UNFCCC Secretariat
Martin-Luther-King-Strasse 8
D-53153 Bonn
Germany

Att: JI Supervisory Committee

DET NORSKE VERITAS
CERTIFICATION AS
Veritasveien 1
1322 Høvik
Norway
Tel: +47 6757 9900
Fax: +47 6757 9911
http://www.dnv.com

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JI Ref 0040	MLEH	16 November 2007

Response to request for review
Rehabilitation of Dolna Arda Hydropower Cascade, Bulgaria (0040)

Dear Members of the JI Supervisory Committee,

We refer to the requests for review raised by three JISC members concerning DNV's determination of the project activity 0040 entitled "Rehabilitation of Dolna Arda Hydropower Cascade, Bulgaria", and we would like to provide the following initial response to the issues raised by these requests for review.

According to the documents contained in the PDD and annexes about the project's additionality, this is based on financial barriers. Particularly restrictions to access to the financial resources to finance the project under reasonable conditions of rates, amount, periods.
This is a very reasonable argument to prove additionality, but there is no financial analysis or documentation that could give certainty on the arguments described on the PDD.
The Determination report did not address the additionality issue and does not provide any additional information or interviews with the purpose to solve this critical aspect, and arrive at the final conclusion given the limited amount of information provided in the PDD.
All the mentioned above is a critical for the JI projects, for that reasons it is necessary to request a review in order to ensure compliance with one of the main requirement to qualify as a JI project under track 2.
Additionality, the PDD only contains qualitative assessment of he financial barriers the project face, however no supporting documents are provided. The PDD further states that the additionality of the project activity is demonstrated through a qualitative assessment of investment barriers and a quantitative financial analysis which shows that the expected ERU revenues improve the financial viability of the project, however, no quantitative information has been provided.
There is no evidence of the financial additionality

DNV Response:

As stated in the determination report, the additionality of the project activity is demonstrated through a qualitative assessment of investment barriers and a quantitative financial analysis, which shows that the expected ERU revenues improve the financial viability of the project. Moreover, DNV was able to confirm that prevailing investment barriers have been overcome by designating the Dolna Arda Hydropower Cascade Project as a JI project. Designation of the project as a JI project is a prerequisite for a substantial part of the project funding. Hence, it is in our opinion sufficiently demonstrated that the necessary funding could only be secured due to the realisation of the project as a JI activity.

The demonstration of the additionality was assessed by DNV through reviewing a financial analysis that was presented to DNV as part of the determination (please refer to Annex I to the project participants' initial response to the requests for review) and through follow-up interviews with the project developers and the National Dispatch Centre. Moreover, in the context of the determination of the a similar project activity in Bulgaria, the Vacha Cascada hydropower project in Bulgaria, DNV also interviewed the Austrian Export Promotion Authority (OeKB) to confirm that prevailing investment barriers have been overcome by designating the types of projects as JI project.

It must be noted that the financial analysis represents only one element of the elements assessed to determine the project's additionality.

While the PDD submitted with the determination report did not include details on the financial analysis, DNV has received and assessed the financial analysis of the project (please refer to section 3.3 in the main report and section B.2.7 in Table 2 and CL 2 in Table 3 of the determination protocol in Appendix A). Hence, the determination report clearly shows that a financial analysis was assessed by DNV as part of the determination of the project and DNV, which provisionally can act as Accredited Independent Entities (AIEs) to perform determinations of projects on behalf of the JI Supervisory Committee, has thus assessed this element for demonstrating additionality.

It is clear from the document how a new unit can increase installed power, however it is not clear how it can increase the overall electricity production from the same water balance.
The Monitoring Plan is not taking into account the affect of unit 5 on units 1-4 electricity production considering that the water supply is the same.
The baseline has not been established and the monitoring plan not well developed. The installaion of a new unit may affect the power generation of other existing units and this influence should be well reflected in both the baseline and the monitoring plan.

DNV Response:

As further explained in the initial response by the project participants to the requests for review, additional electricity generation results from the increased aggregate capacity (flexibility) of the plant machines that enables operation in case of a higher water level of the dam reservoir cup and from energy generation by unit number 5 at Studen Kladentes when it operates in the event of high water overflow.

The rehabilitation of the three existing hydropower plants is expected to generate an additional 20.9 GWh per year due to the increased efficiency coefficients as a result of the rehabilitation. The installation of the additional generating unit is expected to increase the annual power generation by 42.7 GWh per year.

As described in Annex 4 to the PDD, the monitoring plan, the additional electricity generation as result of the rehabilitation of the three existing hydropower plants Studen Kladenets (Units1-4), Kardjali (Units 1-4) and Ivailovgrad (Units 1.3) is determined by measuring and comparing the efficiency coefficients of each hydropower plant before and after the rehabilitation. The additional electricity generation is determined by multiplying the hourly generation of each hydropower plant with the increase in the efficiency coefficient of each hydropower plant. Hence, any effect of the new Studen Kladenets Unit 5 on the power generation by the existing units 1-4 at Studen Kladenets will thus be reflected by a lower hourly generation reported for the existing units. The approach for monitoring and determining emission reductions thus adequately addresses any effect of the new Studen Kladenets Unit 5 on the power generation by the existing units 1-4 at Studen Kladenets.

Furthermore this project according to the baseline study will have a side effect which is reflected in an increase of electricity consumption for pump storage power plants. This issue is not covered neither is additional consumption deducted from the envisaged project output.

DNV Response:

We refer to CL 3 in Table 3 of the determination protocol in Appendix A to the determination report in which DNV has documented its assessment of the projects effect on the Chaira hydro power plant, which purpose is to save power during low peak times (through pumping) and supply electricity to the grid during high peak times. DNV concluded that since the baseline study considers the project's effect on the 4 power plants representing the top 35% (in terms of total generation in 2012) of the electricity grid, the non-consideration of the Chaira hydro power plant is acceptable as the effect is only minor.

There are inconsistencies in the PDD e.g. page 16 the PDD states the project produces no emissions, yet on page 24 significant project emissions are given.

DNV Response:

The hydro power project itself does not produce any GHG emissions (as stated on page 16 of the PDD). The figure given in table E1.1 on page 24 of the PDD represent total CO_2 emissions of all power plants connected to the national power grid in the project scenario.

We sincerely hope that our response demonstrates that DNV, based on our professional experience, has assessed the issues raised in the requests for review as part of the determination of the project and our conclusion was that these issues were adequately addressed.

Yours faithfully

for Det Norske Veritas Certification AS

Michael Lehmann

Michael Lehmann
Technical Director
International Climate Change Services