Verification Report

BTG Czech Republic s.r.o.

Verification

of the project

Biomass Energy Portfolio for Czech Republic

Period 01/01/2004 – 31/01/2004 and 2005 initial

Report No. 689430, Version 01

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TÜV Industrie Service GmbH TÜV SÜD Group
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Subject:	Verification of a JI Project
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Client:	BTG CZECH REPUBLIC S.R.O. Balbínova 8 120 00 Praha 2 - CZECH REPUBLIC
Contract approved by:	Werner Betzenbichler
Report Title:	Verification of the project Biomass Energy Portfolio for Czech Republic – period 01/01/2004 – 31/12/2004 and partly 2005
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Summary:

TÜV Industrie Service GmbH TÜV SÜD Gruppe has performed a Verification of the prospective JI project: "Biomass Energy Portfolio for Czech Republic". The verification is based on requirements of ER-UPT 1 set as part of the MVP for this specific project. Additionally this verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). In this context, the relevant documents are the "Marrakech Accords".

This verification engagement was carried out during the period of 2005-07-22 to 2005-09-21.

The management BTG Czech Republic s.r.o. (BTG) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project "Biomass Energy Portfolio for Czech Republic" on the basis set out within the project Monitoring and Verification Plan. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project is the responsibility of the management of the project.

The verifier confirms that the project is implemented as planned and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately.

The monitoring system is in place and the project is ready to generate GHG emission reductions. Further quality assurance procedures summarized in a appropriate manual shall be elaborated and implemented, further details are addressed in the report and its annexes.

Possible negative as well as positive environmental and social impacts are addressed detailed in the report, however significant negative impacts are not identifiable.

The verifier can confirm that the GHG emission reduction is calculated without material misstatements.

Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported for the period of 01-01-2004 to 31-12-2004 related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the submitted amount of **86,013 ton** CO_2 –equivalents for the period of 2004.

Work carried out by:	**Internal Quality Control by:**
Markus Knödlseder (Project manager, GHG lead auditor, Auditor (ISO 14001)) Eva Aligerova (Lead Auditor (ISO 14001), Local expert, GHG auditor - trainee)	Werner Betzenbichler

Abbreviations

AE	Applicant Operational Entity
BTG	BTG Czech Republic s.r.o.
CAR	Corrective Action Request
FAR	Forward Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CR	Clarification Request
JI	Joint Implementation
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
TÜV SÜD	TÜV Industrie Service GmbH TÜV SÜD Group
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

1.1 Objective

The Client (BTG Czech Republic s.r.o.) has commissioned an independent verification by TÜV Industrie Service GmbH TÜV SÜD Group (TÜV SÜD) of its project **Biomass Energy Portfolio for Czech**. Verification is the periodic independent review and ex post determination by the Designated Operational Entity / Independent Entity of the monitored reductions in GHG emissions during the defined verification period.

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

- **Initial Verification**: The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.
- **Periodic Verification**: The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures de-scribed in the monitoring plan; further more the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is "free" of material misstatements; and verifies the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

The verification shall consider both quantitative and qualitative information on emission reductions. Quantitative data comprises the monitoring reports submitted to the verifier by the project entity. Qualitative data comprises information on internal management controls, calculation procedures, and procedures for transfer, frequency of emissions reports, review and internal audit of calculations/data transfers.

The verification follows UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakech Accords.

The portfolio project is characterized by an increasing number of participating sub-projects. Sub-projects that are the first time in the verification process have to pass above mentioned Initial Verification. In contradiction, sub-projects that were verified initially before have only to pass the periodic verification. Following table summarizes which sub-project passed the Initial and first Periodic Verification and which one passed the second Periodic Verification.

Initial Verification	Initial and 1st Periodic Verification	2nd Periodic Verification
§ TTS CZ s.r.o., Trebic,	§ Bouzov, § Iromez s.r.o., Pelhrimov, § Slavicín, § Stitna nad Vlari, § Velký Karlov, § Zlate Hory, § Zruc nad Sazavou,	§ Bystrice nad Pernstejnem, § Driten, § Horni Plana, § Nova Cerekev, § Rostin, § Zlutice.

