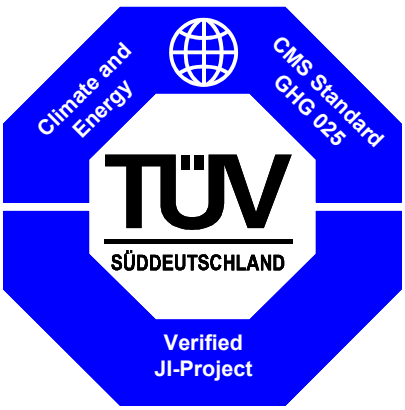
Periodic Verification Report

1. Periodic Verification
of the Decin District Heating Project
Czech Republic

Report No. 565309-4

January 10, 2005



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Subject:	Periodic Verification of a JI Project
Executing Operational Unit:	TÜV Industrie Service GmbH TÜV SÜD Group Carbon Management Service Westendstr. 199 - 80686 Munich - GERMANY
Client:	The World Bank 1818 H Street N.W. Washington, D.C. 20433 USA
Contract approved by:	Werner Betzenbichler
Report Title:	1. Periodic Verification of Decin District Heating Project Czech Republic
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Summary:

The Prototype Carbon Fund of The World Bank has commissioned the cerification body "Climate and Energy" of TÜV Industrie Service GmbH TÜV SÜD Group (TÜV SÜD) to verify a series of Joint Implementation (JI) projects in the Czech Republic. The verification includes the initial and first periodic verification. This report summarizes the findings of the first periodic verification of a district heating (DH) project in Decin.

In our opinion, GHG emissions for the project as reported in the *Annual Emissions Reduction Report – Updated version by CEA: Decin District Heat-ing Project / Rozmital District Heating Project, performed by EuroEnergy, Spol. s.r.o and SEVEn, o.p.s. dated Dec. 16th , 2004*, prepared on the basis of PCF Monitoring Plan, are correctly stated.
The project avoided 40.481 tonnes CO_2-equiv GHG emissions in the period of Oct. 1st, 2002 to March 26th , 2004.

All issues indicated as "Forward Action Request" in chapter 3 of initial verification report 565309-2 have to be submitted as indispensable information to the verification team of the next Periodic Verification. According to those findings the operator is responsible to implement an appropriate management and operation system until next periodic verification. All issues should receive a special focus during the following verification.

Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for the period.

Work carried out by:	Werner Betzenbichler (project manager) Markus Knödlseder (lead auditor) Klaus Nürnberger (GHG auditor) Josef Konradl (technical expert)	**Internal Quality Control** by: Michael Rumberg

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Abbreviations

CAR	Corrective Action Requests
CEA	Czech Energy Agency
DH	District Heating
DNV	Det Norske Veritas Certification Ltd.
ERUs	Emission Reduction Units
FAR	Forward Action Requests
IETA	International Emission Trading Association
IVC	Initial Verification Checklist
JI	Joint Implementation
KP	Kyoto Protocol
MVV	MVV Energie CZ
MP	Monitoring plan
PCF	Prototype Carbon Fund
PVC	Periodic Verification Checklist
TÜV SÜD	TÜV Industrie Service GmbH TÜV SÜD Group
UNFCCC	UN Framework Convention on Climate Change
VVM	Validation and Verification Manual

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Project Key parameter

Variable parameters

- Gas Consumption by Gas Motors
- Gas Consumption by Heat Only Boilers
- Electric Consumption by Heat Pumps
- Total Electric Consumption for Heat Production
- Electric Production by Gas Motors Ex Plant
- Heat Production by Gas Motors Ex Plant
- Heat Production by heat only boilers Ex Plant
- Total Heat Delivered to District Heat Network

Default parameters

-	Percent Coal	91,6	%
-	Percent Gas	8,40	%
-	Coal Efficiency	70	%
-	Gas Efficiency	88	%
-	Coal Factor	0,364	t CO_2/MWh
-	Gas Factor	0,200	t CO_2/MWh
-	Electricity factor (net use)	1,1875	t CO_2/MWh_{el}

