Re-Determination Report

NUON Energy Romania SRL

Re-Determination of the
”MUNICIPAL COGENERATION TÂRGOVIŞTE (ROMANIA)”
JI Project in Romania (Track 1)

Report No. 1096909 Revision 03.1

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Subject:	Re-Determination of a JI project track 1
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Client:	NUON Energy Romania SRL Str. Frigoriferului Nr. 6, Hala 4 550047 SIBIU, Romania
Contract approved by:	Javier Castro
Report Title:	Determination of the JI track 1 project: "MUNICIPAL COGENERATION TÂRGOVIŞTE (ROMANIA)"
Number of pages	15 (excluding cover page and annexes)

Summary:

The Certification Body "Climate and Energy" of TÜV SÜD Industrie Service GmbH has been ordered by NUON Energy Romania SRL to re-determine the above mentioned JI project in Romania.

A pre-determination of the project (PDD from 2004) has been done by KPMG, the report from November 2004 is available. It has been agreed by the involved DFPs that only the subjects project design, ERU calculation and monitoring have to be re-determined by TÜV SÜD. The re-determination of this project has been performed by document reviews, on-site visit and interviews at the office of the project owner in Targoviste.

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 Romanian Designated National Focal Point. For a transfer of ERUs under track 1 final Letter of Approvals of the involved Annex-I-Parties is required. Apart of this requirement, TÜV SÜD can recommend this project for acceptance as JI Track 1 project according to the Romanian rules.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 170,600 tons $CO_{2equivalent}$ (to be issued as AAUs) for the years 2006 and 2007 and 405,040 tons $CO_{2equivalent}$ (to be issued as ERUs) in the intended first crediting period from 2008 - 2012 (the first Commitment Period of the Kyoto Protocol lasts from 2008-2012), represents a reasonable estimation using the assumptions given by the project documents.

Work carried out by:	Thomas Kleiser (Assessment Team Leader) Robert Mitterwallner (GHG auditor)	Internal Quality Control by: Javier Castro

Abbreviations

CAR	Corrective action request
CDM	Clean Development Mechanism
CR	Clarification Request
DOE	Designated Operational Entity
DFP	Designated Focal Point
DP	Determination Protocol
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
ERU	Emission Reduction Unit
GHG	Greenhouse gas(es)
IPPC	Integrated Pollution and Prevention Control
JI	Joint Implementation
KP	Kyoto Protocol
LoA	Letter of Approval
MP	Monitoring Plan
MS	Management System
NGO	Non Governmental Organisation
PDD	Project Design Document
JI SC	JI Supervisory Committee

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1 INTRODUCTION

1.1 Objective

The private company NUON Energy Romania SRL has commissioned TÜV SÜD Industrie Service GmbH to conduct a re-determination of the JI track 1 project MUNICIPAL COGENERATION TÂRGOVIŞTE (ROMANIA) in Romania with regard to the relevant requirements for JI project activities. A pre-determination of the project (PDD from 2004) has been done by KPMG, the report from November 2004 is available. It has been agreed by the involved DFPs that only the subjects project design, ERU calculation and monitoring have to be re-determined by TÜV SÜD. All other subjects, e.g. baseline and additionality, already have been accepted by the DFPs. The re-determination of this project has been performed by document reviews, on-site visit and interviews at the office of the project owner in Targoviste.

The determination serves as a conformity test regarding the project design, ERU calculation and monitoring and is a requirement for all JI projects. Determination is considered 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.

1.2 Scope

The determination scope is defined as an independent and objective review of the project's design documents (PDD, attachment to the PDD) and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. The rules for track 1 have to be defined by the DFP of Romania.

TÜV SÜD has, based on the recommendations in the Validation and Verification Manual (see for further information http://ieta.org/ieta/www/pages/index.php?IdSitePage=392), 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 from 2004 and the attachment to the PDD (5-12-2008). It is a re-determination, hence, PDD wasn't published again in the context of the Global Stakeholder Process (GSP). According to CARs and CRs indicated in the audit process the client decided to revise the calculation file for ERUs and to issue an attachment to the PDD. The PDD from 2004 and the attachment to the PDD (5-12-2008) serve as the basis for the final conclusions presented herewith.

Studying the existing project documentation, 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 14001)
- Quality Assurance

- Technologies, processes and operation of energy efficiency and district heating
- Baseline concepts
- Monitoring concepts
- Political, economical and technical random conditions in host country

According to these requirements TÜV SÜD has assembled a project team in accordance with the appointment rules of the TÜV certification body “Climate and Energy”:

Thomas Kleiser is a lead auditor for CDM and JI projects at TÜV SÜD Industrie Service GmbH and head of CDM/JI division within TÜV SÜD. In this position he is responsible for the implementation of validation and certification processes for GHG mitigation projects. He has participated in more than 90 CDM and JI project assessments.

Robert Mitterwallner is a GHG-Auditor with a background as auditor for environmental management systems (according to ISO 14001), as expert in environmental permit procedures for industrial plants and as expert for environmental impact studies assessment. He is located at TUV SÜD Industrie Service in Munich since 1990. He has received training in the JI determination as well as CDM validation process and applied successfully as GHG Auditor for the scopes energy industries, manufacturing industries, chemical industries, transport, mining/mineral production, metal production, solvent use and waste handling / disposal.

Cristian Delamarian – is a GHG-Auditor for the sectoral scope 1, with a background as a Technical Expert in boilers and pressure vessels according to German and American codes, and ISO 9000 Auditor. He is located in TUV SUD Romania since 2000 with a period of 2.5 years between 2005 and 2007 of activity with TUV SUD Philippines. He received training in the JI determination as well as CDM validation process and applied successfully as GHG Auditor for the scopes energy industries.

The audit team covers following requirements:

- Knowledge of Kyoto Protocol and the Marrakech Accords (All)
- Environmental and Social Impact Assessment (All)
- Skills in environmental auditing (ISO 14001) – (All)
- Quality Assurance (All)
- Technologies, processes and operation of energy efficiency and district heating (All)
- Baseline concepts (All)
- Monitoring concepts (All)
- Political, economical and technical random conditions in host country (All)

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

Javier Castro –Head of the Certification Body “Climate and Energy”

1.3 GHG Project Description

The core part of the project was to install new cogeneration facilities with a total capacity of about 6.8 MWe and new heat only boilers with a capacity of 14.0 MWth, as well as to rehabilitate the existing heat transportation networks and an existing heat only boiler with a capacity of 58.2 MWth. The project intends to solve the heat supply problems in the City of Târgovişte, and to drastically improve the efficiency of electricity and heat production and it produces electricity and heat at lower cost and environmental friendlier than at present. The produced electricity will be partly consumed internally by the beneficiaries of the project and partly sold to a third party, whereas the produced heat will be delivered to the customers of S.C. TERMICA S.A., which is the municipality owned operator of the plant.