1.2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the Designated Operational Entity / Independent Entity of the monitored reductions in GHG emissions. The verification is based on validated project design document including baseline. These documents are reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. TÜV SÜD has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of CERs/ERUs.

The verification is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

The audit team has been provided with a Monitoring Report in July 2005, covering the period 1.1.2004 – 31.12.2004 and in case of Trebic 1.1.2005 – 30.6.2005. Based on this documentation a document review and a fact finding mission in form of an on-site audit has taken place. Afterwards the client decided to revise the Monitoring Report according to the CARs and CRs indicated in the audit process. The final Monitoring Report version was submitted in September 2005 serves as the basis for the assessment presented herewith.

Studying the existing documentation belonging to this project, it was obvious that the competence and capability of the validation team has to cover at least the following aspects:

- Knowledge of Kyoto Protocol and the Marrakech Accords
- Environmental and Social Impact Assessment
- Skills in environmental auditing (ISO 14000, EMAS)
- Quality assurance
- Technical aspects of biomass utilization for energy production and district heating
- Monitoring concepts
- Political, economical and technical random conditions in host country

According to these requirements TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV certification body “climate and energy”:

The audit team covers the above mentioned requirements as follows:

- Knowledge of Kyoto Protocol and the Marrakech Accords (Knödlseder)
- Environmental and Social Impact Assessment (Knödlseder)
- Skills in environmental auditing (Knödlseder/Aligerova)
- Quality assurance (Knödlseder)
- Technical aspects of biomass utilization for energy production and district heating (Knödlseder)
- Monitoring concepts (Knödlseder)
- Political, economical and technical random conditions in host country (Aligerova)

In order to have an internal quality control of the project, a team of the following persons has been composed by the certification body “climate and energy”:

Werner Betzenbichler (head certification body “climate and energy”)

1.3 GHG Project Description

The project *Biomass Energy Portfolio for Czech Republic* is a Joint Implementation project sponsored by Senter International, the Netherlands. The project is owned by BioHeat International B.V., the Netherlands, and administered by its daughter company BTG Central Europe s.r.o., the Czech Republic. After winning a contract (#ERU 0011) in the ERUPT 2000 tender, and two years of administrative delays, the project has recently received an approval from the Czech Ministry of Environment, satisfied the contractual requirements of the Dutch government, and started receiving prepayments from Senter International.

The project is a flexible portfolio of 14 subprojects in the Czech Republic where fossil fuels are replaced by biomass. This document is the second monitoring report for the portfolio. It is linked to the original Project Description (BTG, February 2001), including the Validation Reports (SGS, January 2001 and May 2004). It covers emission reductions between 1st January 2004 and 31st December 2004 for the 13 subprojects of the portfolio. The 14th one (TTS S.r.o., Trebic) has been in operation since January 2005. For assurance of proper operation of this subproject, we require the verification for the period January – June 2005.

The subprojects included are:

- Bouzov,
- Bystrice nad Pernstejnem,
- Driten,
- Horni Plana,
- Iromez s.r.o., Pelhrimov,
- Nova Cerekev,
- Rostin,
- Slavicín,
- Stitna nad Vlari,
- TTS CZ s.r.o., Trebic,
- Velký Karlov,
- Zlate Hory,
- Zruc nad Sazavou,
- Zlutice.

The start of crediting period is January 1, 2003.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual (for further information see www.vvmanual.info), an initiative of all Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

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

It organises, details and clarifies the requirements a CDM/JI project is expected to meet;

It ensures a transparent validation process where the verifier will document how a particular requirement has been proved and the result of the verification.

The verification protocol consists of four tables. The different columns in these tables are described in Figure 1.

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

Initial Verification Checklist – table 1			
OBJECTIVE	Ref.	COMMENTS	Concl.(incl FARs/CARs)
The requirements the project must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*Description of circumstances and further commendation to the conclusion.*	*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 Verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications*

Periodic Verification Checklist Table 1: Data Management System/Controls		
Expectations for GHG data management system/controls	Score	Verifiers Comments (including *Forward Action Requests*)
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	A score is assigned as follows: **Full** all best-practice expectations are implemented. **Partial** a proportion of the best practice expectations is implemented **Limited** this should be given if little or none of the system component is in place.	*Description of circumstances and further commendation to the conclusion. 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 Verification r eport. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications*

