltd." version 02 dated 21 July 2011

/4/ Letter of Approval, issued by Netherlands Ministry of Economic Affairs #2010JI09 dated 13/04/2010

/5/ Letter of Approval, issued by State National Environmental Agency of Ukraine #1819/23/7 dated 13/07/2011

/6/ ERUs calculation model exel file "MR1_2002-2007_Annex2"

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

1. Server on operational data logging and keeping in EEA "Novosvit" and "Energoinvest" LLC control centre
2. State technical commission statement on acceptance Korghivska HPP as finished, dated 28/10/2004
3. Agreement #444/03 dated 01/07/2003 on lease property of Novokostyantynivska and Schedrivska HPPs
4. Annex to agreement #444/03. Rent calculations dated 01/07/2003
5. Statement on acceptance-transmitting Novokostyantynivska and Schedrivska HPPs main facilities in operational lease EEA "Novosvit" dated 01/07/2003
6. Statement on electric energy production Velykokuzhelevetska HPP EEA "Novosvit" in December 2010
7. Statement on electric energy production Korghivska HPP EEA "Novosvit" in December 2010
8. Statement on electric energy production Novo-Kostyantynivska and Schedrivska HPP EEA "Novosvit" in December 2010

9. Statement on electric energy production Bodnarivska HPP EEA "Novosvit" in December 2010
10. Statement on electric energy production Novo-Kostyantynivska and Schedrivska HPP EEA "Novosvit" in November 2010
11. Statement on electric energy production Velykokuzhelevetska HPP EEA "Novosvit" in November 2010
12. Statement on electric energy production Bodnarivska HPP EEA "Novosvit" in November 2010
13. Statement on electric energy production Korghivska HPP EEA "Novosvit" in November 2010
14. Statement on electric energy production Novo-Kostyantynivska and Schedrivska HPP EEA "Novosvit" in October 2010
15. Statement on electric energy production Korghivska HPP EEA "Novosvit" in October 2010
16. Statement on electric energy production Bodnarivska HPP EEA "Novosvit" in December 2010
17. Statement on electric energy production Velykokuzhelevetska HPP EEA "Novosvit" in October 2010
18. Statement on electric energy production Velykokuzhelevetska HPP EEA "Novosvit" in September 2010
19. Statement on electric energy production Korghivska HPP EEA "Novosvit" in September 2010
20. Statement on electric energy production Bodnarivska HPP EEA "Novosvit" in September 2010
21. Statement on electric energy production Novo-Kostyantynivska and Schedrivska HPP EEA "Novosvit" in September 2010
22. Purchase-sell agreement #5621/01 dated 29/07/2009 on electric energy transmitting between "Energorynok" SE and EEA "Novosvit"
23. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Hordashivska HPP
24. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Hordashivska HPP
25. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Hordashivska HPP
26. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Hordashivska HPP
27. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
28. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Zvenihorodska HPP
29. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Zvenihorodska HPP
30. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Zvenihorodska HPP

31. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Zvenihorodska HPP
32. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
33. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Korsun-Shevchenkivska mini-HPP
34. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Korsun-Shevchenkivska mini-HPP
35. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Korsun-Shevchenkivska mini-HPP
36. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Korsun-Shevchenkivska mini-HPP
37. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
38. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Korsun-Shevchenkivska HPP
39. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Korsun-Shevchenkivska HPP
40. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Korsun-Shevchenkivska HPP
41. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Korsun-Shevchenkivska HPP
42. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
43. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Steblivska HPP
44. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Steblivska HPP
45. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Steblivska HPP
46. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Steblivska HPP
47. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
48. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Lotashivska HPP
49. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Lotashivska HPP
50. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational

