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Determination Report

Brestiom Plc., Sofia

DETERMINATION OF JI TRACK 1 BULGARIAN SMALL HYDRO POWER PLANT PORTFOLIO

Report No. 1001714

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TÜV SÜD Industrie Service GmbH

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Summary:

The Certification Body ”Climate and Energy” has been ordered by Brestiom PLC to perform a determination of the above mentioned project. The initial assessment of the JI track 2 project took place in 2006 and is documented in the determination report 806957, issued 13th June 2006. For registration purpose TÜV SÜD re-assessed the mentioned project with report No. 1001711 from 3th July 2007. In Mai 2010 PP decided to withdraw the project under track 2 and re-assess by AIE under JI track 1 regulations. The final result herewith is the conclusion of the previous and current determination.

Using a risk based approach; the determination of this project has been performed by document reviews and on-site inspection, audits at the locations of the project and interviews at the offices of the project developer and the project owner. The determination of this project has been performed by document reviews, interviews by e-mail and on-site inspections, audits at the locations of the project and interviews at the offices of the client.

As the result of this procedure, it can be confirmed that the submitted project documentation is in line with all requirements set by the Marrakech Accords and the Kyoto Protocol and relevant guidelines of Bulgarian DFP. The LoAs of Bulgaria and the Netherlands are available (see chapter 3.1.1).

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 183 095 tonnes CO_{2e} within the whole Kyoto crediting period from 2008 to 2012 (to be issued as ERUs) since the starting date of the project January 1, 2008 until end of 2012 represent a reproducible estimation using the assumptions given by the project documents.

Work carried out by:	• Markus Knödlseder (Project manager, GHG Auditor) • Klaus Nürnberger (GHG lead auditor) • Peicho Peev (GHG trainee) • Robert Mitterwallner (GHG auditor) • Nevena Pingarova (host country expert)	Internal Quality Control by: Thomas Kleiser

Abbreviations

BSHPPP	Bulgarian Small Hydro Power Plant Portfolio
CAR	Corrective action request
CR	Clarification request
DOE	Designated Operational Entity
DP	Determination Protocol
DVM	Determination and Verification Manual
EIA / EA	Environmental Impact Assessment / Environmental Assessment
BEF	Baseline Emission Factor for the Bulgarian Grid
ER	Emission reduction
ERU	Emission Reduction Unit
GHG	Greenhouse gas(es)
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	JI Supervisory Committee
KP	Kyoto Protocol
MoEW	Bulgaria Ministry of Environment and Water
MP	Monitoring Plan
MS	Management System
NGO	Non Governmental Organisation
NPV	Net Present Value
PDD	Project Design Document
RIEPW	Regional Inspection of Environment Protection and Water
SHPP	Small Hydro Power Plant

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1 INTRODUCTION

1.1 Objective

Brestiom Plc., Sofia in Bulgaria has commissioned TÜV SÜD Industrie Service GmbH to conduct a determination of the "Bulgarian Small Hydro Power Plant Portfolio" (BSHPPP- Project) with regard to the relevant requirements for JI project activities. The determination serves as a conformity test of the project design and is a requirement for all JI projects. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Determination is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions (in particular ERUs - in the first commitment period under the Kyoto Protocol).

UNFCCC criteria refer to the Kyoto Protocol Article 6 criteria and the Guidelines for the implementation of Article 6 of the Kyoto Protocol as agreed in the Marrakech Accords.

The project is listed on the webpage of the DFP and in the National Allocation Plan of Bulgaria.

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document (PDD), 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. TÜV SÜD has, based on the recommendations in the DVM, and employed a risk-based approach in the determination, focusing on the identification of significant risks for project implementation and the generation of emission reductions.

This report is based on the PDD which has been issued January, 2006. The version from March, 2006 was published on the TÜV SÜD website of www.netinform.de. Additionally, the PDD has been published on the webpage of the Bulgarian DFP (http://www.moew.government.bg/). According to CARs and CRs indicated in the audit process the client decided to revise the PDD. The final version submitted in May 2006 serves as the basis for the final conclusions presented herewith.

The determination is not meant to provide any consulting neither towards the British company Camco International nor toward the Bulgarian company Brestiom Plc. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 GHG Project Description

The project foresees the installation of 3 small hydro power plants (Loziata, Byala Mesta and Cherna Mesta). The purpose of the project is to generate electricity in Bulgaria to meet the increasing energy demand and replacing part of the electricity production in Bulgaria produced from fossil fuel.

The **Loziata SHPP** is located between two irrigation channels with a difference in elevation of about 41.7 m, which gives the possibility to use this head at a maximum flow of 8 m³/s for electricity generation (maximum capacity 5156 kW).

The higher irrigation channel starts from the bottom reservoir of the state owned hydropower plant Krichim. The HPP Krichim is the last bottom-most stage of the Dospat-Vatcha cascade. The water resource for the SHPP includes two components – the water volumes already utilized from HPP Krichim and the available water from four small rivers - Ustinska, Perushtenska, Pastushka and Brestovica. The catchments of the rivers are located on the Northern slopes of the Rodopi Mountains. There are no side effects on this project (see CR 7 and CR 11 in Annex 1 of the report).

The water is conveyed through two buried pipelines into the powerhouse, where the hydro energy is converted into electrical energy by two horizontal Francis turbines and two generators.

Byala Mesta and Cherna Mesta SHPP are run-off river hydro power plants. Both have a very similar technical design. In order to use the hydro power at an almost constant head (rated net head 98 m and 106.56 m) a regulated Pelton turbine with will be used.

The maximum/minimum discharges of the turbines are 0.8 / 0.1 m^3/s. The main electrical equipment consists of an asynchronous generator for parallel operation with common power grid with rated power output 650 kW.

Byala Mesta SHPP is located in the mountainous part of Mesta River catchments. The River Byala Mesta is the upstream section of Mesta River.

Cherna Mesta SHPP is located at the mountain part of Mesta (Nestos) River catchments. The Cherna Mesta River is the main tributary of the Mesta River.

The construction works of SHPP Loziata has started in October 2005, of SHPP Byala Mesta in December 2005 and of SHPP Cherna Mesta in January 2006. The start of operation for all three power plants is foreseen at the end of August 2006.

The baseline scenario for the SHPPs is reflected in the indirect off-site emissions by electricity production.

The Project Participant of the Host Country is Brestiom Plc. Each of the subprojects has assigned the GHG emission reduction rights to Brestiom to allow one party to aggregate and optimize the GHG emission reduction asset. The revenues to be generated by the sale of the GHG emission reductions shall be redistributed to the project companies by Brestiom.

The individual power plants are operated by the following proponents:

- Loziata SHPP: Brestiom Plc, Sofia, Bulgaria.
- Byala Mesta SHPP: Byala Mesta Ltd., Sofia, Bulgaria.
- Cherna Mesta SHPP: Cherna Mesta Ltd., Sofia, Bulgaria.

The project documentation has been developed by Camco International, London from the United Kingdom who is not project participant.

2 METHODOLOGY

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

- It organises, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent determination process where TÜV SÜD has documented how a particular requirement has been validated and the result of the determination.

The determination protocol consists for this project of three tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Annex 1 to this report.

Determination Protocol Table 1: Mandatory Requirements			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the determination report. It is used in case of an outstanding, currently not solvable issue, AI means Additional Information is required.	Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirement checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table	Gives reference to	Explains how conformance	The section is used to elabo-	This is either acceptable based on evi-

Determination Protocol Table 2: Requirement checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
1 are linked to checklist questions the project should meet. The checklist is organised in six different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	documents where the answer to the checklist question or item is found.	with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	rate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	dence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification or Additional Information is used when the independent entity has identified a need for further clarification or more information.

Determination Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action and additional Information requests	***Ref. to checklist question in table 2***	***Summary of project owner response***	***Determination conclusion***
If the conclusions from the draft determination are either a Corrective Action Request or a Clarification or Additional Information Request, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification or Additional Information Request is explained.*	*The responses given by the Client or other project participants during the communications with the independent entity should be summarised in this section.*	*This section should summarise the independent entity's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

2.1 Review of Documents

The project participants submitted a PDD and additional background documents related to the project design and baseline. A review for all these documents has been performed in order to identify all issues for discussion during the follow-up interviews on-site and by phone or email.

A second document review was conducted during May 01 and June 30, 2007. A last review with an update of the final report followed in May 2010 when the LoA of Bulgaria (IRL-No. 29) was available.