Based on the implementation of energy efficiency measures and rehabilitation of the district heating network, the project leads to a significant reduction of CO_2 emissions in the project scenario in comparison to the baseline scenario.

The starting date of the project was in 2004.

The starting date of the crediting period was January 1, 2006 that can be accepted under the pre-condition that the Romanian National Focal Point does agree with it. The crediting period will end on December 31, 2012 with the end of the first commitment period of the Kyoto protocol.

One of the project participants is : NUON Energy Romania SRL as project applicant

2 METHODOLOGY

In order to ensure transparency, a determination protocol was customised for the project, according to the Validation and Verification Manual (VVM). 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 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 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 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.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence 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 developer submitted a PDD and an attachment to the PDD as well as additional background documents. 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.

2.2 Follow-up Interviews

On December 3, 2007, and December 4, 2007 the audit team of TÜV SÜD performed interviews in Targoviste with the coordinating/managing entity and the project developer to resolve issues identified in the document review.

The main topics of the interviews are summarised in Table 4. The complete and detailed list of all persons interviewed is enclosed in Appendix 2 to this report.

Table 4: Interview topics

Interviewed organisation	Interview topics
S.C. Termica SA	Monitoring, project description, project design, formulae, calculation of GHG emission reductions, JI-Guidelines, national and regional policy as part of a re-determination of the project.
KPMG	Project design, background information of the pre-determination, formulae, calculation of GHG emission reductions, JI-Guidelines, national and regional policy as part of a re-determination of the project.
Nuon Energy Romania SRL	Monitoring, project description, formulae, calculation of GHG emission reductions, JI-Guidelines, national and regional policy as part of a re-determination of the project.

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 Requests raised by TÜV SÜD have been resolved in all parts in the answers to the draft determination protocol, prepared by the project developer Nuon Energy Romania SRL from January to June 2008. An attachment to the PDD and a number of additional documents has been submitted to the EIA in order to provide the required evidences.

To guarantee the transparency of the determination process, the concerns raised 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.

The determination 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.

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 interview 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. In total 13 clarification requests and 1 open issues have been raised.

3) Where Clarification Requests have been issued, the response by the project developer to resolve these requests are summarized in the final determination protocol.

4) The final conclusions of the determination are presented consecutively.

3.1 Project Design

3.1.1 General Findings, environmental issues

The foreseen technology does reflect current good practice for energy efficiency and district heating measures. The project will use technology that can be considered as advanced technology in the host country for this kind medium sized boilers and cogeneration engine. Moreover it is unlikely that the foreseen project technology will be substituted during the crediting period by a more efficient technology.

Romania is a Party to the Kyoto Protocol and already has installed national procedures for the approval of projects.

An IPPC permit of 2006 is available for the plant.

3.1.2 Issued CRs

See Annex 1, CR 1 to CR 4.

3.1.3 Conclusion

All given responses to the indicated CRs are solving the relevant issues.

3.2 Monitoring Plan

3.2.1 Findings

The project activity uses a project-specific approach for the monitoring. As far as possible guidance from approved CDM methodologies is used for the monitoring concept.

The monitoring methodology reflects current good practice and is supported by the monitored and recorded data. The monitoring provisions are in line with the project boundaries. Indicators for project emissions and baseline emissions have been defined and will be monitored.

The figure for the heat losses of the primary network for the baseline of 22% has not been regarded to be conservative taken into account all available historical data.

3.2.2 Issued CRs and Open Issue

See Annex 1, see CR 5 to CR 15 and open issue 1.

3.2.3 Conclusion

The discussed Clarification Requests can be considered to be resolved by the comments of the PP and/or revision of the Excel File calculation.

The AIE suggested for the discussed open issue a more conservative figure for the heat losses in the baseline of 22%. Finally, this figure has been replaced by 26%. The Excel File calculation and the attachment to the PDD have then been revised correctly by PP.

The monitoring plan finally fulfils all requirements for such type of project activity.

3.3 Calculation of GHG Emissions

3.3.1 Findings

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

All necessary parameters to monitor project emissions have been defined. The most relevant and likely operational characteristics and indicators to calculate project emissions and baseline emissions have been chosen.

Thus, the project will result in fewer GHG emissions than the baseline scenario.

No further aspects of leakage have been identified; hence further leakage calculation is not requested.

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.

3.3.2 Issued CRs

See Annex 1, CR 16.

3.3.3 Conclusion

The GHG calculations are documented in a complete and transparent manner. Conservative assumptions have been used when calculating baseline emissions. The project thus does fulfil all the relevant requirements.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD did not publish the project design documents on its website because it is a re-determination.

5 DETERMINATION OPINION

TÜV SÜD has performed a determination of the project MUNICIPAL COGENERATION TÂRGOVIŞTE in Romania on the basis of all currently valid and relevant JI criteria of the host country (here: track 1).

A pre-determination of the project (PDD from 2004) has been done by KPMG and it has been agreed by the involved DFPs that only the subjects project design, ERU calculation and monitoring have to be re-determined by TÜV SÜD. The review of the PDD from 2004 with attachment from 5-12-2008 and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria.

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 Romanian Designated National Focal Point. For a transfer of ERUs under track 1 final Letter of Approvals of the involved Annex-I-Parties are required.

Apart from that, TÜV SÜD can recommend this project for acceptance as JI Track 1 project according to the recent Romanian rules.

Additionally the assessment team reviewed the estimation of the projected emission reductions. We can confirm that the indicated amount of emission reductions of 170,600 tons $CO_{2equivalent}$ (to be issued as AAUs) for the years 2006 and 2007 and 405,040 tons $CO_{2equivalent}$ (to be issued as ERUs) in the intended first crediting period from 2008 - 2012 (the first Commitment Period of the Kyoto Protocol lasts from 2008-2012), represents a reasonable 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 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 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, 2008-12-17

Javier Castro

Head of Certification Body "Climate and Energy"