responsibilities of the Parties at Lotashivska HPP

51. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Lotashivska HPP
52. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
53. Protocol on agreement of data exchange regulations between EEA “Novosvit” and SE “Enerhorynok”, dated 22/06/2009
54. Note on EEA “Novosvit” planned actions
55. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Lysyanskiy HPP
56. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Lysyanskiy HPP
57. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Lysyanskiy HPP
58. Division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Lysyanskiy HPP
59. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
60. Statement on division of electric networks balance ownership and operational responsibilities of the Parties electric scheme at Lysyanska HPP
61. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Lysyanskiy HPP
62. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Sandratska HPP
63. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Yablunitska HPP
64. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Yablunitska HPP
65. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Yablunitskiy HPP
66. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
67. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Koropetska HPP
68. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Koropetska HPP
69. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Koropetska HPP
70. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
71. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Schedrivska HPP
72. Annex #2 to agreement #5621/01. record keeping system and

devices location linear plan at Schedrivska HPP

73. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Schedrivska HPP
74. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
75. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Bodnarivska HPP
76. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Bodnarivska HPP
77. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Bodnarivska HPP
78. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics.
79. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Novo-Kostyantynivska HPP
80. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Novo-Kostyantynivska HPP
81. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Novo-Kostyantynivska HPP
82. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics at Novo-Kostyantynivska HPP.
83. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Korghivska HPP
84. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Korghivska HPP
85. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Korghivska HPP
86. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics at Korghivska HPP.
87. Annex #1 to agreement #5621/01. List of record keeping system and devices installation locations at Velykokughelevetska HPP
88. Annex #2 to agreement #5621/01. record keeping system and devices location linear plan at Velykokughelevetska HPP
89. Annex #3 to agreement #5621/01. Statement on division of electric networks balance ownership and operational responsibilities of the Parties at Velykokughelevetska HPP
90. Annex #4 to agreement #5621/01. Commercial data keeping complexes technical characteristics at Velykokughelevetska HPP.
91. Joint Implementation Project s Letter of Approval
92. Certificate on inclusion in automatic system for commercial measuring of power consumption Register ASCMPC EEA “Novosvit”. Valid till 14/01/2011 to 30/06/2011
93. Certificate№CB510-2011 on Novokostyantynivska HPP

modernized automatic system for commercial measuring of power consumption state metrological attestation, dated 14/03/2011

94. Report #У04728690/8.510-2011П Novokostyantynivska HPP modernized automatic system for commercial measuring of power consumption state metrological attestation, dated 14/03/2011
95. Report #37 on Novo-Kostyantynivska HPP measuring voltage losses, load losses and power coefficient measuring dated 02/08/2005
96. Report #333 on Schedrivska HPP measuring current transformers voltage losses, load losses and power coefficient measuring dated 12/05/2010
97. Report #334 on Schedrivska HPP measuring current transformers voltage losses, load losses and power coefficient and voltage circuits losses in electric power meters measuring dated 12/05/2010
98. Novo-Kostyantynivska HPP measuring complex passport-protocol
99. Certificate №СВ511-2011 on Schedrivska HPP modernized automatic system for commercial measuring of power consumption state metrological attestation, dated 14/03/2011
100. Report # У04728690/8.511-2011П on Schedrivska HPP automatic system for commercial measuring of power consumption state metrological attestation, dated 14/03/2011
101. Schedrivska HPP measuring complex passport-protocol
102. Report #335 on Schedrivska HPP measuring current transformers voltage losses, load losses and power coefficient measuring dated 12/05/2010
103. Report #336 on Schedrivska HPP measuring current transformers voltage losses, load losses and power coefficient and voltage circuits losses in electric power meters measuring dated 12/05/2010
104. Report #38 on Schedrivska HPP measuring voltage losses, load losses and power coefficient measuring dated 02/08/2005
105. Passport and calibration certificate electric power meter типу ЕТ 2А5Е7URLT № 41544
106. Passport and calibration certificate electric power meter типу ЕТ 2А5Е7URLT № 6777
107. Passport and calibration certificate electric power meter типу ЕТ 2А5Е7URLT № 8448
108. Passport and calibration certificate electric power meter типу ЕТ 2А5Е7URLT № 7107
109. EEA “Novosvit” and LLC “Energoinvest” operational control centre control board
110. EEA “Novosvit” and LLC “Energoinvest” operational control centre
111. Schedrivska HPP entrance to turbine hall
112. Schedrivska HPP gate
113. Schedrivska HPP dam
114. Schedrivska HPP main building