2.2 Follow-up Interviews

On March 29th, 2006 TÜV SÜD performed meeting with the project documentation developer and on April 26th, 2006 TÜV SÜD conducted the on-site-mission to confirm selected information and to resolve issues identified in the document review. Representatives of the project owners have been interviewed.

The main topics of the interviews are summarised in Table 1. The complete and detailed list of all persons interviewed is enclosed in Appendix 2 to this report.

Table 1: Interview topics

Interviewed organisation	Interview topics
Camco International	Project design, baseline, monitoring plan, environmental impacts, permits and licenses, stakeholder comments, additionality, monitoring procedures, Energy Sector, Approval of the project, JI-Guidelines
Project owner Brestiom Plc.	Project design, monitoring plan, environmental impacts, permits and licenses, stakeholder comments, monitoring procedures, calibration of the measurement equipment, documentation, archiving of data, Energy Sector
Municipality of Brestovitza	Approvals, Stakeholder comments

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified in order to achieve a positive conclusion during the assessment process. Clarification and Corrective Action Requests raised by TÜV SÜD have been resolved by the revised PDD submitted May 31st, 2006. Furthermore additional documents have been submitted separately in order to provide the required evidences. To guarantee the transparency of the determination process, the concerns raised are and the response given are summarised in chapter 3 below. The whole process is documented in more detail in the final determination protocol in Annex 1.

3 DETERMINATION FINDINGS

In the following sections the findings of the final determination are stated. The determination findings for each determination subject are presented as follows:

1. The findings from the desk review of the project design document and the findings from interviews during the follow up visit are summarised. A more detailed record of these findings can be found in the Determination Protocol in Annex 1.

2. Where TÜV SÜD has identified issues that needed clarification or that represented a risk to the fulfilment of the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Annex 1.

3. Where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in the final determination report.

The final conclusions of the determination are presented consecutively.

3.1 Project Design / Mandatory Requirements

3.1.1 Discussion

The project's spatial boundaries are clearly described for the project installation and respective emissions reduction through electricity generation by renewable energy. The geographical coordinates are also included in the PDD: The project starting date is clearly defined as well as the crediting period which will cover the years 2008-2012 in accordance with the first commitment period (generation of ERUs).

The Technical Description (A.2 and A.4.3) presented in the PDD, shows a complete description of the project's system. A complete description of the used turbines is added. The employed technology does reflect current good practice concerning the installation and operation of hydro power plants. The equipment is delivered by the company Mavel. Maintenance and instruction and training of the personal will be done by representatives of Mavel during the mounting process. Under regular conditions the operational lifetime of the project will exceed this indicated time frame.

The Business Plans were finalised in May and July 2005 and included the planned revenue stream from the sale of emission reductions. The PDD has been finalised in spring 2006 before the official start of the JI process. The construction works started later in May 2006. The project requires initial training and maintenance efforts. The PDD gives information from whom those training will be performed if necessary.

The Bulgarian Designated Focal Point has issued Letters of Endorsement which show in principle the support of the project. Furthermore, an LoA has been issued by the DFP of Bulgaria (see IRL 29). The LoA includes track 1 applicability, but does not include special project specific requirements. The time delay between first and last version of this report is due to the long duration of the issuance of the LoA of Bulgaria.

3.1.2 Findings

Corrective Action Request (CAR1):

It is envisaged that the project has to be approved by both countries (the Netherlands and Bulgaria) at the end of the determination process. The sponsor Party has to be in compliance with its obligations under Articles 5 & 7 of Kyoto Protocol.

Response: The JISC has modified regulation concerning the approval of the parties involved in its 6th meeting (February 2007)[*].

At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report.

At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report

The project has received the Letter of Support from the Bulgarian ministry. The project was submitted to the Bulgarian JI Steering Committee aiming to receive the Letter of Approval.[†]

Clarification Request 1:

The documentation with the technical data of the turbines should be provided from manufacturer.

Response: Information has been submitted.

Clarification Request 2:

The PDD lacks information if all projects are Greenfield projects or refurbishments. The PDD should address this more transparently.

Response: All projects are Greenfield projects. However the Loziata project is using partly the existing infrastructure of an irrigation channel.

3.1.3 Conclusion

LoAs of Bulgaria and the Netherlands are available (see IRL 29 and 30). All requested clarifications have been answered during determination.

[*] This request is just for information regarding track 1 procedures.

[†] Meanwhile, the LoA of Bulgaria is avaialable.

3.2 Baseline/Additionality

3.2.1 Discussion

The baseline of the "Bulgarian Small Hydro Power Plant Portfolio" Project is established according the CDM Small Scale Methodologies ASM I.D.. The emission reductions result from the replacement of electricity generation by the Bulgarian grid.

The PDD refers to the Study on Baseline for JI-Projects in the Bulgarian Power Sector from National Electricity Company, May 2005. This study does not regard build margin power plants by calculating the operating margin. Further by calculating the build margin the recent build Hydro Power Plants and Nuclear Power Plant units are neglected. This study fixes the emission factors for the future ex-ante and does not foresee ex-post determination. All types of variables are clearly and completely specified. The validity of the applicable combined EF has been cross-checked with the published baseline carbon EF of the MOEW (http://www2.moew.government.bg/recent_doc/climate/Baseline%20CEF%20Summary.pdf).

The baseline is established in a conservative project specific manner. It does take into account the major national and/or sectoral policies, macro-economic trends and political developments. Relevant key factors are described and their impact on the baseline and the project risk is evaluated.

3.2.2 Findings

Clarification Request 3:

The PDD states that revenues from carbon are essential for getting subsidiaries; proves for that statement are requested and a clarification what kind of subsidies the project portfolio uses and from whom those subsidiaries are paid directly or indirectly.

> Response: The respective section in the PDD had been clarified. The project receives no direct or indirect (green certificates) subsidies form the Bulgarian Government.

Clarification Request 4:

How can be ensured that the project will not gain revenues as a JI project and from green investment certificates?

> Response: The green certificates system in Bulgaria is not established and it is not clear if the system will be set up. Hence the only additional revenues the project can currently gain are ERU certificates.

Clarification Request 5 and 14:

In order to prove the investment barrier evidences about renewable generation costs are requested as well as the current and future regulated price settings; in addition it is requested to provide convincing opinions that produced electricity will be fed into the national grid at those costs and stating that here are no better paid contracts envisioned.

> Response: Currently there is no possibility to sell the energy on an individually basis. All energy which is produced in Bulgaria by private companies must be sold (following governmental laws) to the now private owned electric power companies. In the case of the Brestiom projects the power will be sold to Austrian EVN, operating in southern Bul-

garia. The price is about € 40.9/MWh. The contracts are closed for one year with the option of renewal. The evidences for the time of investment decision have been checked during on-site visit.

According to the project developer the energy supply company EVN is forced by Bulgarian law to buy the power from SSC Hydropower projects. The contract can be signed for one or for several years. In the case of the Brestiom projects, the contracts are signed for one year. The actual feed in tariff of 40.9 €/MWh might rise slightly in the consecutive contracts with EVN. The respective section of the PDD (Page 7) has been adapted.

Correction Action Request 2 and CR 12

Barrier III is not clear. The PDD is claiming that Bulgaria has no experiences in SSC hydro power projects. At the same time the PDD gives a list of bigger project than the envisioned one. Information is requested for SSC in the size of 0,5 – 10 MWe, because that reflects the envisioned project size. In addition information is requested if those SSC are still in operation, private or state owned.

The determination team understand that during 2002 and 2005 private initiatives for SHPP construction were in place which has been substituted by JI financing. However, that demonstrates on the one hand that there is no technological barrier. Furthermore it raises the question about current institutional and financial barriers in Bulgaria and if additionality discussion is valid.

So, it needs to be explained and proven what institutional and financial circumstances or barriers had changed that in the period of 2002 – 2005 in contrary to 2006 that revenue from JI is needed.

Response: A list of SHPP with the size from 0,56 to 5 MW is now included in the PDD. Those projects are all private owned and in operation. Furthermore a list of Hydropower facilities aiming to receive carbon certificates under the JI had been included. The lists show that carbon certificates are important for realizing SHPP in Bulgaria.

The PDD has claimed technological barriers for proving the additionality of the project. The arguments concerning technological issues are now modified and included in the investment barrier. Hence the new version of the PDD does not claim any technological barrier.