Munich, 2008-12-17

Thomas Kleiser

Assessment Team Leader

Determination Protocol

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of the project				
A.1. Title of the project activity:				
A.1.1. Does the used project title clearly enable to identify the unique JI activity?	11	The title of the PDD is "Municipal Cogeneration Targoviste".	☑	☑
A.1.2. Are there an indication of a revision number and the date of the revision?	11, 21	No, but the issuing date of the PDD was obviously in May or June 2004. However, the PDD is not going to be revised and instead of it an attachment to the PDD has been issued, dated 5/12/2008.	☑	☑
A.1.3. Is this in consistency with the time line of the project's history?	11	Yes, the pre-determination has been done by KPMG in 2004 and the corresponding report has been issued in November 2004.	☑	☑
A.2. Description of the project activity:				
A.2.1. Is the description delivering a transparent overview of the project activities?	1, 11	As information has been gathered during the audit on-site the project comprises the following measures by S.C. Termica S.A.: • Installation of a new pilot cogeneration engine Andreea • Installation of nine new cogeneration Perkins engines with a total capacity of about 7,4 MW_{el} • Installation of new heat only boilers with a total capacity of 15,7 MW_{th} (HOB 4) • Rehabilitation of the existing primary heat transportation networks • Rehabilitation of an existing heat only boiler with a capaci-	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		ty of 58,2 MW_{th} (HOB 3) The produced heat is transported in the primary system that comprises now 55 thermal points with heat exchangers. From these thermal points heat is supplied to the customers of S.C. Termica S.A. connected to the secondary system which is not part of the project. The net produced electricity is fed into the grid of the company Electrica. The above mentioned project installations are owned by the City Hall of Targoviste and operated by S.C. Termica S.A.		
A.2.2. What proofs are available evidencing that information provided in the description is in compliance with actual situation or planning?	1, 8	Licenses for the production and supply of power as well as for production, transportation, delivering and distribution of thermal energy are available for the determination team. The 2006 IPPC permit for the operation of the rehabilitated plant has been submitted by S.C. Termica S.A. Furthermore construction license and power delivering contract with Electrica are available.	☑	☑
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1, 11	Not all, for example the effectively installed power (see above) is slightly higher than indicated power of 6,8 MWel for cogeneration plant and 14 MWth for Heat Only Boiler in the PDD. The operating project pilote engine Andreea is not part of the project.		☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Both the backup boilers and Andreea are considered intergrated units in the project. Andreea was the pilot installation that was installed at the start of the project to gain experience with the systems in Targoviste. Both Andreea and the back-up boilers have a small contribution to the total emission reductions (<5%). Furthermore, the schematic presentation of the future situation (figure 8) in the PDD does not take account of the substitution of boiler K2 by the new boilers K6, K7 and K8 which have been installed to cover heat demand peaks in winter and for backup needs in case of failure of the above mentioned project installations. The flow chart of the project (figure 10) indicates a power plant within the boundary that is not existing (see CR 2) **Clarification Request No. 1** Please clarify why the schematic presentation of the future situation does not take account of the substitution of boiler K2 by the new boilers K6, K7 and K8? **Clarification Request No. 2** Please clarify why the power plant within the boundary is not existing.	CR 1 CR 2	
A.2.4. Is all information provided in consistency with details provided by further chapters of the PDD?	1, 11, 21	The information provided is consistent with the PDD together with the attachment to the PDD.	☑	☑

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A.3. Project participants:				
A.3.1. Is the form required for the indication of project participants correctly applied?	1, 11	According to the PDD the project developer is S.C. Nuon Energy Romania S.R.L. (NER), whereas, project partners are the City Hall Targoviste (owner of the plant) and S.C. Termica S.A. (operator of the plant).	☑	☑
A.3.2. Is the participation of all listed entities or Parties confirmed by each of them?	1, 11	The participation of NER and S.C. Termica S.A. has been confirmed during the Audit on-site. The ownership of the City Hall Targoviste has been evidenced.	☑	☑
A.3.3. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?		The information provided is consistent with the PDD together with the attachment to the PDD.	☑	☑

A.4. Technical description of the project activity:					
A.4.1.	*Location of the project activity:*				
A.4.1.1.	Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1, 11	A scaled map visualizing the location of the producing facilities and the transportation network in Targoviste has been submitted by S.C. Termica S.A.	☑	☑
A.4.1.2.	How is it ensured, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1, 8, 11	See comments to A.2.2	☑	☑
A.4.2.	*Technology(ies) to be employed, or measures, operations or actions to be implemented by the project activity:*				

A.4.2.1.	To which category(ies) is the project activity belonging to? Is it correctly identified and indicated?	1, 11	The project belongs to category 1 (Energy Industry) and 2 (Energy Distribution).	☑	☑
A.4.2.2.	Does the project design engineering reflect current good practices?	1, 11	Yes	☑	☑
A.4.2.3.	Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance?	1, 11	It is evident that the higher efficiency of the Heat Only Boilers and Cogeneration Engine as well as the rehabilitated transportation network is resulting in lower CO2 emissions than in baseline scenario.	☑	☑
A.4.2.4.	Is the technology implemented by the project activity environmentally safe?	1, 11	Yes, it has been already confirmed in 2004 that the project is environmentally safe.	☑	
A.4.2.5.	Is all information provided in compliance with actual situation or planning as available by the project participants?	1, 11, 21	See A.2.3	See CR 1 and CR 2	☑
A.4.2.6.	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, 11	Yes, the implementation of the project measures has been done according to the State-Of-The-Art technology.	☑	☑
A.4.2.7.	Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 11	No, it is unlikely that other more efficient technology will be implemented during the project period of 7 years.	☑	☑

A.4.2.8.	Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1, 11	As information has been gathered during the on-site Audit the dispatcher as well as the responsible person for data operating were sufficiently qualified for there tasks.	☑	☑
A.4.2.9.	Does the project make provisions for meeting training and maintenance needs? Explanation how the needs for training and maintenance are covered? Are there any evidences for them (Contracts, Manuals...)?	14	A Maintenance and Repairs Contract between S.C. Termica SA and NER is available. Training need will be defined as procedure within the Quality Management of S.C. Termica SA.	☑	☑
A.4.2.10.	Is a schedule available on the implementation of the project and are there any risks for delays?	1, 12	Yes, as outlined in the Monitoring Report for 2006 the time table for implementation is as following: • December 2003: operation start of the pilot cogeneration gas engine Andreea • October 2005: operation start of new HOB 4 • November 2005: operation start of rehabilitated HOB 3 • September 2006: operation start of Perkins engines • December 2007: operation start of backup boilers HOB 6, HOB 7 and HOB 8 There is no risk for delays because apart from HOBs 6, 7 and 8 that are already installed but not yet in operation all other installations are running.	☑	☑
A.4.3.	*Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed project activity, including why the emission reductions would not occur in the absence of the proposed project activity, taking into account national and/or sectoral policies and circumstances:*				

A.4.3.1. Is the form required for the indication of projected emission reductions correctly applied?	11	This was part of the pre-determination by KPMG.	☑	☑
A.4.3.2. Are the figures provided consistent with other data presented by the PDD?	1, 11, 21	See A.2.3	See CR1 and CR2	☑
A.4.3.3. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1, 11	Public funding is not project relevant because the owner of the project installations is the City Hall of Targoviste.	☑	☑
A.4.3.4. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1, 11, 21	See comment to A.4.3.1	☑	☑
A.5. Project approval by the Parties involved:				
Open issues related to the approval of the Parties involved are covered in a separate “completeness checklist”				
B. Baseline				
B.1. Description and justification of the baseline chosen				
B.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	11	The baseline has been determined by KPMG during pre-determination in 2004.	☑	☑
B.1.2. Is the applied version the most recent one or still applicable?	1 ,11	See comment to B.1.1	☑	☑
B.1.3. Is the methodology sufficiently described?	11	See comment to B.1.1	☑	☑