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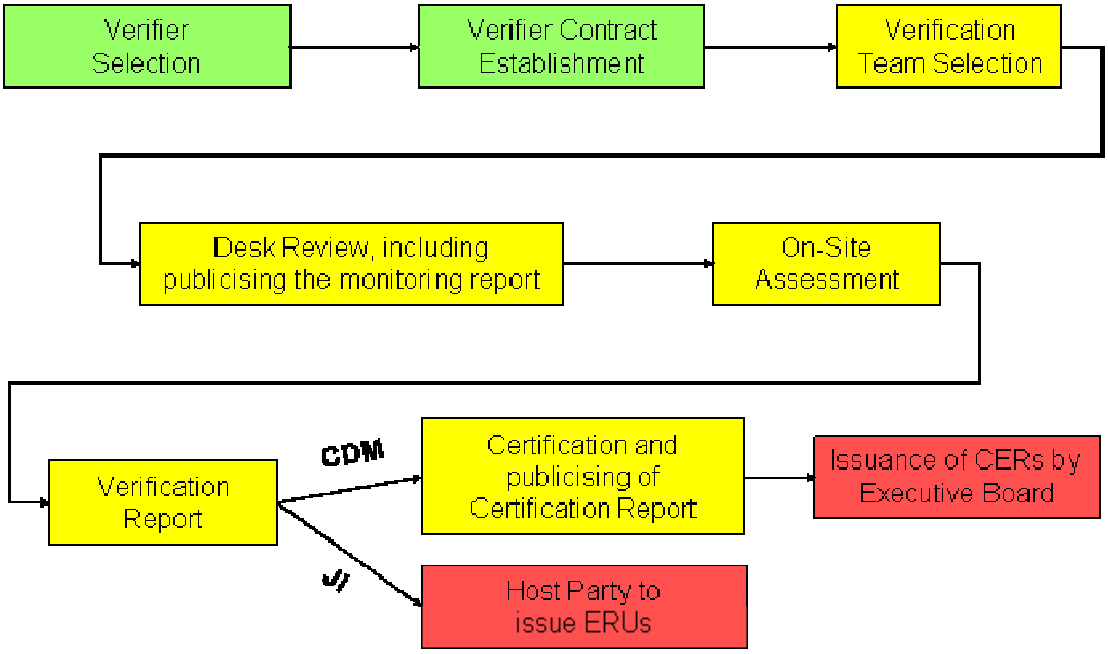
1 INTRODUCTION

The main steps in successful project verification are shown in this flow diagram. The different layers may be seen as representing the verification preparations, the verification itself and at last the results of the verification process. The box colour represents the party responsible for the activity (Green for the project proponent, yellow for the validator, red for other parties).



The Prototype Carbon Fund of The World Bank has commissioned the certification body "Climate and Energy" of TÜV Industrie Service GmbH TÜV SÜD Group (TÜV SÜD) to verify a series of Joint Implementation (JI) projects in the Czech Republic. This report summarizes the findings of the first periodic verification of a district heating (DH) project in Decin.

It is based on the Periodic Verification Report Template Version 3.0, December 2003 of the Validation and Verification Manual (VVM) published by the International Emission Trading Association (IETA). Following that manual 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 audit conclusion is based on the interaction of four key verification principles:

1. Compliance with monitoring plan
2. Materiality / Accuracy
3. Coverage
4. Quality of evidence

The Decin project is part of the PCF's Czech Umbrella Project. One of the objectives of the Prototype Carbon Fund (PCF) Czech Umbrella Project is to develop easily replicable approaches to baseline setting and monitoring plans in order to reduce project preparation and validation costs. Therefore, if appropriate, only one common baseline methodology is to be applied to all projects. For the Decin project, the standardised baseline has not been used, as the project design documentation was submitted for validation prior to the finalisation of the general baseline and Monitoring Plan (MP).

1.1 Objective

The Prototype Carbon Fund of The World Bank has commissioned an independent first periodic verification by TÜV SÜD of the Decin district heating project. All PCF projects must undergo periodic audits and verification of emission reductions. This is a JI requirement and the basis for setting aside Assigned Amount Units (one to one for emission reductions prior to 2008) and issuance of Emission Reduction Units (ERUs) and for their value in the market place.

Verification is conducted at annual or longer intervals as appropriate for the project. The verifier has reviewed the GHG data collected to date for the period between **2002-10-01 and 2004-03-26**.

The purpose of periodic audits and verification is to confirm that:

- the project has achieved the ERs claim for the verification period in compliance with the methodology laid down in this MP.
- the claimed ERs are real and additional to any that would have occurred in the baseline scenario as interpreted and developed in the Decin baseline study and this MP.
- the operation of the project continues to be in compliance with all Kyoto Protocol, PCF and Czech requirements and modalities for JI projects.
- the project maintains a high quality monitoring systems consistent with the MP.

The verification team was expected to

- familiarize themselves with the project and project circumstances,
- introduce the project staff to the audit and verification process,
- confirm reported data regarding correctness, consistency and in compliance with validated monitoring plan,
- check whether assumptions that have an impact on the monitoring and verification processes and its outcomes are still reasonable, in particular baseline assumptions,
- review and audit relevant monitoring records and reports,
- verify that the required measurements and observations have been made for all recordable indicators in this MP,
- check whether the MP methodology has been applied correctly and consistently
- check whether achieved ERs have been computed correctly using the provided spreadsheets, and, if necessary, recalculate achieved ERs,
- verify that all relevant MP and baseline assumptions are still valid,

- verify that the management and monitoring system, including data handling, record keeping and reporting, is in place and remains adequate,
- consult with the operator on the continued adequacy of the monitoring system and approve any modifications that need to be made to ensure a high quality monitoring operation,
- undertake any other activities required by this MP, by the Kyoto Protocol requirements and modalities for JI, by the appropriate Czech authorities or by professional auditing and verification standards and practice.