As indicated in the PDD, the liberalisation of the Bulgarian power sector commenced in 2003. In the next years very little private investment happened in this sector due to financial uncertainty and problems with receiving bank loans (see Table 5). A study by the NEK published in 2004 (which is now included in the PDD) indicates 700 potential places and investment possibilities for SSC hydropower facilities. However also after this publication the number of SSC Hydro projects constructions still remained small due to the above mentioned reasons.

Table 6 shows that with the start of the JI process planning and building of SSC Hydropower projects accelerated. With the setting up of the JI mechanism private project developers saw an additional income stream which helped both, receiving bank loans and making the projects financially viable. Therefore, as listed in Table 6 of the PDD, many of the new projects realized in Bulgaria are JI projects. Including the income of carbon certificates into the financial (Rational Energy Utilisation Plan) documents aiming to re-

ceive banks loans for the three projects was essential for receiving the loans. Consequently without carbon certificates the project would not be realised.

Correction Action Request 3

Barrier IV seems to be contrary to the sustainable idea of JI if environmental aspects are argued as barriers as well as maybe regulatory are not respected appropriately. Correction in the PDD regarding negative environmental effects is necessary if environmental concerns shall be considered as barriers.

Response: The respective section in the PDD had been clarified. The project receives no direct or indirect subsidies from the Bulgarian Government.

3.2.3 Conclusion

The common practice analysis in the PDD includes projects that did not apply for JI. In the time of planning of these projects (before 2003) there was no JI guidance and, hence, the project activity is deemed to be not common practice.

As evidences have been checked during on-site visit, the financial barriers are plausible and seem to be retraceable that JI revenues increase the willingness of financial institutions to provide reasonable loans. The project complies with appropriate regulations.

3.3 Duration of the Project

3.3.1 Discussion

The crediting period for the emission reduction units ERUS is defined as being from 2008 – 2012 in accordance with the first commitment period defined in the Kyoto Protocol.

The project implementation schedules are defined. The PDD defines the starting date as the date of commissioning. The operational lifetime of the project is announced to last 20 years. This timeframe is sufficiently conservative.

3.3.2 Findings

Clarification Request 6:

For the crediting period before 2008 (05.07-12.07) please provide documentation to confirm that the hydro power plants are active since 01.05.2007.

Response: The official construction inspection of Bulgaria issues a letter of commissioning for the SHPP. The approval for Bjala and Tscherna Mesta had been issued in May 2007 and had been attached to the Email. The approval for Loziata is expected to be issued in June 2007 and will then be sent to AIE immediately.

3.3.3 Conclusions

The Kyoto period is explicit defined as being from January 1,2008 until December 31,2012 in accordance with the first commitment period defined in the Kyoto Protocol.

The revised PDD is resolving the belonging issues The project is in compliance with the requirements.

3.4 Monitoring Plan

3.4.1 Discussion

The monitoring methodology for the hydropower projects is rather straightforward and does reflect current good practice and is supported by the monitored and recorded data. The monitoring provisions are in line with the project boundaries.

No indicators for project emissions have been defined and no leakage emissions are monitored according to the monitoring plan as there are no emissions to be expected. The monitoring methodology for the hydropower projects does reflect current good practice. The generated electricity means the net-production of the power plant (own consumption will be deducted).

Transport emissions and emissions related to flooded area are discussed. These emissions are not considered to be monitored and are deemed to be negligible. No anthropogenic emissions by sources of greenhouse gases within the project boundary were identified, because the proposed project activities are run-of-the river hydroelectric projects that will not expand existing reservoirs. Hence, leakage is also not considered from the project activity. In addition the equipment used is not transferred from another project activity. No leakage calculation is required.

The monitoring methodology is in principle supported by the monitored and recorded data. The monitoring provisions in the monitoring methodology are consistent with the project boundaries in the baseline study.

For the hydro-power projects there is one key factor which is required in order to determine the baseline emissions – net electricity production of the project – which is foreseen to be properly monitored. For the metering of electricity, which will be fed into the grid, the distribution company will be responsible for the technical quality of the collected data. Data uncertainties of directly monitored data (i.e. electricity) are deemed to be low. Based on our country expertise, an independent National agency is in charge of checking the meters and guaranteeing their operation within close, officially set parameters. The recorded data have to be archived until 2014 for JI project purposes. On the basis of the read off data the Brestiom Plc (only project participant), the Byala Mesta Ltd and the Cherna Mesta Ltd will prepare regularly invoices for the public provider - the purchaser of the generated electricity. Measuring devices have to be implemented in accordance with the official “Electricity Metering Rules” and have to comply with the technical and metrological requirements, defined by the “Regulation for Metering Devices” in Bulgaria. The devices have to undergo regular inspection and supervision under the “Metering Law” and the “Regulation for Metering Devices”.

The monitoring plan does not provide the collection of environmental impacts. The approvals of EIA or the construction permits show that there are not any relevant environmental impacts.

There is no further need for internal audits of GHG project compliance. The monitoring devices have to undergo regular inspection and supervision. The prepared invoices will be checked by the local distributor. With the monitored data there are enough indicators to check the performance of the project. These indicators are strong connected to generated emission reductions. Therefore no further procedures for project performance are necessary. Procedures are described in the PDD. All the actions in terms of replacement, gauging etc. shall be performed under the supervision of the local purchaser and according to official “Electricity Meter Rules”.

3.4.2 Findings

Corrective Action Request 4

The metering system for the internal energy demand is not clearly explained in the PDD.

> Response: In all SHPP the electrical Energy will be measured with a multiple source electrometer. The energy needed for the internal use, will be deducted automatically from the total produced electrical energy.

3.4.3 Conclusion

All aspects regarding future responsibilities for registration, monitoring, measurement are already fixed in advance. Procedures for training of monitoring personnel are described, too.

For the metering of electricity, which will be fed into the grid, the distribution company will be responsible for the technical quality of the collected data. The Bulgarian authority for metering devices is responsible for calibration.

Procedures for corrective actions in the case of malfunctioning of monitoring devices are identified and described. In the consequence the generation of electricity which is not measured during malfunctioning and/or changes of meter device has to be neglected.

The discussed issues are considered to be resolved. The project does fulfil all the prescribed requirements completely.

3.5 Calculation of GHG Emissions

3.5.1 Discussion

The project's spatial boundaries are clearly described. Uncertainties in the GHG emissions estimates are addressed in the documentation.

Project emissions related to flooded area and to transport during construction are considered negligible. No further aspects of leakage have been identified; hence further leakage calculation is not requested. That aspect is valid for project emissions as well.

The project will definitely result in fewer GHG emissions than the baseline scenario. The calculation of emission reductions is correctly computed. Baseline emissions have been calculated in a conservative manner.

3.5.2 Findings

Clarification Request 7:

The PDD does not address on what base the water flow rate in each river has been determined and how the project owner assumes from that value to projected electricity produced. The determination team ask to demonstrate the approach.

> Response: The water flow had been determined during the initial planning phase of the project by using a gauge. The projects had been designed following the admitted amount of water, which had been prepared and calculated by MOEW. Only this approved amount of water can be used by the projects. The Qmin is controlled by the MOEW, ensuring that enough water remains in the fish passage.

3.5.3 Conclusion

The discussed issues are considered to be resolved. The project does fulfil all the prescribed requirements completely.

3.6 Environmental Impacts

3.6.1 Discussion

SHPP Loziata uses water from irrigation channel and also the very small HPPs of Byala Mesta and Cherna Mesta have very limited impacts on the environment. The fulfilment of the Bulgarian Environmental Protection Act, Waters Act, Protected Territories Act, Biodiversity act and Soil Protection from Pollution Act is described in the PDD.

Requirements for EIAs exist in the host country. The procedures for assessment of the necessity for implementation of an EIA of the SHPPs were carried out. MoEW decided that the SHPPs are not subject to an EIA.

Construction permits, were issued, which take environmental issues into account.

3.6.2 Findings

An analysis of the environmental impact is not described in the PDD, due to SHPP Loziata uses water from irrigation channel and due to the very small HPPs of Byala and Cherna Mesta. Only the approved amount of water can be used by the project (see CR 7 and CR 11).

Clarification Request 8:

What assessments have been applied in order to come to the conclusion that there are no environmental effects even if there is no EIA necessary?

> Response: According to the Bulgarian Ministry SHPP do not require an EIA. Besides, the Regional Inspection of Environment Protection and Water (RIEPW) has investigated the projects and stated that the investment project does not affect protected territories, habitats, wetlands and monuments of culture by law. Consequently the SHPP have only minor impacts on the environment.