Periodic Verification Checklist Table 2: GHG calculation procedures and management control testing		
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
Identification of potential reporting risks based on an assessment of the emission estimation procedures. Identification of key source data. Focus on those risks that impact the accuracy, com-	Identification of the key controls for each area with potential reporting risks. Assessment of adequacy of the key controls and eventually test that the key controls are actually in operation. Internal controls include, Understand-	*Identification of areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks* *Areas where data accuracy,*

Periodic Verification Checklist Table 2: GHG calculation procedures and management control testing		
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
pleteness and consistency of the reported data.	ing of responsibilities and roles, Reporting, reviewing and formal management approval of data; Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc.	*completeness and consistency could be improved are highlighted.*

Periodic Verification Checklist Table 3: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	**Additional verification testing performed**	**Conclusions and Areas Requiring Improvement (including *FAR*s)**
List of residual areas of risks of Periodic Verification Checklist Table 2 where detailed audit testing is necessary. *In addition, other material areas may be selected for detailed audit testing.*	*The additional verification testing performed is described. Testing may include:* § *Sample cross checking of manual transfers of data* § *Recalculation* § *Spreadsheet 'walk throughs' to check links and equations* § *Inspection of calibration and maintenance records for key equipment* § *Check sampling analysis results* *Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.*	*Having investigated the residual risks, the conclusions are noted here. Errors and uncertainties are highlighted.*

Figure 1 Verification Protocol Tables

2.1 Review of Documents

The project design document submitted by the Client and additional background documents related to the project design and baseline were reviewed. A complete list of all documents reviewed is attached as annex 2 to this report.

2.2 Follow-up Interviews

In the period of August 16 – Sept. 2, 2005, TÜV SÜD performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of subproject owners and BTG were interviewed. The main topics of the interviews are summarised in Table 1.

Table 1 Interview topics

Interviewed organisation	Interview topics
BTG on 2nd Sept. 2005,	Ø Project design Ø Technical equipment and operation Ø Crediting period Ø Monitoring plan Ø Monitored data Ø Implementation of management system Ø Environmental impacts Ø Compliance with national laws and regulations
16th Aug. 2005 Pelhrimov, TTS Trebic 17th Aug. 2005 Zlate Hory, Bouzov 18th Aug. 2005 Rostin, Bystrice 19th Aug. 2005 Zlutice	Ø Project Implementation Ø Technical equipment and operation Ø Monitored data Ø Sustainable development issues Ø Environmental impacts Ø Compliance with national laws and regulations

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification and any other outstanding issues which needed to be clarified for TÜV SÜD`s positive conclusion on the project design. The Corrective Action Requests, Clarification Requests and raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. Forward Action Requests are indicated issues which do not effect the generation of emission reduction in the verified period, but shall be improved in order to ensure the reliability of future data. To guarantee the transparency of the verification process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the verification protocol in annex 1.

3 VERIFICATION FINDINGS

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

The findings from the desk review of the final 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 Verification Protocol in annex 1.

1) Where TÜV SÜD had identified issues that needed clarification or that represented a risk to the fulfilment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in annex 1. The verification of the project resulted in **one** Corrective Action Request (CAR) and no Clarification Requests (CR).

2) Where Clarification or Corrective Action Requests have been issued, the exchanges between the Client and TÜV SÜD to resolve these Clarification or Corrective Action Requests are summarised.

3) In the context of Forward Action Requests (FAR), risks have been identified, which may endanger the delivery of high quality CERs in the future, i.e. by deviations from standard procedures as defined by the MP. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions. Forward Action Requests are understood as recommendation for future project monitoring; they are stated, where applicable, in the following sections and are further documented in the Verification Protocol in annex 1. The verification of the project resulted in **five** Forward Action Requests.

4) The final conclusions for verification subject are presented.

The verification findings relate to the project design as documented and described in the final project design documentation.

Initial Verification Findings

3.1 Remaining issues, CARs, FARs from previous validation

The discussion, findings and conclusion regarding the remaining issues/CARs/FARs from the validation/determination stage of the project should be summarised in this section.

3.1.1 Discussion

The portfolio project is characterized by the increasing number of sub-projects. Mentioned above some have passed already the first verification and others are herewith in the first and Initial Verification process.