1.2 Scope

The initial verification scope is defined as an independent and objective check of real emission reductions that have been generated due to the project and against the validated baseline. As far as applicable the information in these documents is reviewed against Kyoto Protocol requirements, UN Framework Convention on Climate Change (UNFCCC) rules and associated interpretations. The team has employed a risk-based approach in the periodic verification, focusing on the identification of significant risks of monitored and used data that result in generation of verifiable Emission Reduction Units (ERUs).

For the project, Article 6 of the Kyoto Protocol as well as UNFCCC decisions in the Marrakech accords on the Kyoto mechanisms are of importance.

Ascertained findings indicated as corrective action requests (CAR) or forward action requests (FAR) in this report are the result of the verification process. Resultant improvements are not understood as consulting services, they are part of that verification. The verification is based on the common accepted Validation and Verification Manual, version 3.0.

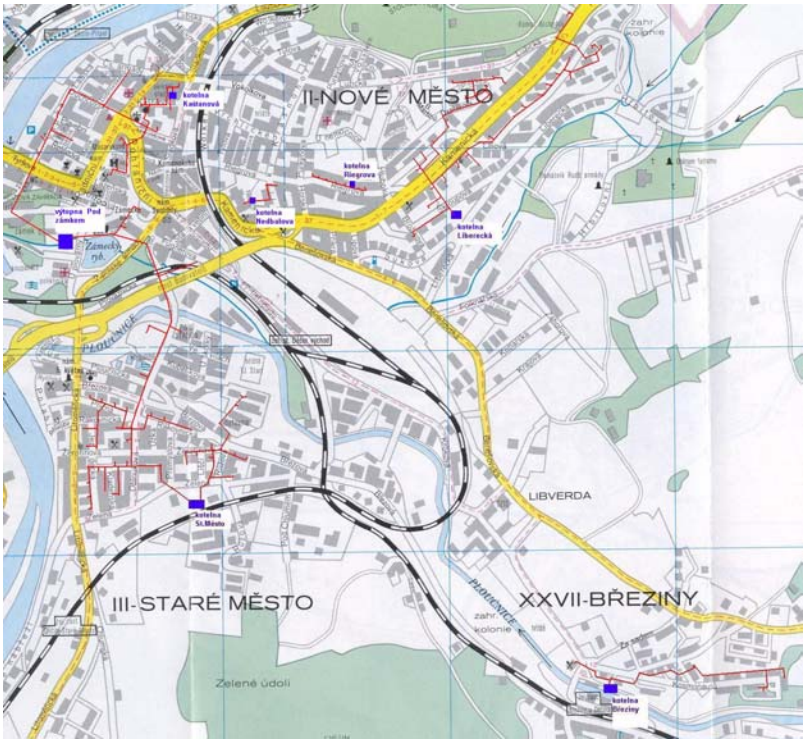
1.3 Description of the Project Activity

The project is located in Decin, post code 405 01, Czech Republic. Decin is a middle sized town in northern Bohemia in the Czech Republic with about 55,000 inhabitants.

The historic situation was characterized by seven heating islands that were served by 17.0 MWthof gas boilers, 0.8 MWth of light fuel oil boilers and 31.3 MWth of heavy fuel oil boilers. The heat supplies to these seven islands come from the boilers that are characterized in the following table.

Boiler House	Inst MWt	Boilers	Inst Yr	Inst Yr	Fuel	Rep Fuel	Medium
Kastanova	2.1	2	1997	1997	Gas	Gas	Warm Water
Liberecka	9.5	2	1997	1982	Gas	Gas	Warm Water
Nedbalova	0.8	2	1995	1995	Gas	Gas	Warm Water
Zelena Stare Mesto	4.6	1	1991		Gas	Gas	Steam
Subtotal	17.0	7					
Riegrova	0.8	2	1994	1994	LFO	Gas	Warm Water
Breziny	9.3	2	1985	1999	HFO	HFO	Warm Water
Pod Zamkem	22.0	2	1983	1987	HFO	HFO	Steam
HFO Total	31.3	4					
Total	49.1	13					

The geographical situation is characterized in following map. The red lines show the old pipes and the blue boxes indicate the old boilers.