B.1.4. Is the applied methodology considered being the most appropriate one?	11	See comment to B.1.1	☑	☑
B.1.5. Can the geographic and system boundaries for the relevant distribution channel clearly be identified?	11	Yes, see A.4.1.1 (map)	☑	☑
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the project activity				
Description of how the baseline scenario is identified and description of the identified baseline scenario				
B.2.1. Is a description of the baseline scenario, (b) a description of the project scenario, and (c) an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario.	11	See comment to B.1.1	☑	☑
B.2.2. Have all technically feasible baseline scenario alternatives to the project activity been identified and discussed by the PDD?	11	See comment to B.1.1	☑	☑
B.2.3. Does the project identify correctly and excludes those options not in line with regulatory or legal requirements?	11	See comment to B.1.1	☑	☑
B.2.4. Have applicable regulatory or legal requirements been identified?	1, 7, 11	According to the 2006 IPPC permit for the Large Combustion Plant an action plan is required to automate the big Heat Only Boiler (CAF 3) until the end of 2008.		☑

		Clarification Request No. 3 Please clarify the required measure and discuss the influence on the project. **Clarification Request No. 4** The construction license covers the new installations described in the PDD. Hence, the effectively slightly higher power mentioned in the comment to A.2.3 is not covered by the existing license. Please clarify if there is any risk for the production of power and heat during the crediting period.	CR 3 CR 4	
B.2.5.	In case of applying step 2 of the additionality tool: Is the analysis method appropriately identified (step 2a)?	11	See comment to B.1.1	☑	☑
B.2.6.	In case of applying step 3 (barrier analysis): Is a complete list of barriers developed that prevent alternatives to occur?	11	See comment to B.1.1	☑	☑
B.2.7.	In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	11	See comment to B.1.1	☑	☑
B.2.8.	In case of applying step 3 (barrier analysis): Is it transparently shown that at least one of the alternatives is not prevented by the identified barriers?	11	See comment to B.1.1	☑	☑
B.2.9.	Have other activities in the host country / re-	11	See comment to B.1.1	☑	☑

	gion similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?			
B.2.10.	If similar activities are occurring: Is it demonstrated that in spite these similarities the project activity would not be implemented without the JI (step 4b)?	11	See comment to B.1.1	☑	☑
B.3.	**Description of how the definition of the project boundary is applied to the project:**				
B.3.1.	Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?		Yes	☑	☑
Description of the sources and gases included in the project boundary (Fill in the required amount of sub checklists for sources and gases as given by the methodology applied and comment at least every line answered with "No")					
B.3.2.	Project sources for CO2:		The sources for the GHG CO2 are: • HOB 3 • HOB 4 • HOB 6, HOB 7, HOB 8 • Perkins Cogeneration Engines • Andreea Cogeneration Engine	☑	☑
B.4.	**Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline Emissions reductions**				
B.4.1.	Is there any indication of a date when determining the baseline?	1, 11	The starting date of the project (first construction works) was in 2003 (see time table in chapter A.4.2.10).	☑	☑

B.4.2. Is this in consistency with the time line of the PDD history?	1, 11, 21	Yes, see determination report of KPMG	☑	☑
B.4.3. Is information of the person(s) / entity(ies) responsible for the application of the baseline methodology provided in consistency with the actual situation?	1, 11	Yes, according to the PDD NER is project developer and S.C. Termica SA and City Hall of Targoviste are project participants (see also A.3.1).	☑	☑
B.4.4. Is information provided whether this person / entity is also a project participant?	1, 11	Yes, see above	☑	☑
C. Duration of the project activity / crediting period				
C.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1,11	No, the starting date according to PDD was 2006 which does not comply with the real situation (see comment to B.4.1). However, PDD has been elaborated in 2004, after the first construction works for the pilot engine. Andreea was the pilot installation that was installed at the start of the project to gain experience with the systems in Targoviste. The pilot engine Andreea and the back-up boilers have a small contribution to the total emission reductions (<5%).	☑	☑
C.2. Is the assumed crediting time clearly defined and reasonable (crediting period between 2008 and 2012)?	1, 11	The crediting time from 2006 to 2012 is clearly identified in the PDD.	☑	☑
D. Monitoring plan				
D.1. Description of monitoring plan chosen:				
Is the applied methodology considered being the most appropriate one?	1, 11	The applied special methodology does not require directly monitoring plan. Hence, a project specific monitoring plan has been developed.	See CR 5 to CR 11	☑

D.1.1. *Monitoring of the emissions in the project scenario and the baseline scenario:*				
In the following "data checklists" are shown for all data which are fixed at determination time, and "monitoring checklists" for all data which have to be monitored during the life-time of the project.				
D.1.1.1 Data to be collected in order to monitor emissions from the **project** and how these data will be archived				
Is the list of parameters presented by chapter D.1.1.1 considered to be complete with regard to the requirements of the applied methodology?	1, 11	The calculation of project emissions indicated in chapter 6.5 of the PDD is mainly not consistent with the submitted Excel Spread Sheet for ex-ante calculation of project emissions. **Clarification Request No. 5** Please clarify why calculation of project emissions indicated in chapter 6.5 of the PDD is mainly not consistent with the submitted Excel Spread Sheet for ex-ante calculation of project emissions? It is conservative approach that the heat output of the backup boilers and Andreea have not been used for calculation of the project emissions.	CR 5	☑
ID 111.1: Heat: Future Heat Demand [GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes QA/QC procedures described? Yes QA/QC procedures appropriate? Yes	☑	☑

ID 111.2: Heat Losses of primary transportation network [%]	1, 11	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> As stated in the Excel Spread Sheet for Monitoring 2006 the losses for the first month of 2006 are about 22 % and this figure is rising to about 45 % in the summer of this year. The losses in the primary network, seen as percentage from the total supplied heat, are so much different between winter and summer because the dimension of the primary system (the total volume of the pipes) is the same. This means in the summer, because the velocity in the pipes is lower and the total flow through the pipes is lower, the heat transfer with the environment has much more time to happen, resulting in more losses. Differences can come between months, in the same season, also caused by troubles that may happen (leakages in the pipes). **Clarification Request No. 6** There is a need to demonstrate for the figure of 17 % (2007) until 12 % (2012) of this parameter more in detail that these figures are sufficiently conservative. However, please discuss why these project losses shall not be calculated ex-post since the heat output of the production units and the thermal points is measured.	CR 6	☑