For those sub-projects which were validated last year and now in the Initial and first Periodic Verification process, the validator stated two issues. It is the objective of the Initial verification to consider that issues.

3.1.2 Findings

Forward Action Request 1:

Missing issues for final approval are not addressed. Nevertheless from the last verification of the sites of Bystrice n. P., Nova Cerekev, Driften, Horni Plana, Zludice, Rostin following issues were not solved: Involved contractors for equipment installing and issuing of invoices shall be addressed in detail.

The validator addressed two observations in its validation report covering the sites of Bouzov, Iromez s.r.o., Pelhrimov, Slavicín, Stitna nad Vlari, TTS CZ s.r.o., Trebic, Velký Karlov, Zlate Hory, Zruc nad Sazavou.

Those observations are:

- ***Observation 1:*** *Monitoring plan does not cover the exact data to be collected, how data will be collected, by whom and how data will be handled.*
- ***Observation 2:*** *No conformance to internationally accepted methods for monitoring and measurement plan has been provided.*

3.1.3 Conclusion

FAR 1 is still pending, the project developer is recommended to address all involved contracted companies.

Referring to observation 1 the verification team confirm that used monitoring protocol that has to be fulfilled by responsible persons collecting relevant data is sufficient. The contracted sub-projects are aware about their responsibility, due to the contract. Nevertheless the verification team recommend summarizing monitoring, reporting and responsibility issues in an eligible manual.

The verification team agrees with observation 2 that submitted project is not in line with international approved methods. On the one hand side that is reasoned that submitted project is a Joint Implementation project according to the Kyoto Protocol and for those mechanism appropriate bodies, methods and institutions are not existing, yet. On the other hand TÜV SÜD suggested a change in the monitoring and measurement being slightly different to the baseline study and recommended that those changes shall be accepted by involved parties. The Czech

as well as the Dutch party agreed with these changes after the last verification, hence the verification team observation 2 as fulfilled.

3.2 Project Implementation

3.2.1 Discussion

The subprojects are properly implemented; slight changes of installed capacities of biomass boilers or an extension district heating systems are identifiable. Nevertheless these changes are not considered serious, because the installed capacities are always smaller than prospected and smaller than the old previous existing boiler. So there is no risk that new installed equipment will be able to produce more energy than in the baseline situation. In cases where an extension of the old district heating system is identifiable the team assessed, if that extension had been possible under the baseline scenario as well.

The project boundary follows the description of the baseline study.

The data acquisition and data processing systems are sufficiently organized, because the individual municipalities have high interest in their purchased energy.

Exhausting documented instructions are not in place, because there are only two main responsible persons involved. On the one hand side the contracted major or facility manager and on the other hand BTG. The tasks for the owner of sub-project are clear due to the monitoring protocol. The task of BTG is more challenging; as far as there is no personnel change at BTG involved staff is sufficient qualified to over view the whole process, nevertheless the verification team recommend to introduce documented instructions like already set in the current monitoring report.

The competences of involved staff and responsible persons ensure an appropriate quality of data.

3.2.2 Findings

Corrective Action Request 1:

Monitoring equipment is installed appropriately; evidences about its calibration are outstanding. Evidences about calibrated metering systems shall be provided including uncertainties of used metering systems. Although the general calculation approach in the PDD deducts a kind of uncertainty according to the level of risk data uncertainties shall be addressed.

Forward Action Request 2:

Concrete reporting and calculating procedures at BTG shall be elaborated, in order to ensure a proper continuation of the project in case of any personal changes. The responsible people of contracted municipalities and companies have certain instruction regarding the monitoring protocols. Further procedures are elaborated in the current submitted monitoring report 2004. However, concrete reporting and calculating procedures at BTG do not exist and shall be elaborated until next verification.

3.2.3 Conclusion

Information about calibration of relevant heat metering systems including notes to their uncertainty has been submitted to the verification team. According to European Standard heat metering systems has to be in line with EN 1434. That standard is implemented into Czech standard, too. The standard rules that heat metering systems are not allowed to measure worse than 5%.