Clarification Request 9

What does the MoEW understands in “minimum” impacts?

> Response: See answer to CR 8, above.

Clarification Request 10:

Which actions will be done to minimize environmental impacts during construction and later operation?

> Response: According to the Bulgarian law all SHPP require a minimum flow and a fish passage, consequently all SHPP have a minimum flow and a fish passage.

3.6.3 Conclusion

The determination team confirms that the projects will have no significant impacts on the environment.

3.7 Local stakeholder process

3.7.1 Discussion

Authorities and stakeholders have been consulted during the process of approval of the project. The project participants applied for an approval of the local mayor, who announced the regarding project. With issuing the construction permits stakeholder comments are regarded. Further for the BEERECL facility, two public conferences were organised. Advertisements were made in national and local newspapers, internet and radio. As it has been checked during on-site audit, there have been no comments, which would have required any further action.

3.7.2 Findings

Clarification Request 11:

The project participants submitted application to the Director of the Basin Department regarding permit for water use. The projects were public announced through display in the respective town halls. With issuing the permits of water use and construction permits stakeholder comments are regarded.

Does the simultaneous use irrigation channel relating irrigation and power generation impact any stakeholder or power generation?

> Response: The design water discharge of the HPP Krichim is 61 m^3/s. From this amount of water 36 m^3 are discharged into the main channel which leads to the two irrigation channels and the SHPP Loziata. The irrigation channels require together 6,5 m^3/s, Lozita is planned to use 16m^3/s. Consequently the power generation does not influence the irrigation channels and as there are around 13,5m^3 of surplus water flow which is not used by the SHPP and the irrigation channels, it can be stated that stakeholders will not be influenced.

3.7.3 Conclusion

The project fulfils all the prescribed requirements completely.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project design document on its website for 30 days from March 28 to April 26, 2006.

Due to the second assessment a second global stakeholder project has been lunched according to UNFCCC regulations as well. The project was published for 30 days (from May 22 to June 20, 2007) under http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=3022&Ebene1_ID=26&Ebene2_ID=923&mode=1

No comments have been received in this period.

5 DETERMINATION OPINION

The Certification Body "Climate and Energy" has been ordered by Brestiom PLC to perform a determination of the above mentioned JI track 1 project. The first assessment took place in 2006 and is documented in the determination report 806957, issued 13th June 2006. For registration purpose TÜV SÜD re-assessed the mentioned project under current regulations. The final result here with is the conclusion of the previous and current determination.

Using a risk based approach; the determination of this project has been performed by document reviews and on-site inspection, audits at the locations of the project and interviews at the offices of the project developer and the project owner. The determination of this project has been performed by document reviews, interviews by e-mail and on-site inspections, audits at the locations of the project and interviews at the offices of the client.

As the result of this procedure, it can be confirmed that the submitted project documentation is in line with all requirements set by the Marrakech Accords and the Kyoto Protocol and relevant guidelines of Bulgarian DFP.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 183 095 tonnes CO_{2e} within the whole Kyoto crediting period from 2008 to 2012 (to be issued as ERUs) since the starting date of the project January 1, 2008 until end of 2012 represent a reproducible, plausible and conservative estimation using the assumptions given by the project documents.

The determination is based on the information made available to us and the engagement conditions detailed in this report. The project is included in Bulgarian National Allocation Plan and the LoA confirms that no double counting according to the directive 2004/101/EC may occur. The determination has been performed using a risk-based approach as described above. The only purpose of the report is its use during the registration process as JI project. Hence, TÜV SÜD can not be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

Munich, 04/06/2010

Klaus Nürnberger
Project Manager

Munich, 04/06/2010

Thomas Kleiser
Certification Body
Climate and Energy

Annex 1

Determination Checklist

TABLE 1 MANDATORY REQUIREMENT FOR JOINT IMPLEMENTATION (JI) PROJECT ACTIVITIES

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
1. The project shall have the approval of the Parties involved	Kyoto Protocol Article 6.1 (a)	Corrective Action Request 1 The Approvals should be provided at the end of the validation.	It is envisaged that the project will be approved by both countries (investor country and Bulgaria) at the end of the validation process. The Bulgarian National Focal Point has issued a Letter of Endorsement which shows in principle the support of the project. The Project Participants envisaged submitting the Letters of Approval to the validator.
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur	Kyoto Protocol Article 6.1 (b)	☑	Table 2, Section B.2
3. The sponsor Party shall not aquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7	Kyoto Protocol Article 6.1 (c)	See CAR 1 The sponsor Party has to be in compliance with its obligations under Articles 5 & 7.	
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3	Kyoto Protocol Article 6.1 (d)	☑	The project is additional to domestic actions.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects	Marrakech Accords, JI Modalities, §20	See CAR 1 It should be clarified before end of the validation, whether the sponsor Party has appointed a national focal point and have in place national guidelines and procedures for the approval of JI Projects	The Ministry for Environment and Water MoEW was appointed as national focal point of Bulgaria and has issued National JI-Guidelines "How to develop a climate change project and leverage the carbon benefits" (http://www.moew.government.bg/recent_doc/international/climate/Brochure_JI_eng.pdf
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	☑	Verified at UNFCCC website
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts	Marrakech Accords, JI Modalities, §21(b)/24	☑	Third National Communication is available
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities, §21(d)/24	☑	This issue can not be answered by now as such as the JI system is not installed yet.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination	Marrakech Accords, JI Modalities, §31	☑	A PDD has been submitted in March 2006, which contains the most relevant information.
10. The project design document shall be made	Marrakech Ac-	Open	The project design document was

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments	cords, JI Modalities, §32		made publicly available from May 16 to June 14, 2007. Within the comment period no comments have been received.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out	Marrakech Accords, JI Modalities, §33(d)	☑	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project	Marrakech Accords, JI Modalities, Appendix B	☑	Table 2, Section B.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, JI Modalities, Appendix B	☑	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	☑	Table 2, Section B.2
15. The project shall have an appropriate monitor-	Marrakech Ac-	☑	Table 2, Section D

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
ing plan	cords, JI Modalities, §33(c)		

TABLE 2 REQUIREMENTS CHECKLIST

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General Description of Project Activity					
A.1. Project Boundaries					
A.1.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2, 3,4, 5	DR, I	The project's spatial boundaries are clearly described for the project installation and respective emissions reduction through electricity generation by renewable energy. The geographical coordinates are also included in the PDD.	☑	☑
A.1.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	1,2, 3,4, 5	DR, I	Yes, the Technical Description (A.2 and A.4.3) presented in the PDD, shows a complete description of the project's system. A complete description of the used turbines is added. <u>Clarification Request 1:</u> The documentation with the technical data of the turbines should be provided from manufacturer. <u>Clarification Request 2:</u> The PDD lacks information if all projects	CR 1 CR 2	☑