ID 111.3: Heat: heat production cogeneration plant [GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes QA/QC procedures described? Yes QA/QC procedures appropriate? Yes It is conservative approach that the calculated thermal power is with 10 MWth slightly smaller than effective for all nine engines with each 1,24 MWth.	☑	☑
ID 111.4: Heat: heat production of new HOB [GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? No Appropriate description? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No QA/QC procedures described? No QA/QC procedures appropriate? No **Clarification Request No. 7** Please demonstrate that the indicated running time of new HOB is conservative.	CR 7	☑
ID 111.5: Heat: Thermal efficiency of new HOB [%]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? No Appropriate description? No Source clearly referenced? No Correct value provided? No		☑

		Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No QA/QC procedures described? No QA/QC procedures appropriate? No **Clarification Request No. 8** The figure of 94 % for this parameter seems to be very high; please demonstrate, e.g. by means of technical specification data that this figure is sufficiently conservative.	CR 8	
ID 111.6: Heat: heat production of rehabilitated HOB [GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? No Appropriate description? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No QA/QC procedures described? No QA/QC procedures appropriate? No **Clarification Request No. 9** Please demonstrate that the indicated running time for rehabilitated HOB is conservative.	CR 9	☑
ID 111.7: Heat: Thermal efficiency of rehabilitated HOB [%]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? No Appropriate description? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No		☑

		Measurement method correctly described? No QA/QC procedures described? No QA/QC procedures appropriate? No **Clarification Request No. 10** The figure of 90 % for this parameter seems to rather high; please demonstrate that this figure is sufficiently conservative.	CR 10	
ID 111.8: Power: Emission Factor for Natural Gas [kg CO2/GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes QA/QC procedures described? Yes QA/QC procedures appropriate? Yes The value of 56,1 kg CO2/GJ is indicated in IPCC 2006 Guideline.	☑	☑
ID 111.9: Power: Electricity Production [MWh]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? Yes Choice of data correctly justified? Yes Measurement method correctly described? Yes QA/QC procedures described? Yes QA/QC procedures appropriate? Yes	☑	☑

<table>
<tr><td></td><td></td><td>The indicated power of 6,8 MWel of the Perkins engines which is definitely slightly higher is conservative. The indicated running time of the engines of 7915 h/a is rather high.. However, the running time parameter has no influence since it is used as well for baseline calculation.</td><td></td><td></td></tr>
<tr><td>ID 111.10: <u>Power</u>: Electric efficiency of new cogeneration engines [%]</td><td>1, 11</td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Data unit correctly expressed?</td><td>No</td></tr>
<tr><td>Appropriate description?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>No</td></tr>
<tr><td>Choice of data correctly justified?</td><td>No</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
</table>

The figure of 35,4% for this parameter has been evidenced by the offer for the Perkins engines/generators.

Clarification Request No. 11
The figure applied in the Excel Spread Sheet Calculation of 35,7 % is not conservative, please clarify.</td><td>CR 11</td><td>☑</td></tr>
<tr><td colspan="5">D.1.1.2 Description of formula used to estimate emissions from the project</td></tr>
<tr><td>Are formulae required for the estimation of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?</td><td>11</td><td>Formulae to calculate the project emissions were not indicated in the PDD but are part of the Excel Spread Sheet for Ex-Ante calculation.</td><td>☑</td><td>☑</td></tr>
<tr><td colspan="5">D.1.1.3 Data to be collected in order to determine the baseline emissions within the project boundary how these data will archived</td></tr>
</table>

Industrie Service

Fill in the required amount of sub checklists for fixed data parameter and comment any line answered with "No"

The calculation of baseline emissions indicated in chapter 5.4 of the PDD is mainly not consistent with the submitted Excel Spread Sheet for ex-ante calculation of baseline emissions. The following assessment has been done regarding information in Excel Spread Sheet.

ID 113.1: Heat: Future Heat Demand [GJ]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? Yes Appropriate description? Yes Source clearly referenced? Yes Correct value provided? Yes Has this value been verified? No* Choice of data correctly justified? Yes Measurement method correctly described? NA QA/QC procedures described? NA QA/QC procedures appropriate? NA * same default value as for project emission calculation	☑	☑
ID 113.2: Heat: Losses of primary transportation network [%]	1, 11	Data Checklist / Yes / No Data unit correctly expressed? No Appropriate description? No Source clearly referenced? No Correct value provided? No Has this value been verified? No Choice of data correctly justified? No Measurement method correctly described? No QA/QC procedures described? No QA/QC procedures appropriate? No It has been stated in chapter 2.1 of the PDD that the technical status of the primary heat transportation system with an average age		☑

<table>
<tr><td></td><td></td><td>of 18 years is very poor leading to about 22 % losses.

Clarification Request No. 12
Has the figure of 22 % for this parameter been measured or calculated? There is a need to demonstrate more in detail that this figure is sufficiently conservative.</td><td>CR 12</td><td></td></tr>
<tr><td>ID 113.3: Heat: Thermal Efficiency of existing Heat Only Boiler [%]</td><td>1, 11</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>
The figure of 65 % for this parameter does comply with national experiences of the determination team. Since even thermal efficiencies of 50 % of existing boilers are common the figure deemed to be conservative.</td><td>☑</td><td>☑</td></tr>
<tr><td>ID 113.4: Heat: Emission Factor for Natural Gas [kg CO2/GJ]</td><td>1, 11</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table></td><td>☑</td><td>☑</td></tr>
</table>

<table>
<tr><td></td><td></td><td>The value of 56,1 kg CO2/GJ is indicated in IPCC 2006 Guideline.</td><td></td><td></td></tr>
<tr><td>ID 113.5: <u>Power</u>: Electricity Production [MWh]</td><td>1, 11</td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Data unit correctly expressed?</td><td>Yes</td></tr>
<tr><td>Appropriate description?</td><td>Yes</td></tr>
<tr><td>Source clearly referenced?</td><td>Yes</td></tr>
<tr><td>Correct value provided?</td><td>Yes</td></tr>
<tr><td>Has this value been verified?</td><td>Yes</td></tr>
<tr><td>Choice of data correctly justified?</td><td>Yes</td></tr>
<tr><td>Measurement method correctly described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures described?</td><td>Yes</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr>
</table>