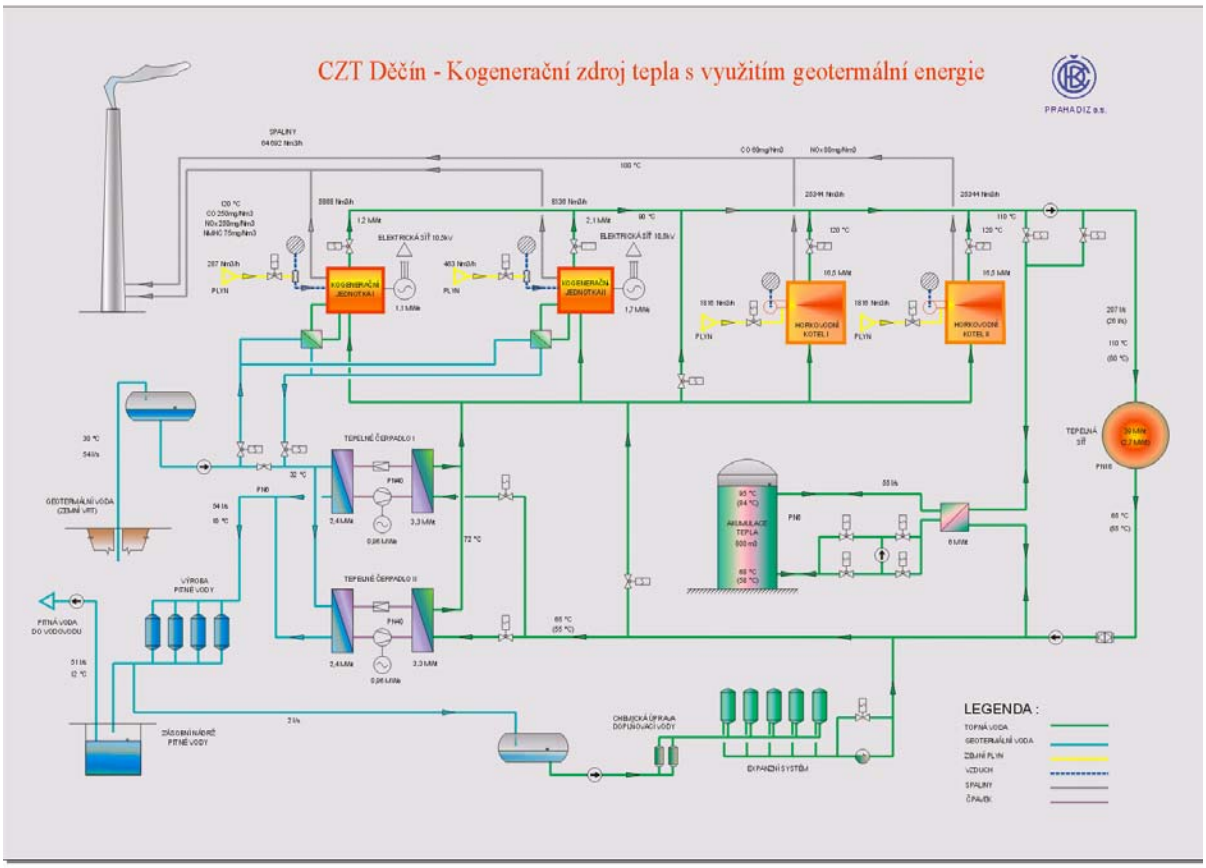
The second map shows the current situation with newly installed equipment:

The bold red box indicates the new central station. The quarter Stare Mesto is supplied in addition by a separate geothermal system. This system is used for hot water supply to the area and not for heating. Hence it does not affect the boundary of the project; apart from that it had been existed already before the new supply started.

The heat supply comes from an innovative combination of low temperature geothermal water, heat pumps (2 X 3.4 MWth), two gas motor cogeneration units (total capacity 2.75 MWel and 3.1 MWth), and two gas boilers (2x 16.5 MW). Heat storage is also included to enhance the efficiency of operation of the cogeneration units. The geothermal water is treated and used for the City's drinking water supply.

The cogeneration units have been sized to cover the electrical needs of the project so that no net sales or purchases are included in the calculations. The electric production from the gas engines should be equal to the expected electric use of the heat pumps plus the pumping load for the geothermal system.

A technical scheme is shown following:



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Involved main project participants and their representatives:

Mr. Jan	MVV Energie CZ (MVV)	Owner and operator of DH
Mr. Jaroslav	Termo Cecin a.s.	Owner and operator of DH
Mr. Vayrynen	Prototyp Carbon Fund (PCF)	Project developer and buyer of ERUs
Ms. Kulhava	Czech Energy Agency (CEA)	Local project coordinator

2 METHODOLOGY

Starting the periodic verification the verifier's first task has been to familiarize with the project and maybe new circumstances. Based on the received documents chapter 5 a checklist, the periodic verification checklist (PVC) has been prepared according to the VVM.

The PVC serves the following purposes:

- it organizes details of the audit procedure and clarifies the requirements the project is expected to meet; and
- it documents how a particular requirement has been validated and the result of the verification.

A special focus was given to:

- Expectations for GHG data management system/controls
- Identification of potential reporting risk, including
    - *the calculation methods,*
    - *raw data collection and sources of supporting documentation,*
    - *reports/databases/information systems from which data is obtained.*
    - *manual transfer of data/manual calculations,*
    - *unclear origins of data,*
    - *accuracy due to technological limitations,*
    - *lack of appropriate data protection measures? For example, protected calculation cells in spreadsheets and/or password restrictions.*
- Identification, assessment and testing of management controls, including
    - *Understanding 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.*
    - *Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures;*
    - *Controls over the computer information systems;*
    - *Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes*
    - *Comparing and analysing the GHG data with previous periods, targets and benchmarks.*
- Areas of residual risks, including
    - *Areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks*
    - *Areas where data accuracy, completeness and consistency could be improved are highlighted.*

After the document review the audit team conducted

- on-site inspections,
- interviews with operational personnel, mentioned in chapter 2.3,
- an interview with responsible of Decin and
- interviews with CEA

The findings are the essential part of this verification report, which is based on the verification Protocols of the VVM (Annex 1).