* MoV = Means of Verification, DR= Document Review, I= Interview

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			are Greenfield projects or refurbishments. The PDD should address this more transparently.		
A.2. Technology to be employed					
A.2.1. Does the project design engineering reflect current good practices?	1,2, 3,4, 5,6, 7,8	DR, I	Yes, the employed technology does reflect current good practice concerning the installation and operation of hydro power plants.	☑	☑
A.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2, 3,4, 5,6, 7,8, 9,25	DR, I	The foreseen technology reflects good practice for generation of electricity using hydro. The project uses technology that goes beyond the state of the art in the host country.	☑	☑
A.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	"	DR, I	The project technology will not be substituted by a more efficient technology.	☑	☑
A.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	"	DR, I	Yes, the project requires initial training and maintenance efforts. The PDD gives information from whom those training will be performed if necessary.	☑	☑
A.2.5. Does the project make provisions for meeting training and maintenance needs?	26, 27	DR, I	The equipment is delivered by the company Mavel. Maintenance and instruction and training of the personal will be done by representatives of Mavel during the	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			mounting process.		
B. Project Baseline					
B.1. Baseline Methodology					
B.1.1. Is the discussion and selection of the baseline methodology transparent?	1,2, 3,4, 5,6	DR, I	The discussion and selection in the Baseline Study is transparent. CDM-Methodologies for small-scale-projects are used.	☑	☑
B.1.2. Does the baseline methodology specify data sources and assumptions?	"	DR, I	Yes, all data used are specified and documented.	☑	☑
B.1.3. Does the baseline methodology sufficiently describe the underlying rationale for the algorithm/formulae used to determine baseline emissions (e.g. marginal vs. average, etc.)	"	DR, I	The PDD refers to the Study on Baseline for JI-Projects in the Bulgarian Power Sector from National Electricity Company, May 2005. This study does not regard build margin power plants by calculating the operating margin. Further by calculating the build margin the recent build Hydro Power Plants and Nuclear Power Plant units are neglected. This study fixes the emission factors for the future ex-ante and does not foresee ex-post determination.	☑	☑
B.1.4. Does the baseline methodology specify types of variables used (e.g. fuels used, fuel consumption rates, etc)?	"	DR, I	Yes, all types of variables are clearly and completely specified.	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
B.1.5. Does the baseline methodology specify the spatial level of data (local, regional, national)?	"	DR, I	All spatial levels are considered to be appropriate.	☑	☑
B.2. Baseline Determination					
B.2.1. Is the application of the methodology and the discussion and determination of the chosen baseline transparent?	1,2, 3,4, 5,6, 7,8, 25	DR, I	The discussion and determination of the chosen baseline is transparent..	☑	☑
B.2.2. Has the baseline been determined using conservative assumptions where possible?	"	DR, I	Yes, the assumptions are conservative.	☑	☑
B.2.3. Has the baseline been established on a project-specific basis?	"	DR, I	Yes, the baseline is established in a project specific manner.	☑	☑
B.2.4. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	"	DR, I	Yes, the baseline does take into account the major national and/or sectoral policies, macro-economic trends and political developments. Relevant key factors are described and their impact on the baseline and the project risk is evaluated.	☑	☑
B.2.5. Is the baseline determination compatible with the available data?	"	DR, I	Yes, the baseline determination is compatible with the available data.	☑	☑
B.2.6. Does the selected baseline represent a likely scenario in the absence of the project?	"	DR, I	Yes, the baseline does represent a likely scenario in the non project case as it con-	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			forms to all legal requirements and the prevailing practice in the Bulgarian energy sector.		
B.2.7. Is it demonstrated that the project activity itself is not a likely baseline scenario?	"	DR, I	The additionality of the project is demonstrated by using Barrier Analysis. <u>Clarification Request 3:</u> The PDD says that REUP states that revenues from carbon are essential for getting subsidiaries; proves for that statement are requested and a clarification what kind of subsidies the project portfolio uses and from whom those subsidiaries are paid directly or indirectly. <u>Clarification Request 4:</u> How can be ensured that the project will not gain revenues as a JI project and from green investment certificates? <u>Clarification Request 5:</u> In order to prove the investment barrier evidences about renewable generation costs are requested as well as the current and future regulated price settings; in addition it is requested to provide convincing opinions that produced electricity will be fed into the national grid at those costs	CR 3 CR 4 CR 5 CAR 2 CAR 3	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			and stating that here are no better paid contracts envisioned. <u>Correction Action Request 2</u> Barrier III is not clear. The PDD is claiming that Bulgaria has no experiences in SSC. At the same time the PDD gives a list of bigger project than the envisioned one. Information is requested for SSC in the size of 0,5 – 10 MWe, because that reflects the envisioned project size. In addition information is requested if those SSC are still in operation, private or state owned. <u>Correction Action Request 3</u> Barrier IV seems to be contrary to the sustainable idea of JI if environmental aspects are argued as barriers as well as maybe regulatory are not respected appropriately. Correction in the PDD regarding negative environmental effects is necessary if environmental concerns shall be considered as barriers.		
B.2.8. Have the major risks to the baseline been identified?	"	DR, I	Yes, the mayor risks have been identified.	☑	☑
B.2.9. Is all literature and sources clearly referenced?	"	DR, I	Yes, all literature and sources are clearly	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			referred.		
C. Duration of the Project/ Crediting Period					
C.1. Are the project's starting date and operational life-time clearly defined and reasonable?	1,2, 3,4, 5,6	DR, I	The project's starting date and operational lifetime is defined and reasonable.	☑	☑
C.2. Is the project's crediting time clearly defined?	"	DR, I	Yes, the crediting period for the emission reduction units ERUS is defined as being from 2008 – 2012 in accordance with the first commitment period defined in the Kyoto Protocol. <u>Clarification Request 6:</u> For the crediting period before 2008 (05.07-12.07) please provide documentation to confirm that the hydro power plants are active since 01.05.2007.	CR6	☑
D. Monitoring Plan					
D.1. Monitoring Methodology					
D.1.1. Does the monitoring methodology reflect good monitoring and reporting practices?	1,2, 3,4, 5,6, 7,8, 25	DR, I	The monitoring methodology for the hydropower projects does reflect current good practice. The generated electricity means the net-production of the power plant (own consumption will be deducted)	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.1.2. Is the selected monitoring methodology supported by the monitored and recorded data?	"	DR, I	The monitoring methodology is in principle supported by the monitored and recorded data. Corrective Action Request 4 The metering system for the internal energy demand is not clearly explained in the PDD	CAR4	☑
D.1.3. Are the monitoring provisions in the monitoring methodology consistent with the project boundaries in the baseline study?	"	DR, I	Yes, the monitoring provisions in the monitoring methodology are consistent with the project boundaries in the baseline study.	☑	☑
D.1.4. Have any needs for monitoring outside the project boundaries been evaluated and if so, included as applicable?	"	DR, I	It has been evaluated, but there is no such need.	☑	☑
D.1.5. Does the monitoring methodology allow for conservative, transparent, accurate and complete calculation of the ex post GHG emissions?	"	DR, I	Yes.	☑	☑
D.1.6. Is the monitoring methodology clear and user friendly?	"	DR, I	Yes. See D.1.1	☑	☑
D.1.7. Does the methodology mitigate possible monitoring errors or uncertainties addressed?	"	DR, I	The monitoring methodology is straight forward and minimizes errors and uncertainties.	☑	☑