3.3 External / Internal data

3.3.1 Discussion

It is the nature of a portfolio project to have various types of internal data. They are determined in the PDD. Data about energy production or consumption is measured continually with calibrated metering systems. The amount of burnt biomass is based on invoices considering the stocks. Further used data are validated default factors. External data are used as defaults and are well addressed by sources in the PDD and in the monitoring report.

As already mentioned the municipalities have a high interest in this data. Therefore collecting is well done. The cumulated data are transferred to BTG, which processes it. Access to external data is not relevant so far.

The quality assurance about external data is in the responsibility of BTG; a significant risk is not identifiable.

External data are from official sources or scientific studies, their uncertainty is not addressable. The most significant risk is the use and determination of the biomass utilization factor, as that factor is just based on statements. Perpetuation that this approach is validated and approved by involved parties the verification identified no significance and reporting risks.

3.3.2 Findings

Forward Action Request 3:

The quality assurance for internal data has to be improved. Procedures have to be elaborated and established. The project developer, BTG, has not a sufficient systematic control about all available information.

3.3.3 Conclusion

The identified issue of FAR 3 is a significant risk within that verification, because the verification team was convinced the Ms. Remrova, the main responsible person at BTG, is sufficient familiar with the project, thus the risk is minimized. Nevertheless the verification team recommends that all elaborated procedures, including quality assurance procedures, shall be summarized in a kind of manual and given to sub-project owner and to BTG office.

3.4 Environmental and Social Indicators

3.4.1 Discussion

Significant adverse environmental or social indicators are not identifiable. Positive effects due to decentralized energy production are likely, but these effects are not monitored or documented.

3.4.2 Findings

Forward Action Request 4:

As mentioned in the first validation report, the only environmental impact that this project could generate is the increasing demand and consumption of non sustainable wood. The noted request in the validation report has not been fulfilled; therefore a system has to be elaborated, that demonstrates that there will be no negative impact to the environmental.

3.4.3 Conclusion

The verification identified for considered period that burnt wood waste came from wood processing industries like saw mills, hence there is no direct danger that those sub-projects will result in a diminishing of natural forest, because the main propose of wood processing industry is not the production of wood waste or biomass as afuel.

3.5 Management and Operational System

3.5.1 Discussion

In order to ensure a successful operation of a Client project and the credibility and verifiability of the ERs achieved, the project must have a well defined management and operational system.

The management and operational system works well. The qualification of involved person is sufficient according to task. As already mentioned the allocation of responsibility is defined in the contracts between BTG and the sub-project owner. Emergency procedures will be elaborated on demand, however in 2004 emergency cases did not occur.

The data archiving of ghg reporting relevant data is done twice at the sub-projects and at BTG. However, the raw data is stored at the sub-projects.

As mentioned above the documentation of quality assurance issues has to be improved. Procedures have to be elaborated and established. All elaborated procedures and further quality assurance procedures, shall be summarized in a kind of manual and given to sub-project owner and to BTG office. That aspect is addressed already above, hence it is not noticed in below findings again.

3.5.2 Findings

Forward Action Request 5:

Internal audits and interviews have taken place, but that is not documented. BTG has to establish a system of internal audits and management reviews assuring that the subprojects are operating well and for identifying emergency cases as soon as possible.

3.5.3 Conclusion

The missing documentation of internal audits and management procedures is not crucial for submitted monitoring report. The correctness of submitted data can be confirmed.

Periodic Verification Findings

3.6 Remaining Issues, CARs, FARs from Previous Verification

3.6.1 Discussion

Beside of open issues from the last validation assessed in chapter 3.1.1 the objective of Periodic Verification is also the consideration of Forward Action Request from previous verifications. As six of submitted 14 sub-projects were verified in 2004 open FARs from previous verification has to be considered in this verification.

3.6.2 Finding

Forward Action Request 1:

Missing issues for final approval are not addressed. Nevertheless from the last verification of the sites of Bystrice n. P., Nova Cerekev, Driften, Horni Plana, Zludice, Rostin following issues were not solved: Involved contractors for equipment installing and issuing of invoices shall be addressed in detail.

3.6.3 Conclusion

The missing documentation of involved contractors is a lack of information, which has to be solved until submitting a monitoring report about future period. That finding is not crucial for ghg reporting, but missing information is a risk that has to be reduced.