The indicated power of 6,8 MWel of the Perkins engines which is definitely slightly higher is conservative. The indicated running time of the engines of 7915 h/a is rather high. However, the running time parameter has no influence since it is used as well for project calculation.
</td><td>☑</td><td>☑</td></tr>
<tr><td>ID 113.6: <u>Power</u>: Electric Efficiency of lignite fired co-generation plant [%]</td><td>1, 11</td><td>
<table>
<tr><th>Data Checklist</th><th>Yes / No</th></tr>
<tr><td>Data unit correctly expressed?</td><td>No</td></tr>
<tr><td>Appropriate description?</td><td>No</td></tr>
<tr><td>Source clearly referenced?</td><td>No</td></tr>
<tr><td>Correct value provided?</td><td>No</td></tr>
<tr><td>Has this value been verified?</td><td>No</td></tr>
<tr><td>Choice of data correctly justified?</td><td>No</td></tr>
<tr><td>Measurement method correctly described?</td><td>No</td></tr>
<tr><td>QA/QC procedures described?</td><td>No</td></tr>
<tr><td>QA/QC procedures appropriate?</td><td>No</td></tr>
</table>
</td><td></td><td>☑</td></tr>
</table>

<table>
<tr><td></td><td></td><td>Clarification Request No. 13
There is a need to demonstrate more in detail that the figure of 28 % (2006) until 33 % (2012) of this parameter is sufficiently conservative, e.g. by submitting the confirmation of the Department for Planning, Studies and Engineering of Transelectrica SA (as quoted in chapter 5.2 of PDD).</td><td>CR 13</td><td></td></tr>
<tr><td>ID 113.7: Emission Factor for Lignite [kg CO2/GJ]</td><td>1, 11</td><td><table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table>
Clarification Request No. 14
According to IPCC 2006 Guideline the default value for lignite is 101,000 kg CO2/GJ and the applied value is 101,2 please clarify.</td><td>CR 14</td><td>☑</td></tr>
<tr><td>Is the list of parameters presented by chapter D.1.1.3 considered to be complete with regard to the requirements of the applied methodology?</td><td></td><td>Yes</td><td>☑</td><td>☑</td></tr>
<tr><td colspan="5">D.1.1.4 Description of formula used to estimate baseline emissions</td></tr>
<tr><td>Are formulae required for the estimation of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?</td><td></td><td>Formulae to calculate the baseline emissions were not indicated in the PDD but are part of the Excel Spread Sheet for Ex-Ante calculation.</td><td>☑</td><td>☑</td></tr>
</table>

D.1.3 *Treatment of leakage in the monitoring plan:*				
Is it explained how the procedures provided by the methodology are applied by the proposed project activity?		Leakages are not applicable in this project.	☑	☑
D.1.3.1 Data to be collected in order to determine the leakage emissions outside the project boundary				
Fill in the required amount of sub checklists for fixed data parameter and comment any line answered with "No"				
D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored:				
This aspect is covered for the relevant data in section D.1.1.1, D.1.1.3 and D.1.3.1				
D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan:				
D.3.1. Is the operational and management structure clearly described and in compliance with the envisioned situation? Explanation of management structure and responsibilities.	1, 15	PDD does not comprise information about the operational and management structure of project relevant monitoring. **Clarification Request No. 15** However, it has to be demonstrated how the existing but not yet certified Quality Management System does cover operational and management structure of the project relevant organization and staff.	CR 15	☑
D.3.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	15	See comments to D.3.1	☑	☑
D.3.3. Does the monitoring plan provide current good monitoring practice?	1, 11	Yes	☑	☑
D.3.4. Does annex 3 provide useful information enabling a better understanding of the envi-	1, 11	NA	☑	☑

	sioned monitoring provisions?			
D.4.	**Name of person(s)/entity(ies) establishing the monitoring plan:**			
D.4.1.	D.4.1 Is information of the person(s) / entity(ies) responsible for the monitoring methodology provided in consistency with the actual situation?	1, 11	Yes	☑	☑
D.4.2.	D.4.2 Is information provided whether this person / entity is also a project participant?	1, 11	Yes	☑	☑
E. Estimation of greenhouse gas emission reductions					
E.1.	**Estimated project emissions and formulae used in the estimation**				
E.1.1.	Are formulae required for the estimation of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 11	The gradually modernization of the heat transportation network causes the slightly increasing project emissions.	☑	☑
E.2.	**Estimated leakage and formulae used in the estimation, if applicable:**				
E.2.1.	Are formulae required for the estimation of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 11	NA	☑	☑
E.2.2.	Why are the leakage emissions not constant over the years?	1, 11	NA	☑	☑
E.3.	**The sum of E.1. and E.2.:**				
E.3.1.	Is the data provided under this section in consistency with data as presented by other	1, 11	Yes	☑	☑

chapters of the PDD?				
E.4. Estimated baseline emissions and formulae used in the estimation:				
Ex-ante calculation of emission reductions				
E.4.1. Is the projection based on the same procedures as used for later monitoring?	1, 11, 21	Yes	☑	☑
E.4.2. Is the data provided under this section in consistency with data as presented by other chapters of the PDD?	1, 11, 21	See CR 12	See CR 12	☑
E.4.3. Are formulae required for the estimation of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1, 11, 21	Yes	☑	☑
E.5. Difference between E.4. and E.3 representing the emission reductions of the project:				
E.5.1. Are formulae required for the determination of emission reductions correctly presented?	11, 21	Yes, "The decrease of the transportation losses will not affect the net consumption of heat"	☑	☑
E.6. Table providing values obtained when applying formulae above:				
E.6.1. Will the project result in fewer GHG emissions than the baseline scenario?	11, 21	Yes	☑	☑
E.6.2. Is the form/table required for the indication of projected emission reductions correctly applied?	11, 21	Yes	☑	☑
E.6.3. Is the projection in line with the envisioned	11,	Yes	☑	☑

	time schedule for the project's implementation and the indicated crediting period?	21			
E.6.4.	Is the data provided under this section in consistency with data as presented by other chapters of the PDD?	11, 21	**Clarification Request No. 16** The figures in table 10 for total emission reductions in the years 2006 to 2012 are not consistent with the figures in the Excel calculation sheets, please clarify.	CR 16	☑
F. Environmental impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party:					
F.1.1.	Has an analysis of the environmental impacts of the project activity been sufficiently described?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
F.1.2.	Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
F.1.3.	Will the project create any adverse environmental effects?	10, 11	No, The project will determine a decrease in air emissions	☑	☑
F.1.4.	Are transboundary environmental impacts considered in the analysis? e.g. rape and sunflowers from Romania?	10, 11	NA	☑	☑

F.2.	**If environmental impacts are considered significant by the project participants or the host Party, provision of conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:**				
F.2.1.	Have identified environmental impacts been addressed in the project design?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
F.2.2.	Does the project comply with environmental legislation in the host country?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G. Stakeholders' comments					
G.1.	**Information on stakeholders' comments on the project, as appropriate:**				
G.1.1.	Have relevant stakeholders been consulted?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G.1.2.	Have appropriate media been used to invite comments by local stakeholders? Announcement in local newspaper "UTRO"	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G.1.3.	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?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G.1.4.	Is the undertaken stakeholder process described in a complete, transparent manner?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G.1.5.	Is a summary of the stakeholder comments received provided? (participant list, minutes)	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑
G.1.6.	Has due account been taken of any stakeholder comments received?	10, 11	Yes, as a part of the pre-determination report performed by KPMG	☑	☑