* MoV = Means of Verification, DR= Document Review, I= Interview

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.2. Monitoring of Project Emissions					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the project boundary during the crediting period?	1,2, 3,4, 5,6, 7,8, 25	DR, I	No anthropogenic emissions by sources of greenhouse gases within the project boundary were identified, because the proposed project activities are run-of-the river hydroelectric projects that will not expand existing reservoirs.	☑	☑
D.2.2. Are the choices of project GHG indicators reasonable?	"	DR, I	See above	☑	☑
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	"	DR, I	See above	☑	☑
D.2.4. Will the indicators enable comparison of project data and performance over time?	"	DR, I	See above	☑	☑
D.3. Monitoring of Leakage					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	1,2, 3,4, 5,6, 7,8	DR, I	The project proponents identified no anthropogenic greenhouse gases by sources outside the project boundary that are significant, measurable and attributable to the project activity. Hence, no leakage is considered from the project activity. In addition the equipment used is not transferred from another project activity. No leakage calculation is required.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.3.2. Have relevant indicators for GHG leakage been included?	"	DR, I	See comment above.	☑	☑
D.3.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	"	DR, I	See comment above.	☑	☑
D.3.4. Will it be possible to monitor the specified GHG leakage indicators?	"	DR, I	See comment above.	☑	☑
D.4. Monitoring of Baseline Emissions					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline emissions during the crediting period?	1,2, 3,4, 5,6, 7,8, 25	DR, I	For the hydro-power projects there is one key factor which is required in order to determine the baseline emissions – net electricity production of the project – which is foreseen to be properly monitored.	☑	☑
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	"	DR, I	The choice is reasonable.	☑	☑
D.4.3. Will it be possible to monitor the specified baseline indicators?	"	DR, I	Yes.	☑	☑
D.5. Monitoring of Social and Environmental Impacts					
D.5.1. Does the monitoring plan provide for the collection and archiving of relevant data on social	1,2, 3,4, 5,6,	DR, I	No, the monitoring plan does not provide the collection of environmental impacts. The approvals of EIA or the construction	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
and environmental impacts?	7,8		permits show that there are not any relevant environmental impacts.		
D.5.2. Will it be possible to monitor the specified impact indicators?		DR, I	See comment above	☑	☑
D.6. Project Management Planning					
D.6.1. Is the authority and responsibility of project management clearly described?	1,2, 3,4, 5,6, 7,8	DR, I	The aspects regarding future responsibilities and monitoring are described in the PDD in Section D.5.	☑	☑
D.6.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	"	DR, I	See comment above	☑	☑
D.6.3. Are procedures identified for training of monitoring personnel?	"	DR, I	Yes, procedures for training of the personal are described.	☑	☑
D.6.4. Are procedures identified for emergency preparedness where emergencies can result in unintended emissions?	"	DR, I	There is no need for this; emergencies can not result in unintended emissions.	☑	☑
D.6.5. Are procedures identified for calibration of monitoring equipment?	"	DR, I	For the metering of electricity, which will be fed into the grid, the distribution company will be responsible for the technical quality of the collected data.	☑	☑
D.6.6. Are procedures identified for maintenance of	"	DR, I	Data uncertainties of directly monitored	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
monitoring equipment and installations?			data (i.e. electricity) are deemed to be low. An independent National agency is in charge of checking the meters and guaranteeing their operation within close, officially set parameters.		
D.6.7. Are procedures identified for monitoring, measurements and reporting?	"	DR, I	Yes, the procedures regarding monitoring, measurements and reporting are already fixed in advance.	☑	☑
D.6.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	"	DR, I	The recorded data have to be archived until 2014 for JI project purposes. On the basis of the read off data the Brestiom Plc, the Byala Mesta Ltd and the Cherna Mesta Ltd will prepare regularly invoices for the public provider - the purchaser of the generated electricity	☑	☑
D.6.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	"	DR, I	The measuring devices have to be implemented in accordance with the official "Electricity Metering Rules" and have to comply with the technical and metrological requirements, defined by the "Regulation for Metering Devices. The devices have to undergo regular inspection and supervision under the "Metering Law" and the "Regulation for Metering Devices".	☑	☑
D.6.10. Are procedures identified for internal audits of GHG project compliance with operational re-	"	DR, I	There is no further need for internal audits of GHG project compliance. The monitoring devices have to undergo regular in-	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
quirements where applicable?			spection and supervision. The prepared invoices will be checked by the local distributor.		
D.6.11. Are procedures identified for project performance reviews?	"	DR, I	With the monitored data there are enough indicators to check the performance of the project. These indicators are strong connected to generated emission reduction. Therefore no further procedures for project performance are necessary.	☑	☑
D.6.12. Are procedures identified for corrective actions?	"	DR, I	Procedures are described in the PDD. All the actions in terms of replacement, gauging etc. shall be performed under the supervision of the local purchaser and according to official "Electricity Meter Rules".	☑	☑
E. Calculation of GHG Emissions by Source					
E.1. Predicted Project GHG Emissions					
E.1.1. Are all aspects related to direct and indirect GHG emissions captured in the project design?	1,2, 3.4, 5,6	DR, I	Yes, but there is no need to calculate project emissions.	☑	☑
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	"	DR, I	Yes, project emissions can be neglected here.	☑	☑
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	"	DR, I	See comment above	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	"	DR, I	See comment above.	☑	☑
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?	"	DR, I	Yes.	☑	☑
E.2. Leakage Effect Emissions					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	1,2, 3,4, 5,6	DR, I	No potential leakage is identified.	☑	☑
E.2.2. Have these leakage effects been properly accounted for in calculations?	"	DR, I	See comment above	☑	☑
E.2.3. Does the methodology for calculating leakage comply with existing good practice?	"	DR, I	See comment above	☑	☑
E.2.4. Are the calculations documented in a complete and transparent manner?	"	DR, I	See comment above	☑	☑
E.2.5. Have conservative assumptions been used when calculating leakage?	"	DR, I	See comment above	☑	☑
E.2.6. Are uncertainties in the leakage estimates properly addressed?	"	DR, I	See comment above	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3. Baseline Emissions					
E.3.1. Have the most relevant and likely operational characteristics and baseline indicators been chosen as reference for baseline emissions?	1,2, 3,4, 5,6, 7,8	DR, I	Yes, the most relevant and likely operational characteristics and baseline indicators been chosen.	☑	☑
E.3.2. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline emissions?	"	DR, I	Yes.	☑	☑
E.3.3. Are the GHG calculations documented in a complete and transparent manner?	"	DR, I	Yes	☑	☑
E.3.4. Have conservative assumptions been used when calculating baseline emissions?	"	DR, I	The baseline emissions have been calculated in a conservative manner. Additionally see CR3.	☑	☑
E.3.5. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	"	DR, I	The GHG emissions were estimated with the estimated electricity production of the project and with the Bulgarian grid emissions factor that includes future developments of the Bulgarian power plants.	☑	☑
E.3.6. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	"	DR, I	Yes.	☑	☑

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.4. Emission Reductions					
E.5. Will the project result in fewer GHG emissions than the baseline scenario?	1,2, 3,4, 5,6	DR, I	Clarification Request 7: The PDD does not address on what base the water flow rate in each river has been determined and how the project owner assumes from that value to projected electricity produced. The determination team ask to demonstrate the approach.	CR 7	☑
F. Environmental Impacts					
F.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	DR, I	No, an analysis of the environmental impact is not described in the PDD, due to SHPP Loziata uses water from irrigation channel and due to the very small HPPs of Byala and Cherna Mesta. Clarification Request 8: What assessments have been applied in order to come to the conclusion that there are no environmental effects even if there is no EIA necessary? Clarification Request 9 What does the MoEW understands in “minimum” impacts? Clarification Request 10:	CR 8 CR 9 CR 10	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Which actions will be done to minimize environmental impacts during construction and later operation?		
F.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	"	DR, I	Requirements for EIAs exist in the host country. The procedures for assessment of the necessity for implementation of an EIA of the SHPPs were carried out. MoEW decided that the SHPPs are not subject to an EIA. Construction permits, were issued, which take environmental issues into account.	☑	☑
F.3. Will the project create any adverse environmental effects?	"	DR, I	Open see CR 7		
F.4. Are transboundary environmental impacts considered in the analysis?	"	DR, I	It can be confirmed that no transboundary impacts are existing.	☑	☑
F.5. Have identified environmental impacts been addressed in the project design?	"	DR, I	Open see CR 7		
F.6. Does the project comply with environmental legislation in the host country?	"	DR, I	Yes the project complies with the environmental legislation in Bulgaria and the EU.	☑	☑
G. Stakeholder Comments					

* MoV = Means of Verification, DR= Document Review, I= Interview

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
G.1. Have relevant stakeholders been consulted?	10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24	DR	Yes, the project participants submitted application to the Director of the Basin Department regarding permit for water use. The projects were public announced through display in the respective town halls. With issuing the permits of water use and construction permits stakeholder comments are regarded. <u>Clarification Request 11:</u> Does the simultaneous use irrigation channel relating irrigation and power generation impact any stakeholder or power generation?	CR 11	
G.2. Have appropriate media been used to invite comments by local stakeholders?	"	DR	Yes	☑	☑
G.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	"	DR	Yes	☑	☑
G.4. Is a summary of the stakeholder comments received provided?	"	DR	There have been no comments, which would have required any further action.	☑	☑
G.5. Has due account been taken of any stakeholder	"	DR	See comment above	☑	☑

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
comments received?					

* MoV = Means of Verification, DR= Document Review, I= Interview

TABLE 3 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
CARs			
CAR 1 The Approvals should be provided at the end of the validation.	Table 1., 1	The JISC has modified regulation concerning the approval of the parties involved in its 6th meeting (February 2007). …at least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report… …at least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report The project has received the Letter of Support from the Bulgarian ministry. The project was submitted to the Bulgarian JI Steering Committee aiming to receive the Letter of Approval.	The PPs are aware about that open issue. Under the preliminary assumption that all required documents will be submitted the issue can be considered as resolved. ☑
CAR2 Barrier III is not clear. The PDD is claiming that Bulgaria has no experiences in SSC. At the same time the PDD gives a list of bigger project than the envisioned	B.2.7	A list of SHPP with the size from 0,56 to 5 MW is now included in the PDD. Those projects are all private owned and in operation. Furthermore a list of Hydropower facilities aiming to receive carbon certificates under the JI had been included. The lists show that carbon certificates are important for realizing SHPP in Bulgaria.	The determination team understand that during 2002 and 2005 private initiatives for SHPP construction were in place which has been substituted by JI financing. However, that demonstrates on