115. Schedrivska HPP control room
116. Electric meter ЕЛВІН ET 2A5E7URLT № 7636 with calibration marks
117. Hydrogenerator #15051
118. Hydro turbine vane's angle variation mechanism
119. Generators spider
120. Schedrivska HPP electric meters logbook
121. Schedrivska HPP principal electric scheme
122. Electric meter ENERGOMERA Ф68700B, №39013393
123. Electric meter ЕЛВІН ET 2A5E7URLT № 6777 with calibration marks
124. Schedrivska HPP distributing gear 10 kV electric meters compartment
125. Schedrivska HPP distributing gear 10 kV compartments
126. Novo-Kostyantynivska HPP main building
127. Novo-Kostyantynivska HPP drain tunnel input
128. Novo-Kostyantynivska HPP drain tunnel output
129. Water measuring gage
130. Novo-Kostyantynivska HPP dam
131. Novo-Kostyantynivska HPP gate
132. Hydrogenerators
133. Electric meter ЕЛВІН ET 3B5E8URLT №27489
134. Electric meter ЕЛВІН ET 3B5E8URLT №27490
135. Electric meter ЕЛВІН ET 3B5E8URLT №27491
136. Novo-Kostyantynivska HPP control room
137. Electric meter ЕЛВІН ET 2B5E7URLT №38271
138. Electric meters ЕЛВІН ET 2B5E7URLT №38271 and №41544
139. Novo-Kostyantynivska HPP operational logbook
140. Novo-Kostyantynivska HPP electric meters logbook
141. Novo-Kostyantynivska HPP tail pond
142. Korghivska HPP electric meters ЕЛВІН ET 2B5E7URLT №8448 and №7107
143. Generators electric power meters ЕЛВІН 3B5E8URLT № 27492, №27493
144. Generators
145. Korghivska HPP operational logbook
146. Korghivska HPP electric meters logbook
147. Water measuring gage
148. Korghivska HPP dam
149. Korghivska HPP turbine hall entrance
150. Determination and verification manual, version 1.0

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/ Kostyantyn Mandybura – vice-director of EEA "Novosvit" joined dispatcher centre

/2/ Valeriy Klekit – vice director of “Energoinvest” LLC joined dispatcher centre
/3/ Pavlo Midyanyi – Head Metrologist of EEA “Novosvit”
/4/ Serhiy Lyamprekht – vice director of EEA “Novosvit” joined dispatcher centre
/5/ Ivan Puzanov – engineer of Institute of Engineering Ecology