The PVC consists of three tables:

Table 1: Data Management System/Controls

Table 2: GHG calculation procedures and management control testing

Table 3: Detailed audit testing of residual risk areas and random testing

The verification team distinguishes between two different types of findings identified during the verification process.

A "**Corrective Action Request**" (CAR) in the verification context would be where:

- are clear deviations concerning the operation of the project as defined by the PDD
- Requirements set by the objectives of the VPs have not been met; or
- There is a risk that the project would not be able to deliver high quality ERUs

Before awarding a positive verification opinion it is necessary to resolve all findings indicated with a CAR.

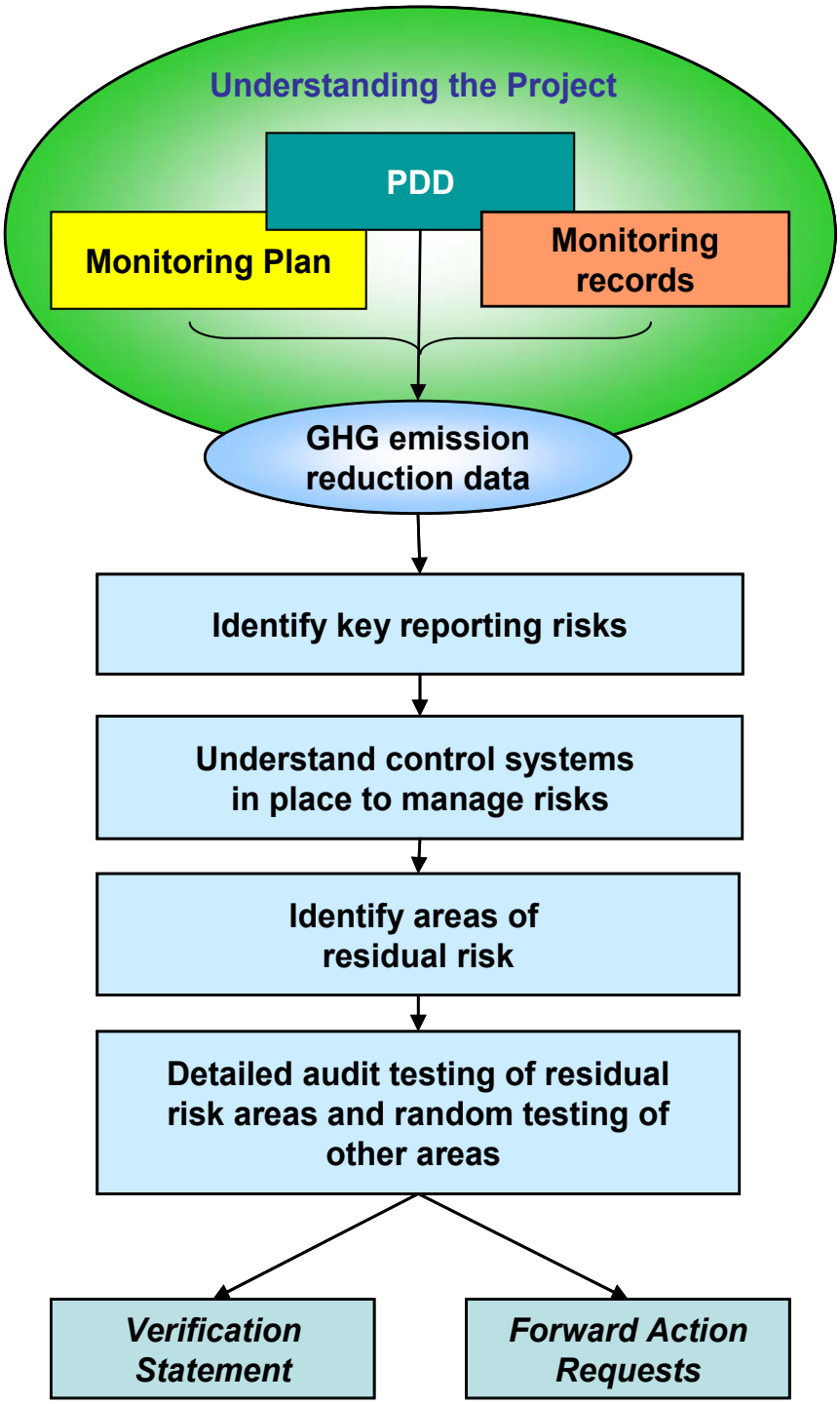
The verification team has also used the term "**Forward Action Request**" (FAR), whenever

- the actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
- an adjustment of the MP is recommended.