3.7 Project Implementation / changes

3.7.1 Discussion

According to the stated baseline and to the previous verification there are no changes beyond the baseline.

3.7.2 Findings

None

3.7.3 Conclusion

No significant risk can be identified..

3.8 Completeness of Monitoring

3.8.1 Discussion

Monitoring of data covers all aspects of data measuring, processing and collecting. The focus is on completeness, accuracy and consistency.

3.8.2 Findings

Calibration and maintenance are managed different by the operators. Some of them use specialized companies for maintenance and some do not. Evidences about performed calibrations shall be collected and stored by BTG, see CAR 1 above.

3.8.3 Conclusion

Information about calibrations and metering specific uncertainty is submitted in the form of national and international accepted standards to measuring heat.

3.9 Accuracy of Emission Reduction Calculations

3.9.1 Discussion

The calculation is defined in an Excel sheet. Its functionality was tested.

3.9.2 Findings

See above section 3.8.2, the correctness of the calculated amount of emission reduction can be confirmed in a conservative manner. That means that the inherent uncertainty deduction (min. 5%) of the chosen calculation approach covers measurement uncertainties sufficiently.

3.9.3 Conclusion

The accuracy of submitted emission reduction calculation can be confirmed considering the inherent conservative deduction of uncertainty.

3.10 Quality of Evidence to Determine Emission Reductions

3.10.1 Discussion

Determining emission reductions is based on invoices in the case of biomass. Those are usually the most reliable evidences. In case of produced or consumed heat the most reliable evidence is also the invoice for sold heat in respective manual monitored heat production.

3.10.2 Findings

See above section 3.8.2, for determining the uncertainty reliable evidences are missing.

3.10.3 Conclusion

Information about calibrations and metering specific uncertainty is submitted in the form of national and international accepted standards to measuring heat.

3.11 Management System and Quality Assurance

3.11.1 Discussion

A proper established and implemented Quality Management System is not crucial for monitoring and reporting of emission reduction units (ERU), but it reduce the inherent risk and raise the reliability of monitored data.

3.11.2 Findings

As mentioned above performing internal audits, checks and verification shall be strengthen and documented. Additional documented procedures shall be introduced.

3.11.3 Conclusion

The verification team can not identify any misstatements through that missing documentation. Nevertheless, the verification team recommend the introduction of such a management system.

4 PROJECT SCORECARD

Risk Areas		**Conclusions**			**Summary of findings and comments**
		Baseline Emissions	Project Emissions	Emission Reductions	
Completeness	Source coverage/ boundary definition	þ	þ	þ	Can be confirmed
Accuracy	Physical Measurement and Analysis	þ	þ	þ	Can be confirmed
	Data calculations	þ	þ	þ	Can be confirmed
	Data management & reporting	þ	þ	þ	Can be confirmed partly due to missing management documentation
Consistency	Changes in the project	þ	þ	þ	Can be confirmed

Industrie Service

5 VERIFICATION OPINION

TÜV Industrie Service GmbH TÜV SÜD Gruppe has performed a Verification of the prospective JI project: "Biomass Energy Portfolio for Czech Republic". The verification is based on requirements of ER-UPT 1 set as part of the MVP for this specific project. Additionally this verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). In this context, the relevant documents are the "Marrakech Accords".

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The verifier confirms that the project is implemented as planned and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately.

The monitoring system is in place and the project is ready to generate GHG emission reductions. Further quality assurance procedures summarized in a appropriate manual shall be elaborated and implemented, further details are addressed in the report and its annexes.

Possible negative as well as positive environmental and social impacts are addressed detailed in the report, however significant negative impacts are not identifiable.

The verifier can confirm that the GHG emission reduction is calculated without material misstatements.

Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported for the period of 01-01-2004 to 31-12-2004 in respective 01-01-2005 to 30-06-2005 in case of sub-project in Trebic and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the submitted amount of 86,013 ton CO2 –equivalents for the period of 2004.

Munich, 2005-09-30

Werner Betzenbichler

Head of certification body "climate and energy"

Munich, 2005-09-30

Markus Knödlseder

Project Manager

Industrie Service

Annex 1: Verification Protocol

Industrie Service

Annex 2: Information Reference List