



Jl DETERMINATION REPORT FORM (F-Jl-DRep) - Version 01

(By submitting this form, an accredited independent entity requests the publication of a determination pursuant to paragraph 33 of the Jl guidelines in accordance with paragraph 34 of the Jl guidelines.)

Name of accredited independent entity (AIE)	Det Norske Veritas Certification AS
P r o p o s e d J l P r o j e c t	
Title and reference number of project	Rehabilitation of Dolna Arda Hydropower Cascade, Bulgaria (0040)
Host Party(ies)	Bulgaria
Parties involved in the project	
(Authorised) project participants	National Electric Company (Natsionalna Elektricheska Kompania EAD)
Small-scale project (yes/no)	No
Brief description of project	
<p>The "Rehabilitation of Dolna Arda Hydropower Cascade, Bulgaria" project is intended to be designated as a Jl project between Bulgaria and Austria. The project location is in the valley of the Arda River in the South-eastern part of Bulgaria.</p> <p>The proposed project consists of two main activities:</p> <ul style="list-style-type: none">- Rehabilitation and refurbishment of 3 existing hydropower plants in Studen Kladenets, Kardjali and Ivailovgrad- Installation of a new 16 MW unit at the existing hydropower plant in Studen Kladenets <p>The project is forecasted to reduce 267 465 tCO₂ in the years 2008 to 2012.</p>	
D e t e r m i n a t i o n r e p o r t	
General information on determination	
(Please describe:	
<ul style="list-style-type: none">➤ The scope of the determination process, including all documentation that has been reviewed and the names of persons interviewed during the determination process, as applicable;➤ The AIE's determination team, including a list of all persons involved in the determination process and a description of the functions assumed.)	
<p>The determination scope is defined as an independent and objective review of the Project Design Document (PDD) and other relevant documents. The information contained in these documents is reviewed against the Kyoto Protocol requirements for Joint Implementation (Jl) projects, the guidelines for the implementation of Article 6 of the Kyoto Protocol (Decision 16/CP.7) as agreed in the Marrakech Accords, in particular the verification procedures under the Jl supervisory committee, and decisions adopted by the Jl supervisory committee.</p> <p>The following documents have been reviewed:</p> <ul style="list-style-type: none">• Pöyri Energy GmbH (formerly Verbundplan GmbH, Austria: Rehabilitation of Dolna Arda Hydropower Cascade, Project Design Document. Version 01 of November 2005, version 02 of January 2007 and version 03 of May 2007.• Verbundplan GmbH, Austria: Rehabilitation of Dolna Arda Hydropower Cascade, Baseline Study. July 2005 (included as Annex 3 in version 02 of PDD of January 2007 and version 03 of May 2007).• Verbundplan GmbH, Austria: Rehabilitation of Dolna Arda Hydropower Cascade, Monitoring Plan. July 2005 (included as Annex 4 in version 02 of PDD of January 2007 and version 03 of May 2007).• NEK: Financial analysis spreadsheet, November 2005.• International Emission Trading Association (IETA) & the World Bank's Prototype Carbon Fund (PCF): Validation and Verification Manual. http://www.vvmanual.info <p>The following persons were interviewed</p> <ul style="list-style-type: none">• Mr. Christo Schwabski – environment compliance expert, NEK• Mr. Georgi Stoilov, Generation Planning Department Chief, NDC (National Power Dispatch Centre)	

- Nevena Alexandrova, Ministry of Environment and Water
- Ivona Grozeva, Ministry of Environment and Water

The determination team consisted of the following personnel:

- Susanne Haefeli-Hestvik, DNV Oslo, Norway, JI validator
- Viktor Saroch, DNV Prague, Czech Republic, GHG auditor
- Michael Lehmann, DNV Oslo, Norway, Technical reviewer

Description of determination process

(Please refer to:

- The review of the JI PDD and additional documentation attached to it;
- The assessment against JI requirements, e.g. by using a determination protocol;
- The report of findings by the AIE, including the use of different types of findings (e.g. corrective action requests, clarifications or observations etc.).

Statements or assessments should be included in section "Conclusions, final comments and determination opinion" below.)

The determination of the project commenced in November 2005. The determination consisted of the following three phases:

- a desk review of the project design documents
- follow-up interviews with project stakeholders,
- the resolution of outstanding issues (Corrective Action or Clarification Requests) and the issuance of the final determination report and opinion.