In the context of FARs no risks have been identified, which may endanger the delivery of high quality ERUs, but it is a hint that there could be deviations from standard procedures as defined by the MVP. As a consequence such aspects should receive a special focus during the next consecutive verification.

All FARs have to be reported to the verification team of the next Periodic Verification, which have to take into account all such findings.

The following graph indicates steps of verification



The periodic verification was performed as a desk review of the project documents including baseline study, monitoring plan, validation report, emission reduction report and further

documentations. The results of the validation were documented by Det Norske Veritas (DNV) in the report No. 2002-1235, revision 02. The validation report indicates no remaining issues.

The verification team consists of the following personnel:

Werner Betzenbichler	TÜV SÜD, Munich, Germany	Project Manager, Team Leader, GHG Auditor
Klaus Nürnberger	TÜV SÜD, Munich, Germany	GHG Auditor
Markus Knödlseder	TÜV SÜD, Munich, Germany	GHG Lead Auditor
Josef Konradl	ZREU, Regensburg, Germany	Technical expert

Duration of verification

Preparations:	From 18-11-2004 to 10-01-2005
On-site verification:	At CEA on 22-11-2004 and at Decin on 24-11-2004
Emission reduction Reporting period:	From 01-10-2002 to 26-03-2004

2.1 Review of Documentation and Site Visits

The periodic verification was performed as a desk review of the project documents including baseline study, monitoring plan, validation report, emission reduction report and further documentations. The results of the validation were documented by Det Norske Veritas (DNV) in the report No. 2002-1235, revision 02. The validation report indicates no remaining issues.

Site visits included an audit in Praha with responsible persons from CEA and consultants, MVV Energie CZ in Decin, new boiler house and old reconstructed boilers.

2.2 Assessment

The assessment is based on information and documents that are listed in chapter 5. For a scrutinized verification the team used information from interviewed person as well as liable evidences.

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3 VERIFICATION FINDINGS

As a conclusion of this verification the verification team identified one main FAR:

Main FAR: Like mentioned in initial verification report no. 565309-2, the project has no written and documented operational and management system. Neither the project developer nor the owner of the DH have such kind of system.
The project participants shall bear care that an appropriate system will be established.

3.1 Remaining Issues, CARs, FARs from Previous Validation or Verification

3.1.1 Discussion

The validation indicated no open issues. As the initial verification is conducted with first periodic verification in parallel, it is obvious that addressed findings are still open.

3.2 Project Implementation

3.2.1 Discussion

Like mentioned in the initial verification report all physical components are installed and already in operation. Measurement equipments are in place, calibrated and sealed. The size of installed components is not exactly like planed, but that has no influences to the project success. The project boundary has not changed.

Identified findings regarding project implementation are related to the missing instructions and documentations. See initial verification report no. 565309-2.

3.3 Reporting of Findings

3.3.1 Discussion

MVV Energie CZ submitted its report to CEA, who concluded the report and submitted it to the verifier. The original report follows the monitoring plan and a comparison of original and submitted report indicates no difference.

A scrutinized verification of the submitted report results in the following finding.

3.3.2 Finding

The emission reduction report addresses gas consumption by gas motors from the beginning of the reporting period Oct. 2002. Heat only boilers however consumed gas from Dec. 2002. A plausibility check indicates an inconsistency of reported figures. According to interviews with Mr. Stancl it is reasoned by troubles with heat meters of the heat only boilers in Oct./Nov. 2002. Therefore he reported all consumed gas to the motors. It is also mentioned in the original report to CEA, but	FAR#1

that note was not transferred by CEA to the submitted report. **Response by client:** The missing information about the measuring problem is addressed in the updated emission reduction report.	
The Decin monitoring plan addresses in chapter 3.2, page 5, that a special calculation has to be done in cases where electricity production is less than 90% of electric use. Given that the operator uses just a meter that measures only net production or net consumption, it is not possible to identify the trigger barrier.	FAR#2
For GHG monitoring and reporting the used Excel workbook was checked. Stated emission reduction is addressed correctly, but the verification team identified a finding in the used spread sheets. The finding is related to calculation of emission generating because of electricity consumption. The Excel sheet contains missing formulas and moreover is not fully completed.	FAR#3:

3.3.3 Conclusion

To FAR#1: The explanation is reasonable and reliable. The statement from MVV was added later to an updated annual emission report by CEA.
It is recommended to ensure the transfer of important additional information to all report levels (subprojects and umbrella project) by including that aspect in the envisioned quality management manual. Future verification teams shall care about reports from the project owner to CEA.

To FAR#2: The verifier discussed with project owner about the introduction of an additional measuring point, maybe the existing ones at CHPs for balancing of production and net consumption.
Next verification team shall care about that aspect.

To FAR#3: The identified wrong Excel sheet has no influence to the reported emission reduction as long as electricity production is higher than its consumption like in the reporting period.
Next verification team shall care about that aspect.