APPENDIX A: COMPANY PROJECT 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?	*Corrective Action Request #01 (CAR01)* Information about Project Approval of Host Party is missed in the Monitoring Report. Please add relevant information in the Monitoring Report.	CAR01	OK
91	Are all the written project approvals by Parties involved unconditional?	Written project approvals by Parties involved 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?	*Corrective Action Request #02 (CAR02)* Please provide the JI registration number in the Monitoring Report. *Corrective Action Request #03 (CAR03)* Please explain in the Monitoring Report difference between emission reduction achieved during 3rd monitoring period and emission reduction indicated in the PDD	CAR02 CAR03	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
93	What is the status of operation of the project during the monitoring period?	*Clarification Request #01 (CL01)* Please indicate in the Monitoring Report if any equipment related to the project activity were installed during the monitoring period *Clarification Request #02 (CL02)* Please add in the geographical description more information on each Project HPPs	CL01 CL02	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 occurred in accordance with the monitoring plan included in the PDD.	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	Yes. The key factors, e.g. those listed in 23 (b) (i)-(vii) of the DVM check list, 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 for calculating the emission reductions.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	appropriate?			
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	The data sources used for calculating emission reductions are clearly identified, reliable and transparent	OK	OK
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?	The emissions factor used for calculation the emission reductions is selected with accuracy and reasonableness and appropriately justified of the choice.	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 reduction 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	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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? Do the monitoring periods not overlap with those for which verifications were already	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	deemed final in the past?			
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?	Not applicable	Not applicable	Not applicable
99 (b)	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?	Not applicable	Not applicable	Not applicable
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 data collection procedures are in accordance with monitoring plan, including the quality control and quality assurance procedures.	OK	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	The function of monitoring equipment is in order. Electric meters are in calibration interval according to actual Ukraine	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		National standards.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	The evidence and records used for the monitoring are 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?	*Corrective Action Request #01 (FAR01)* Please submit any document which indicates that the data monitored and required for ERUs calculation will be kept during two years after the end of crediting period.	CAR04	OK
Verification regarding programs of activities (additional elements for assessment)				
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	
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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: (a) Describe its sample selection, taking into account that: (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 reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA;	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − 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 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	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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

Corrective Action Request #01 Information about Project Approval of Host Party is missed in the Monitoring Report. Please add relevant information in the Monitoring Report.	*CAR01*	The State Enviromental Investment Agency of Ukraine has issued the Letter of Approval on behalf of Ukraine for this project No. 1819/23/7 dated 13.07.2011. The Ministry of Economic Affairs of the Netherlands (Party of Buyer) has issued the Letter of Approval on behalf of The Netherlands for this project No. 2010JI09 dated April 13, 2010. This information is added into the Monitoring Report version 02.	The issue is closed
Corrective Action Request #02 Please provide the JI registration number in the Monitoring Report.	*CAR02*	This project is being realized under the national procedure (Track 1) and thus has no JI registration number	The issue is closed

Corrective Action Request #03 Please explain in the Monitoring Report difference between emission reduction achieved during 3rd monitoring period and emission reduction indicated in the PDD	*CAR03*	The differences between emission reductions indicated in the PDD for 2010, and achieved during 2010 and listed in the Monitoring Report # 55-M / 03 for the same year, are caused by the following reasons: 1. The amount of electricity generated by a HPP is dependent on the differences in operation conditions that are not under the control of a small HPP operator, for example on water levels on the upper and lower ponds. It is difficult to ex-ante foresee water levels and thus to predict exactly the amount of generated electricity. 2. In the PDD the value of GHG emission factor (CEF) was used according to the document "Ukraine – Assessment of new calculation of CEF" developed by Global Carbon and confirmed by TÜV SÜD: 0.807 t CO_2e/MWh for 2010.	The issue is closed

		In the Monitoring Report the value of CEF was used according to the recent Order of the National Environmental Investment Agency of Ukraine, that is: 1.067 t CO_2e/MWh for 2010 (Order No. 43 dated 28.03.2011). 3. Steblivska mini-HPP was planned to be put into operation, but renovation is delayed	
Corrective Action Request #04 Please submit any document which indicates that the data monitored and required for ERUs calculation will be kept during two years after the end of crediting period.	*CAR04*	The data monitored and required for ERUs calculation will be kept during two years after the end of crediting period, according to the Order # 13/11 dated 01.06.2011, on formation of the operational team and storage term of documents. This Order may be submitted to AIE by EEA "Novosvit"	The issue is closed
Clarification Request #01 Please indicate in the Monitoring Report if any equipment related to the project activity were installed during the monitoring period	*CL01*	No new generation equipment related to the project activity were installed during the monitoring period. This information is added into the Monitoring Report version 02	The issue is closed

Clarification Request #02 Please add in the geographical description more information on each Project HPPs	*CL02*	This information is added into the Monitoring Report version 02	The issue is closed