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
one. Information is requested for SSC in the size of 0,5 – 10 MWe, because that reflects the envisioned project size. In addition information is requested if those SSC are still in operation, private or state owned.			the one hand that there is no technological barrier. Furthermore it raises the question about current institutional and financial barriers in Bulgaria and if additionality discussion is valid. So, it needs to be explained and proven what institutional and financial circumstances or barriers had changed that in the period of 2002 – 2005 in contrary to 2006 that revenue from JI is needed.
CAR3 Barrier IV seems to be contrary to the sustainable idea of JI if environmental aspects are argued as barriers as well as maybe regulatory are not respected appropriately. Correction in the PDD regarding negative environmental effects is necessary if environmental concerns shall be considered	B.2.7.	The Bulgarian institutional and regulatory framework is an unclear process. The existing feed-in tariff structure was planned to be replaced by a system of green certificates. The system of the Bulgarian green certificates was expected to be set up in June 2006, however until now it is not yet established. The projects have to deal with such institutional uncertainties. Please refer also to CR3. The PDD had been corrected concerning negative environmental effects. Flooding will not be considered as major barrier for the SHPP.	The uncertainty regarding tariffs and profitability is retraceable. However, see comment above: who could previous SHPP deal with that uncertainty, in other words is there any risk analysis regarding how feasible is any change of regulation within a certain period, how will a change (in one or the other direction) effect the profitability of the project? How is that

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
as barriers			uncertainty analysed and the result considered reasonably considered in the decision making process?
CAR4 The metering system for the internal energy demand is not clearly explained in the PDD:	D.1.2	In all SHPP the electrical Energy will be measured with a multiple source electrometer. The energy needed for the internal use, will be deducted automatically from the total produced electrical energy.	The issue is considered as solved. ☑
CRs			
CR1 The documentation with the technical data of the turbines should be provided from manufacturer.	A.1.2	The documentation is attached to the Email.	The issue is considered as solved. ☑
CR2 The PDD lacks information if all projects are greenfield projects or refurbishments. The PDD should address this more transparently.	A.1.2.	All projects are Greenfield projects. However the Loziata project is using partly the existing infrastructure of an irrigation channel.	The issue is considered as solved. ☑
CR3 The PDD says that REUP	B.2.7	The respective section in the PDD had been clarified. The project receives no direct or indirect (green certificates) subsidies form the Bulgarian Government.	The issue is clarified and considered as solved.

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
states that revenues from carbon are essential for getting subsidiaries; proves for that statement are requested and a clarification what kind of subsidies the project portfolio uses and from whom those subsidiaries are paid directly or indirectly.			☑
CR4 How can be ensured that the project will not gain revenues as a JI project and from green investment certificates?	B.2.7	The green investment certificates system in Bulgaria is not yet established and it is not clear when the system will be set up. Hence the only additional revenues the project can currently gain are ERU certificates. Furthermore, if the time the green certificate system will be introduced the feed in tariff will be reduced.	The issue is clarified and considered as solved. ☑ Recommendation: The legal and regulatory developments in Bulgaria regarding implementation of green investment schemes shall be monitored by the operators.
CR5 In order to prove the investment barrier evidences about renewable generation costs are requested as well as the current and future	B.2.7.	Currently there is no possibility to sell the energy on an individually basis. All energy which is produced in Bulgaria by private companies must be sold (following governmental laws) to the now private owned electric power companies. In the case of the Brestiom projects the power will be sold to Austrian EVN, operating in southern Bulgaria. The price is about € 40.9/MWh. The contracts are closed for one year with the option of renewal.	The determination team ask for references to hat particular Bulgarian law. Does the law forces Austrian EVN to buy offered electricity? In addition the team ask also

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
regulated price settings; in addition it is requested to provide convincing opinions that produced electricity will be fed into the national grid at those costs and stating that here are no better paid contracts envisioned.			if the tariff of 40.9 €/MWh is fixed for one year and is continued with new contract or if it changes dramatically from year to year?
CR6 For the crediting period before 2008 (05.07-12.07) please provide documentation to confirm that the hydro power plants are active since 01.05.2007.	C.1.2.	The official construction inspection of Bulgaria issues a letter of commissioning for the SHPP. The approval for Bjala and Tscherna Mesta had been issued in May 2007 and had been attached to the Email. The approval for Loziata is expected to be issued in June 2007 and will then be sent to TÜV immediately.	The issue is clarified and considered as solved. ☑
CR7 The PDD does not address on what base the water flow rate in each river has been determined and how the project owner assumes from that value to projected electricity produced. The determination team ask to demonstrate the approach	E.5.	The water flow had been determined during the initial planning phase of the project by using a gauge. The projects had been designed following the admitted amount of water, which had been prepared and calculated by MOEW. Only this approved amount of water can be used by the projects. The Qmin is controlled by the MOEW, ensuring that enough water remains in the fish passage.	The issue is clarified and considered as solved. ☑

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
CR8 What assessments have been applied in order to come to the conclusion that there are no environmental effects even if there is no EIA necessary?	F.1.	According to the Bulgarian Ministry SHPP do not require an EIA. Besides, the Regional Inspection of Environment Protection and Water (RIEPW) has investigated the projects and stated that the investment project does not affect protected territories, habitats, wetlands and monuments of culture by law. Consequently the SHPP have only minor impacts on the environment.	The issue is clarified and considered as solved. ☑
CR9 What does the MoEW understands in “minimum” impacts?	F.1.	Please refer to section CR8	The issue is clarified and considered as solved. ☑
CR10 Which actions will be done to minimize environmental impacts during construction and later operation?	F.1.	According to the Bulgarian law all SHPP require a minimum flow and a fish passage, consequently all SHPP have a minimum flow and a fish passage.	The issue is clarified and considered as solved. ☑
CR11 Does the simultaneous use irrigation channel relating irrigation and power generation impact any stakeholder or power generation?	G.1.	The design water discharge of the HPP Krichim is 61 m^3/s. From this amount of water 36 m^3 are discharged into the main channel which leads to the two irrigation channels and the SHPP Loziata. The irrigation channels require together 6,5 m^3/s, Lozita is planned to use 16m^3/s. Consequently the power generation does not influence the irrigation channels and as there are around 13,5m^3 of surplus water flow which is not used by the SHPP and the irrigation channels, it can be stated that stakeholders will not	The issue is clarified and considered as solved. ☑

Draft report clarifications and corrective action requests	Ref. to checklist in table 2	Summary of project owner response	Determination conclusion
		be influenced.	

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Comment	Conclusion
CAR 2 => CR 12 The determination team understand that during 2002 and 2005 private initiatives for SHPP construction were in place which has been substituted by JI financing. However, that demonstrates on the one hand that there is no technological barrier. Furthermore it raises the question about current institutional and financial barriers in Bulgaria and if additionality discussion is valid. So, it needs to be explained and proven what institutional and financial circumstances or barriers had changed that in the period of 2002 – 2005 in contrary to 2006 that revenue from JI is needed.	CAR 2	The PDD has claimed technological barriers for proving the additionality of the project. The arguments concerning technological issues are now modified and included in the investment barrier. Hence the new version of the PDD does not claim any technological barrier. As indicated in the PDD, the liberalisation of the Bulgarian power sector commenced in 2003. In the next years very little private investment happened in this sector due to financial uncertainty and problems with receiving bank loans (see Table 5). A study by the NEK published in 2004 (which is now included in the PDD) indicates 700 potential places and investment possibilities for SSC hydropower facilities. However also after this publication the number of SSC Hydro projects constructions still remained small due to the above mentioned reasons. Table 6 shows that with the start of the JI process planning and building of SSC Hydropower projects accelerated. With the setting up of the JI mechanism private project developers saw an additional income stream which helped both, receiving bank loans and making the projects financially viable. Therefore, as listed in Table 6 of the PDD, many of the new projects realized in Bulgaria are JI projects. Including the income of carbon certificates into the financial (Rational Energy Utilisation Plan) docu-	The issue is clarified and considered as solved. ☑

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Comment	Conclusion
		ments aiming to receive banks loans for the three projects was essential for receiving the loans. Consequently without carbon certificates the project would not be realised.	
CR 13 The uncertainty regarding tariffs and profitability is retraceable. However, see comment above: who could previous SHPP deal with that uncertainty, in other words is there any risk analysis regarding how feasible is any change of regulation within a certain period, how will a change (in one or the other direction) effect the profitability of the project? How is that uncertainty analysed and the result considered reasonably considered in the decision making process?	CAR 3	Concerning the other Hydropower facilities built after the liberalisation process and without carbon certificates no further information could be gained. As discussed in CAR 2 the majority of the new planned and built projects need carbon certificates to receive good bank loans and to make the project financially viable due to the insecure investment climate in Bulgaria.	The issue is clarified and considered as solved. ☑
CR 14 The determination team ask for references to hat particular Bulgarian law. Does the law forces Austrian EVN to buy offered electricity?	CR 5	According to the project developer the energy supply company EVN is forced by Bulgarian law to buy the power from SSC Hydropower projects. The contract can be signed for one or for several years. In the case of the Brestiom projects, the contracts are signed for one year. The actual feed in tariff of 40.9 €/MWh might rise slightly in the consecutive contracts with EVN. The respec-	The issue is clarified and considered as solved. ☑

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Comment	Conclusion
In addition the the team ask also if the tariff of 40.9 €/MWh is fixed for one year and is continued with new contract or if it changes dramatically from year to year?		tive section of the PDD (Page 7) had been adapted.	