3.4 Completeness of Monitoring

3.4.1 Discussion

Apart from findings mentioned above in the main FAR of missing management system, the monitoring is complete.

3.5 Accuracy of Emission Reduction Calculations

3.5.1 Discussion

The operator got an Excel spreadsheet for calculating the emission reduction. The spreadsheet has checked by the verification team regarding correct formulas and content. No misstatements referring to accuracy are identified.

3.6 Quality of Evidence to Determine Emission Reductions

3.6.1 Discussion

Produced heat and consumed gas are from calibrated and sealed meters that are also relevant for accounting. Additional meters in the plant can be used for plausibility. The verifier feels confident regarding submitted evidences and the respective quality.

3.7 Management System and Quality Assurance

3.7.1 Discussion

In order to ensure a successful operation of a project and the credibility and verifiability of the ERUs achieved, the project must have a well defined management and operational system. It shall include the management system for monitoring and reporting, i.e. organisational structure, responsibilities, competencies, non-conformance handling, internal audits and management review.

3.7.2 Finding

Like mentioned in initial report no. 565309-2 a management system and a quality assurance system for the purpose of GHG reduction determination and reporting is not in place. The operator shall bear care that an appropiate system will be implemented.	Main FAR

3.7.3 Conclusion

As long as Mr. Stancl will be the only responsible and involved person for the determination and reporting of emission reductions, implementation of such system is a minor issue. As mentioned in the interview however other staff will be involved in addition, therefore a written system focussing on GHG reporting should be implemented.

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4 VERIFICATION STATEMENT

The Prototype Carbon Fund of The World Bank has commissioned the certification body "Climate and Energy" of TÜV Industrie Service GmbH TÜV SÜD Group to verify a series of Joint Implementation (JI) projects in the Czech Republic. This report summarizes the findings of the first periodic verification of a district heating (DH) project in Decin.

Our verification approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for the period October 1st 2002 to March 26th 2004.

In our opinion, GHG emissions for the project as reported in the *Annual Emissions Reduction Report – Updated version by CEA: Decin District Heat-ing Project / Rozmital District Heating Project, performed by EuroEnergy, Spol. s.r.o and SEVEn, o.p.s. dated Dec. 16th , 2004*, prepared on the basis of PCF Monitoring Plan, are correctly stated.

The project has avoided 40.481 tonnes CO_2-equiv. GHG emissions in the period of October 1st , 2002 to March 26th, 2004.

All issues indicated as "Forward Action Request" in chapter 3 of initial verification report 565309-2 have to be submitted as indispensable information to the verification team of the next Periodic Verification.

All issues should receive a special focus during the following verification.

Munich, 2005-01-10

Michael Rumberg
Deputy head of certification body Climate and Energy

Markus Knödlseder
Lead Auditor

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5 REFERENCES

Category 1 Documents:

List documents provided by the Client that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the initial verification conclusions.

1. Czech District Heating Projects Proposed Standard Baseline Final Report, published by PCF and performed by Power System Engineering Inc. on Dec. 9th , 2002
2. Decin District Heating Project Baseline Study Final Report, published by PCF and performed by Power System Engineering Inc. on Aug. 21st , 2003
3. The Prototype Carbon Fund monitoring Plan (MP) Decin District Heating Project, published by PCF on Aug. 21st , 2003
4. Determination Report: Determination of a Sector Baseline and Monitoring Plan for Joint Implementation projects in the Czech District Heating Sector, report-# 2002-1305, rev. 02, performed by DNV on Nov. 16th , 2002
5. Determination Report: Determination/validation of the Decin District Heating Project Czech Republic, report-# 2002-1235, rev. 02, performed by DNV on May 30th , 2004
6. Original emission reduction report to CEA: covering monitoring period Oct. 1st 2002 to Mar. 31st 2004, prepared by Termo Cecin a.s. on July. 7th 2004
7. Annual Emissions Reduction Report: Decin District Heating Project / Rozmital District Heating Project, performed by EuroEnergy, Spol. s.r.o and SEVEn, o.p.s. on July 31st , 2004
8. Annual Emissions Reduction Report – Updated version by CEA: Decin District Heating Project / Rozmital District Heating Project, performed by EuroEnergy, Spol. s.r.o and SEVEn, o.p.s. on Dec. 16th , 2004

Persons interviewed:

List persons interviewed during the initial verification, or persons contributed with other information that are not included in the documents listed above.

9. Ms. Kulhavá — Czech Energy Agency
10. Mr. Fiala — Czech Energy Agency
11. Mr. Pisko — EuroEnergy, Spol. s.r.o
12. Ms. Szomoláyiova — SEVEn, o.p.s.
13. Mr. Stancl — MVV Energie CZ
14. Mr. Jaroslav — Termo Decin a.s.

Table 1: Data Management System/Controls

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.