The determination has been carried out in line with the verification procedure under the Article 6 supervisory committee, as well as, in line with determination process outlined in the Validation and Verification Manual.

In order to ensure transparency, a determination protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria.

For further details please refer to section 2 of the Determination Report.

Comments received from Parties, stakeholders and UNFCCC accredited observers

(Please:

- Summarise the comments received pursuant to paragraph 32 of the JI guidelines; and
- Provide a report of how due account was taken of these.)

The PDD of January 2007 was made publicly available on the JI website and Parties, stakeholders and observers were through the Secretariat invited to provide comments during a 30 days period from 07 March 2007 to 05 April 2007. No comments were received.

Conclusions, final comments and determination opinion

(The requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines have to be met.

Please provide:

- Conclusions on each of these requirements, describing how these requirements, in particular those referred to in paragraph 33 of the JI guidelines, have been met, including assessments and findings (e.g. corrective action requests, clarifications or observations) related to each requirement and statements on whether all issues raised have been addressed to the AIE's satisfaction;
- Final comments and a determination opinion.)

Det Norske Veritas Certification AS (DNV) has performed a determination of the "Rehabilitation of Dolna Arda Hydropower Cascade, Bulgaria" project. This determination was performed on the basis of the UNFCCC criteria for JI projects, in particular the verification procedures under the Article 6 supervisory committee, as well as criteria given to provide for consistent project operations, monitoring and reporting.

It is DNV's opinion that the project meets all relevant UNFCCC requirements for JI projects.

The project is intended to be designated as a JI project between Bulgaria and Austria. The host Party Bulgaria has approved the project on 10 October 2006. Austria has not yet provided approval of the project. However, in accordance with the clarification given by the JI Supervisory Committee at its 6th meeting, this approval may only be

provided when submitting the first verification report for publication.

The project design appears to represent good engineering practice and the project will introduce state of the art technology developed in Austria, resulting in technology and capacity transfer to Bulgaria. No EIA was required by the Bulgarian Ministry of Environment.

The selected "Marginal Plant Only" (Least cost dispatch analysis) baseline methodology is appropriate because the project hydro power plants will be operated mainly as peaking plants, and the electricity generated by the project will hence likely displace electricity generation at thermal power plants operating at the margin. The baseline is determined in a transparent manner and takes sufficiently into account relevant national and sectoral circumstances.

It is demonstrated that the emission scenario for the Bulgarian EPS for the period 2005-2012 results in fewer GHG emissions in the project scenario (with the capacity added to the Bulgarian electricity sector by the proposed project) than in the baseline scenario. A qualitative and quantitative analysis of the investment barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

Emission calculations are transparently documented and conservative assumptions were used, where applicable, regarding expected electricity generation by the Studen Kladenets, Kardjali and Ivailovgrad hydro power plants.

The monitoring plan sufficiently specifies the monitoring requirements of the main project indicators. However, the monitoring plan does not yet make the necessary provisions for collecting and archiving the necessary data for determining the CEF of the power plant operating at the margin. Procedures for this will have to be developed prior to the starting date of the ERU generation period of the project to ensure later verification of ERUs. Moreover, detailed QA/QC procedures will need to be developed before the project can generate ERUs.

For further details please refer to section 3 of the Determination Report and the Determination Protocol in Appendix A.

All requirements of Article 6 of the Kyoto Protocol and the JI guidelines and further relevant requirements defined by the COP/MOP or the JISC with regard to determinations pursuant to paragraph 33 of the JI guidelines are met:

Yes

No

List of documents attached to the determination report

(Please attach:

- ✓ The JI PDD of the project;
- ✓ Written approvals by all Parties involved in an alphabetical order; and
- ✓ Other relevant documents, e.g. any determination protocol used in the determination process, a list of persons interviewed by the AIE's determination team during the determination process; and

check mark below accordingly.)

JI PDD of the project

Written approvals by the Parties involved

Other documents:

Determination report and protocol

List of persons interviewed

Any other documents (please list):

The AIE herewith declares that undertaking the determination for the proposed JI project referred to above does not constitute a conflict of interest which is incompatible with the role of an AIE under JI.

Name of authorized officer signing for the AIE

Michael Lehmann

Date and signature

30 August 2007

Michael Lehmann