H. Annexes 1 – 3				
Annex 1: Contact Information				
1. Is the information provided in consistency with the one given under section A.3?		NA	☑	☑
2. Is information on all private participants and directly involved Parties presented?		NA	☑	☑
Annex 2: Baseline study				
1. If additional background information on baseline data is provided: Is this information in consistency with data presented by other sections of the PDD?		NA	☑	☑
2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?		NA	☑	☑
3. Does the additional information substantiate statements given in other sections of the PDD?		NA	☑	☑
Annex 3: Monitoring information				
4. If additional background information on monitoring is provided: Is this information in consistency with data presented by other sections of the PDD?		NA	☑	☑
5. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?		NA	☑	☑
6. Do the additional information substantiate statements given in other sections of PDD?		NA	☑	☑

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
Clarification Request No. 1 Please clarify why the schematic presentation of the future situation does not take account of the substitution of boiler K2 by the new boilers K6, K7 and K8?	A.2.3	The impact of this will be minimal because K2 in the baseline situation as well as K6, K7 and K8 in the project situation only run in upset conditions if the outside temperature is below -15 °C or if HOB 3 is out of operation during the winter.	Closed
Clarification Request No. 2 Please clarify why the power plant within the boundary is not existing.	A.2.3	Only the boilers and Co-generators at Termica Sud and the primary heat transport system are within the boundaries of the project.	Closed
According to the 2006 IPPC permit for the Large Combustion Plant an action plan is required to automate the big Heat Only Boiler (CAF 3) until the end of 2008. **Clarification Request No. 3** Please clarify the required measure and discuss the influence on the project.	B.2.4	IPPC permit includes a measure called "automatisation of HOB 3" scheduled 2008. This has already been realised and consists of automatic control of the boiler load/charge, according to the "requirements", in order to provide good quality services; this will not impact the project.	Closed, the permit has been checked by our local Auditor.

According to the 2006 IPPC permit for the Large Combustion Plant an action plan is required to automate the big Heat Only Boiler (CAF 3) until the end of 2008. **Clarification Request No. 4** The construction license covers the new installations described in the PDD. Hence, the effectively slightly higher power mentioned in the comment to A.2.3 is not covered by the existing license. Please clarify if there is any risk for the production of power and heat during the crediting period.	B.2.4	The construction license only covers the construction phase of the project. There was no need to change the licence. The "operational permits" for the operational phase of the project (including the environmental permit) was issued for the current capacity (see environmental permit).	Closed, copies from technical specifications have been provided to the AIE and the construction license has been checked by our local Auditor.
Clarification Request No. 5 Please clarify why calculation of project emissions indicated in chapter 6.5 of the PDD is mainly not consistent with the submitted Excel Spread Sheet for ex-ante calculation of project emissions?	D.1.1.1.	The Excel Spreadsheet for ex-ante calculation was an integrated part of the PDD. This table is further used for monitoring.	Closed
Clarification Request No. 6 There is a need to demonstrate for the figure of 17 % (2007) until 12 % (2012) of this parameter more in detail that these figures are sufficiently conservative. However, please discuss why these project losses shall not be calculated ex-post since the heat output of the production units and the thermal points is measured.	D.1.1.1	This was based on conservative estimates by the company. The project losses are monitored and the actual losses in the primary system will be used for the calculations of the emissions due to losses.	Closed, copies from Specification of the Rehabilitated boiler have been provided to the AIE.

Clarification Request No. 7 Please demonstrate that the indicated running time of new HOB is conservative.	D.1.1.1	This was based on supplier information and experience with similar boilers. New HOB rarely fail because it is commonly used modern technology. In case of failure there is usually back-up capacity available. There is no division of running time of the boilers in the PDD. At this moment the heat demand is lower than expected in 2004 due to circumstances that were not foreseeable. The real heat production is monitored ex-post and real production values are used for the calculation of project emissions and emission reductions.	Closed, the operating time of new HOB is monitored in the project.
Thermal efficiency of new HOB [%] **Clarification Request No. 8** The figure of 94 % for this parameter seems to be very high; please demonstrate, e.g. by means of technical specification data that this figure is sufficiently conservative.	D.1.1.1	This was an estimate based on information from the supplier of the new HOB 4. Moreover gas consumption and heat production are continuously monitored ex-post. Therefore the actual data will be used for the calculation of the project emissions and emission reductions (see Technical Specifications boiler and Brochure of the supplier).	Closed, technical specification has been checked by the Audit team.
Clarification Request No. 9 Please demonstrate that the indicated running time for rehabilitated HOB is conservative.	D.1.1.1	This was based on estimates by the company. HOB rarely fail because it is commonly used technology and the burners were replaced by modern reliable models. In case of failure there is often back-up capacity available. There is no division of running time of the boilers in the PDD. At this moment the heat demand is lower than expected in 2004 due to circumstances that were not foreseeable. The real heat production is monitored ex-ante and these values are used for the project emission calculations.	Closed

Thermal efficiency of rehabilitated HOB **Clarification Request No. 10** The figure of 90 % for this parameter seems to rather high; please demonstrate that this figure is sufficiently conservative.	D.1.1.1	The upgrade of the rehabilitated boiler was thorough and based on experience of Nuon with comparable projects the efficiency was conservatively estimated. Moreover gas consumption and heat production are continuously monitored ex-post. Therefore the actual data will be used for the calculation of the project emissions and emission reductions (see Specification of the Rehabilitated boiler).	Closed, the excel spread sheet has been revised appropriate-ly.
Electric efficiency of new cogeneration en-gines [%] **Clarification Request No. 11** The figure applied in the Excel Spread Sheet Calculation of 35,7 % is not conservative, please clarify.	D.1.1.1	This was based on supplier information.	Closed, the supplier informa-tion has been checked by the audit team.