Expectations for GHG data management system/controls	Score	Verifiers Comments (including *Forward Action Requests*)
1. Defined organisational structure, responsibilities and competencies		
1.1. Position and roles	Fully	For reported period Mr. Stancl (MVV) was mainly involved in GHG reporting. Given that he is also the project manager, his position and role is sufficiently implemented.
1.2. Responsibilities .	Partial	See 1.1, but special instruction for future employees is missing. The responsible person shall bear care about implementation of that documentation.
1.3. *Competencies needed*	Fully	For reported period Mr. Stancl (MVV) was mainly involved in GHG reporting. Given that he is also the project manager, his qualification is sufficient.

2. Conformance with monitoring plan		
2.1. Reporting procedures	Partial	The reporting procedures follow the validated monitoring plan. FAR#1: The emission reduction report addresses gas consumption by gas motors from the beginning of reported period Oct. 2002. Heat only boilers however consumed gas from Dec. 2002. A plausibility check indicates an inconsistency of reported figures. According to interviews with Mr. Stancl it is reasoned by troubles with heat meters of the heat only boilers in Oct./Nov. 2002. Therefore he reported all consumed gas to the motors. It is also mentioned in the original report to CEA, but that note was not transferred to the submitted report. Response: The updated annual emission reduction report addresses that trouble.
2.2. Necessary Changes	Fully	Changes to the monitoring plan could not be identified.
3. Application of GHG determination methods		
3.1. Methods used	Partial	The used method follows the monitoring plan and needed data, but a written instruction is not implemented. The responsible person shall bear care about implementation of that documentation.
3.2. Information/process flow	Partial	Given that Mr. Stancl is the project manager and also responsible for other operation the principle information flow is clear and could be verified during the audit. But nevertheless a flow diagram is needed.
3.3. Data transfer	Fully	Reported relevant GHG key parameters are subject of different cross checks in the company. The manual transfer to the electronic workbook for GHG reporting is checked by the verification team.

3.4. Data trails	Fully	The company produce regularly printouts from all recorded energy related data.
4. Identification and maintenance of key process parameters		
4.1. Identification of key parameters	Partial	For the reported period all used key parameters are not critical, because electricity production was higher than electricity use. FAR#2: Nevertheless, Decin monitoring plan addresses in chapter 3.2, page 5, that a special calculation has to be done in cases where electricity production is less than 90% of electric use. Given that the operator uses just a meter that measures only net production or net consumption, it is not possible to identify the trigger barrier. The verifier discussed the introduction of an additional measuring point, maybe the existing ones at CHPs, for balancing of production and net consumption.
4.2. Calibration/maintenance	Fully	All relevant meters are calibrated and sealed.
5. GHG Calculations		
5.1. Use of estimates and default data	Fully	Default data follows validated baseline and monitoring plan.
5.2. Guidance on checks and reviews	Partial	Given that Mr. Stancl is the project manager and also responsible for reporting he reviewed used date personally. A second person was not involved regarding reviews. As far as no management and operational system is in place, just as little documentation regarding to internal checks and reviews exists.

5.3. Internal verification	Partial	See 5.2
5.4. Internal validation	Partial	See 5.2
5.5. Data protection measures	Fully	Given that Mr. Stancl is the project manager and also responsible for reporting, data protection is ensured.
5.6. IT systems	Partial	FAR#3: For GHG monitoring and reporting the used Excel workbook was checked. Stated emission reduction is calculated correctly, but the verification team identified a finding. The finding refers to calculation of emission generation because of electricity consumption. The Excel sheet contains missing formulas and is moreover not fully completed. Given that electricity consumption was lower than production that does not effect the emission reduction of reported period.

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
Reported data is measured monthly. Invoices are issued for gas consumption and sold heat. A potential risk has been identified as data could be adjusted ex-post at the end of the year. In that situation it can be necessary to change relevant data ex-post.	*Neither the project owner nor the project developer have an operational and management procedure, which addresses the ex-post adjustment of invoices data and its handling with respect to the emission reduction report.* *The operator and the project developer shall ensure that relevant data will be adjusted ex-post, if it is needed.*	*See table 1*

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 *Forward Action Requests*)
FAR#1: Information losses from original report from project owner to CEA.	*Performing of a scrutinized check of reported data and conducting of plausibility checks.*	Future verification team shall care about reports from the project owner to CEA.
FAR#2: The Decin monitoring plan addresses in chapter 3.2, page 5, that a special calculation has to be done in cases where electricity production is less than 90% of electric use. Given that the operator uses just a meter that measures only net production or net consumption, it is not possible to identify the trigger barrier.	*Performing of on-site visits and checking of installed measuring equipment.*	The verifier discussed the introduction of an additional measuring point, maybe the existing ones at CHPs for balancing of production and net consumption.

Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including *Forward Action Requests*)
FAR#3: For GHG monitoring and reporting the used Excel workbook was checked. Stated emission reduction is calculated correctly, but the verification team identified a finding. The finding refers to calculation of emission generating because of electricity consumption. The Excel sheet provides missing formulas and connections.	*Performing of a scrutinized check of used calculation sheet.*	The identified wrong Excel sheet as no influence to the reported emission reduction as long as electricity production is higher than its consumption.