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Annex 2

Information Reference List

Reference No.	Document or Type of Information
1.	On-site interview at the offices of KWI Consultants in Vienna with the project developer conducted on March 29, 2006 by auditing team of TÜV SÜD **Validation team on-site:** Klaus Nürnberger (Project Manager) — TUV SUD Industrie Service GmbH **Interviewed persons:** Martin Hammer — Camco International Ltd, London
2.	On-site interview at the offices of Union Bank in Sofia with the project owner conducted on April 26, 2006 by auditing team of TÜV SÜD **Validation team on-site:** Klaus Nürnberger (Project Manager) — TUV SUD Industrie Service GmbH Dipl.Ing. Peicho Peev (Local Expert, GHG Trainee) — TUV SUD Office in Bulgaria / Stara Zagora – **Interviewed persons:** Philip Fotev, Executive Director — Brestiom Plc. Stefan Fotev, Technical Consultant — Brestiom Plc. Mihail Todorov, Executive Director — Byala Mesta Ltd. And Cherna Mesta Ltd. Emanuil Manolov, Chairman of Supervisory Board — Union Bank, Sofia Radev Svetoslav — Mashbild Ltd. (shareholder of Brestiom, Byala and Cherna Mesta)
3.	On-site visit at the site of hydro power plant Loziata with the project owner conducted on April 26, 2006 by auditing team of TÜV SÜD **Validation team on-site:** Klaus Nürnberger (Project Manager) — TUV SUD Industrie Service GmbH Dipl.Ing. Peicho Peev (Local Expert, GHG Trainee) — TUV SUD Office in Bulgaria / Stara Zagora –

Reference No.	Document or Type of Information
	Interviewed persons: Stefan Fotev, Technical Consultant — Brestiom Plc. Mihail Todorov, Executive Director — Byala Mesta Ltd. And Cherna Mesta Ltd. Kolencov, Engineer — Brestiom Plc. Georgi Mitarchev, Mayor — Municipality of Brestovitza
4. a	Project Design Document for the JI Project "Bulgarian Small Hydro Power Plant Portfolio", version January 2006
4 b	Project Design Document for the JI Project "Bulgarian Small Hydro Power Plant Portfolio", submitted March 24, 2006
5.	Project Design Document for the JI Project "Bulgarian Small Hydro Power Plant Portfolio", submitted June 2006
6.	REUP Study Rational Energy Utilisation Plan No. 24 for Brestiom Renewable Energy Project, EnCon Services, May 2005
7.	REUP Study Rational Energy Utilisation Plan No. 33 for Byala Mesta Renewable Energy Project, EnCon Services, July 2005
8.	REUP Study Rational Energy Utilisation Plan No. 34 for Cherna Mesta Renewable Energy Project, EnCon Services, July 2005
9.	Preliminary connection contract of a producer to the electrical distribution net of Electrical distribution department Plovdiv Joint –stock company Nr. 2266-1 / 10.04.2006.
10.	Ministry of Environment and waters regional inspection of environment and waters – Blagoewgrad Decision Nr.32-PR/2004 for assessment of the necessity of accomplishment of a valuation of the impact on the environment. : "I have decided- not to make an assessment of the impact on the environment of the investment proposal for a construction of waterpower station on river Byala Mesta on a elevation 1050m and water catching basin on river Byala Mesta on a elevation 1200m, on land belonging to municipality Jakoruda.
11.	Ministry of environment and waters / Basin Board of directors of west- whitesea region. Permit for water use Nr.400207-1/ 20.05.2005 for Byla Mesta –Ltd-Sofia for water site river Byala Mesta.

Reference No.	Document or Type of Information
12.	Ministry of environment and waters Basin / Basin Board of directors of west-whitesea region- Blagoewgrad. Decision Nr. 69/ 21.12.2004 for “Byla Mesta” – Ltd- Sofia : “I have decided: to issue permit for water use of water site river Byala Mesta with spot of water taking elevation 1200m and spot of water use elevation 1050m on the name “Byla Mesta”-Ltd – Sofia.
13.	Municipality-Jkoruda , town Jakoruda district Blagoewgrad Permission for construction Nr.30 / 18.10.2005 - sub-side of hydro power station “Byla Mesta”.
14.	Municipality – Jakoruda / town Jakoruda - district Blagoewgrad Permission for construction Nr. 5 / 28.02.2006 for “Byla Mesta”-Ltd- Sofia
15.	Republic of Bulgaria / Ministry of environment and waters Outgoing Nr. PV-1377 / Sofia , 14.04.2005 – to BRESTIOM – Sofia Concerning: Permit for water use :” Here we send you a permission for water use Nr.003601/ 31.03.2005 for a electrical energy production of the company Brestiom-AD, issued by the Minister of the environment and waters.“ Deputy Minister…….
16.	Ministry of environment and waters : Permission for water use Nr.003601 / 31.03.2995 for Brestiom-AD , Sofia “Purpose of water use – Production of electricity trough hydro power station “ Loziata” Place of water use – elevation 189,0m. Parameters of the facilities water catching elevation – 230,0m.
17.	Municipality-“Rodopi” Plovdiv/ District Plovdiv Permission for construction Nr.388 / 10.11.2005 “It is permitted to 1. Brestion- AD….. for site hydro power station “Loziata”.

Reference No.	Document or Type of Information
18.	Municipality “Rodopi”/ Plovdiv/ district Plovdiv Permission for construction Nr. 279 /07.10.2005” It is permitted to “Brestiom” –AD, Sofia for site : hydro power station “Loziata”.
19.	Ministry of environment and waters – Sofia / Regional inspection of environment and waters – Plovdiv Decision Nr. P-208-PR/ 2004 for assessment of the necessity of accomplishment of an valuation of of the impact on the environment “I have decided not to make an assessment of effect on the environment of investment proposal for construction of a small waterpower station – “Lozyata”.
20.	Ministry of environment and waters ./ Regional inspection of environment and waters – Blagoewgrad Decision Nr. 35-PR/ 2004 for assessment of the necessity of accomplishment of an valuation of the impact on the environment .. “I have decided, not to make an assessment of the impact on the environment of investment proposal for construction of hydro power station of running waters, river “Cherna Mesta”, area village “Cherna Mesta”, municipality – Jakoruda.
21.	Ministry of environment and waters / Basin Board of Directors of west-whitesea region . Permit for water use Nr.400208-1/ 20.05.2005 for “Cherna Mesta”-Ltd- Sofia.- for river “Cherna Mesta.
22.	Ministry of environment water- Basin Board of Directors / west-whitesea region – Blagoewgrad Decision Nr.68 / 21.12.2004 for wateruse for “Cherna Mesta”-Ltd, Sofia. “I have decided to issue, permission for water use of water site river-“Cherna Mesta” with water taking elevation 1185m and water use-elevation 1095m on the name “Cherna Mesta”- Ltd, Sofia.
23.	Municipality- Jakoruda/ town Jakoruda – District Blagoewgrad Permission for construction Nr.29 / 18.10.2005 “ It is permitted to : “Cherna Mesta”- Ltd, Sofia
24.	Municipality- Jakoruda/ town Jakoruda- District Blagoewgrad

Reference No.	Document or Type of Information
	Permission for construction Nr. 4 / 28.02.2006-05-09 “It is permitted to “Cherna Mesta” – Ltd, Sofia for small water station “Cherna Mesta”- II stage.
25.	Single line diagrams of SHPP Loziata, Byala and Cherna Mesta, May 2006
26.	Contract for the supply and assembly supervision of SHPP Loziata; No. 020725/00/05
27.	Contract for the supply and assembly supervision SHPP Cherna Mesta, No. 020491/00/05
28.	PDD “Bulgarian Small Hydro Power Plant (SHPP) portfolio “ issued June 15th, 2007
29.	LoA of Bulgaria
30.	LoA of Netherlands