Losses of primary transportation network [%] **Clarification Request No. 12** Has the figure of 22 % for this parameter been measured or calculated? There is a need to demonstrate more in detail that this figure is sufficiently conservative.	D.1.1.3	The measured data from 2003 showed losses of the primary system of 22.48%. Monitoring in 2006 after more precise heat meters were installed showed that the actual losses over 2006 were 27.1% which is actually a better representation of the baseline situation. In 2006 Termica started to implement losses reduction measures and for 2007 the losses have reduced (losses 2003 and 2006). **Answer of PP to new AIE request:** A memo (IRL-No. 22) has been submitted by the PP demonstrating the correctness of historical heat losses.	The figures for the heat losses of primary transportation network from the last years, submitted by AIE, have been checked by local Auditor together with Termica, taken into account the transportation conditions like pressure and temperature. **New AIE request:** The approach to define the baseline losses for the primary transportation network is not conservative enough; please revise the figure for the losses. **Final Conclusion of AIE:** The average annual losses over 2004, 2005 and 2006 have been based on the actual measured data from the monitoring system and the value is 27.4%. This loss value is a better indication of what would happen in the absence of the project activity (the baseline) than the 22% mentioned in the original PDD. The figure of 22% for heat losses has to be replaced by 26% which is more conservative value. The Excel File calculation and the attachment to the PDD have been revised correctly by PP. The heat losses in the baseline set at 26% of the heat production is conservative taken into account all available historical data.

Electric Efficiency of lignite fired cogeneration plant [%] **Clarification Request No. 13** There is a need to demonstrate more in detail that the figure of 28 % (2006) until 33 % (2012) of this parameter is sufficiently conservative, e.g. by submitting the confirmation of the Department for Planning, Studies and Engineering of Transelectrica SA (as quoted in chapter 5.2 of PDD).	D.1.1.3	The document "road map for the energy sector in Romania - 2003" on its page 86, there is a table with the most important units to be rehabilitated; there you can see Turceni unit (on lignite) has a net efficiency of 32.6% and this is considered one of the best (this was the reason for proposing it on the list of "to be rehabilitated" units. Actual fuel consumption and electricity production data from the lignite units of Transelectria the electricity company in Romania were used to estimate a conservative emission factor of the least efficient units that would probably be phased out in the period 2006-2012. As described in the PDD the project replaces the capacity these units. The trend line from 28% in 2006 to 33% in 2012 was based on this information and the road map for the energy sector in Romania 2003 (Grid emissions lignite units Romania).	Closed, the conservativeness of the calculation of the parameter Electric Efficiency of lignite fired cogeneration plant has been proved.
Emission Factor for Lignite [kg CO2/GJ] **Clarification Request No. 14** According to IPCC 2006 Guideline the default value for lignite is 101,000 kg CO2/GJ and the applied value is 101,2 please clarify.	D.1.1.3	IPCC 2006 was not issued in 2004 when the PDD was finished. IPCC 1996 Guidelines mentioned an value of 101.2 kg CO2/GJ. The difference is less than 0.2%.	Closed
Clarification Request No. 15 However, it has to be demonstrated how the existing but not yet certified Quality Management System does cover operational and management structure of the project relevant organization and staff.	D.3.1	The management system is actively used and it is the guiding document for managing the company. Based on the comments during the on site assessment an additional procedure has been made for the Cogeneration units (Management System).	Closed

Clarification Request No. 16 The figures in table 10 for total emission reductions in the years 2006 to 2012 are not consistent with the figures in the Excel calculation sheets, please clarify.	E.6.4	This difference was due to the fact that on 19 November 2007 we sent you by mistake a version of the spreadsheet that was not the final version. The final version is from 25 May and has been attached to this document. The numbers from the PDD and the final version of the spreadsheet have also been use in the contract with SenterNovem, the buyer of the carbon credits (Final version of the spreadsheet with the ex-ante emission reduction calculations).	Closed, the excel spread sheet has been revised appropriately.

Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)

Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
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Determination Reference List

Reference No.	Document or Type of Information
1.	Interview and on-site visit at S.C. Termica in Targoviste, Romania on December 3 and 4, 2007 by auditor of TÜV SÜD Industrie Service GmbH Determination auditors on-site: Robert Mitterwallner — TÜV SÜD Industrie Service GmbH, Munich, Germany Christian Delamarian — TUV SUD Romania S.R.L., Bucharest, Romania Interviewed persons: Viorel Tabacu — S.C. Termica SA, General Director Marius Sala — S.C. Termica SA, Interpreter Elena Blioyu — S.C. Termica SA, Data operator Alexandru Serban — S.C. Termica SA, Energetic dispatcher Mariana Mindrescu — S.C. Termica SA, Quality responsible person Leo Paulissen — Nuon, General Manager Eric Koudijs — KPMG, advisor of Nuon Geta Diaconu — KPMG, advisor of Nuon Ioan Isaila — S.C. Nuon Energia Romania S.R.L. (NER), Engineer
2.	Map of Targoviste with primary transportation network, Scale 1:5000, issued 2007
3.	Meter scheme, NER, November 16th 2007
4.	Heat Delivery Contract Nr. 784 between S.C. Termica SA and Municipality of Targoviste, March 18th 2004
5.	Construction License No. 26 of S.C. Termica SA for engine with 6,5 MWel and Boiler with 14 MWth; January 26th 2006
6.	Power Purchase Agreement No. 2 between S.C. Termica SA and S.C. FDFEE Electrica Muntenia Nord; August 9th 2007
7.	IPPC permit (*Autorizatia Integrata de Mediu*) No. 2564 of REPA Pitesti to operate the Thermal Power Plant of S.C. Termica SA; November 13th 2006

Reference No.	Document or Type of Information
8.	Licenses of the National Authorization for Energy Regulation for S.C. Termica SA to: • produce power (No. 742; June 8th 2006), • supply power (No. 762, November 16th 2006) • produce thermal energy (No. 28, June 28th 2000) • transport thermal energy (No. 29, June 28th 2000) • deliver thermal energy (No. 31, June 28th 2000) and • distribute thermal energy (No. 30, June 28th 2000).
9.	Excel Spread Sheet for Ex-Ante Calculation of Emission Reduction Units; Mai 25th 2004
10.	Determination Report of KPMG; November 9th 2004
11.	Erupt 4 - Final PDD of KPMG (without date)
12.	Monitoring Report for 2006 of NER, November 2007
13.	Excel Spread Sheet for Monitoring Calculation of Emission Reduction Units; June 16, 2008
14.	Maintenance and Repairs Contract between between S.C. Termica SA and NER; September 30th 2005
15.	Quality Management System including system procedures: MANUALUL DE MANAGEMENT CALITATE MEDIU for S.C. Termica S.A. Targoviste; November 16, 2007
16.	Print Screens SCADA from December 4th 2007
17.	NER: Computation Monitoring and CO2 emission reduction for Joint Implementation Project: Municipal Cogeneration Targoviste; November 9th 2007
18.	Offer for 8 Cogeneration Engines; June 17th 2005

Reference No.	Document or Type of Information
19.	Technical Description of Perkins combustion Engine Series 4000, date: 1999
20.	Gas Meter Actaris Fluxi 2300: certificate of 2005-07-15 and declaration of confirmation with Ro standards of 2006-05-05
21.	Attachment of NER for the final PDD (see IRL No. 11), dated December 05 , 2008
22.	Memo