

**UNITED NATIONS DEVELOPMENT PROGRAM  
GLOBAL ENVIRONMENT FACILITY  
Project of the ROMANIA Government**

**INDEPENDENT FINAL REVIEW**

**Project number:** ROM/00/G31/Rev.1/A/2/1G/31  
**Project title:** Capacity Building for GHG Emission Reduction through Energy Efficiency Improvement in Romania  
**Duration:** 3 years  
**Government Counterpart Agency:** Ministry of Industry and Resources (MIR)  
**Executing Agency:** United Nations Office for Project Services (UNOPS)  
**Starting date:** March 2003  
**End date:** October 31, 2006

<i>ACC Sector and Sub-sector:</i>	
Development issues:	GHG reduction, energy efficiency, capacity building
Government sector and sub-sector:	Energy and environment
Primary areas of focus/sub-focus:	Energy saving, investment generation, demonstration
Primary target beneficiaries:	ARCE, municipalities, enterprises, NGOs
Secondary target beneficiaries:	local suppliers of energy saving services and equipment

**Brief Description\*:**

This Project presents an innovative approach to address Romania's lack of investment in the field of energy efficiency in the municipal and industrial sectors. The Project will assist Romanian industries and enterprises in obtaining commercial investment financing for their Energy Efficiency projects from international and national financial institutions, such as FREE. It will also provide limited partial funding for selected energy efficiency projects in the public sector to demonstrate their capability to leverage financial resources from other sources for energy efficiency investments. It will provide technical assistance and undertake other capacity building activities to improve local capacity for leveraging investment financing for Energy Efficiency (EE) projects/schemes in future.

---

\* In this document, Project (with a capital P) refers to the UNDP/GEF Project, while project (s) – lower case p – refers to energy efficiency systems/proposals/activities.

## TABLE OF CONTENTS

	Page
<b>I. INTRODUCTION .....</b>	<b>1</b>
<b>A. Brief Description of Project .....</b>	<b>1</b>
<b>B. Objective of the Evaluation .....</b>	<b>3</b>
<b>C. Criteria for Review .....</b>	<b>3</b>
<b>II EXECUTIVE SUMMARY AND KEY FINDINGS .....</b>	<b>4</b>
<b>A. Project Results .....</b>	<b>4</b>
<b>B. Project Design, Implementation and Execution .....</b>	<b>5</b>
<b>C. Outreach and Promotion .....</b>	<b>6</b>
<b>D. Capacity Building .....</b>	<b>6</b>
<b>E. Coordination with Government and Non-Government         Organizations .....</b>	<b>6</b>
<b>III. PROJECT EVALUATION.....</b>	<b>6</b>
<b>A. Overall Performance .....</b>	<b>6</b>
<b>B. Project Design and Implementation .....</b>	<b>9</b>
1. Project Development Facilities (PDFs) .....	9
2. Initial Energy Efficiency (EE) Project Assessments ....	10
3. Technical Assistance .....	11
4. Direct Contributions .....	13
5. Financial Models .....	13
6. Administration .....	14
7. Exit Strategy .....	14
<b>C. Continued Outreach and Promotion .....</b>	<b>18</b>
<b>D. Capacity Building for EE Projects.....</b>	<b>19</b>
<b>E. Coordination with Government and Non-Government         Organizations .....</b>	<b>20</b>
<b>F. Sustainability .....</b>	<b>20</b>
<b>G. Financial Planning .....</b>	<b>21</b>
<b>H. Co-financing .....</b>	<b>21</b>
<b>I. Project Monitoring.....</b>	<b>22</b>
<b>IV. EVALUATION MATRIX .....</b>	<b>22</b>
<b>V. CONCLUSIONS AND OBSERVATIONS .....</b>	<b>23</b>
<b>ANNEXES</b>	
<b>A. TOR .....</b>	<b>24</b>

**B. Itinerary ..... 33**  
**C. Lists of documents viewed ..... 36**  
**D. UNDP/GEF Romania Training and Best Practice Manual.....39**

## I. INTRODUCTION

### A. Brief Description of Project

The Project is designed to help Romanian energy consumers find commercial financing for energy efficiency (EE) projects, and to build capacity for this activity to continue beyond the duration of the project. Notwithstanding the initiation of several energy efficiency programs in Romania over the last several years by the Romanian government, donor agencies, and international financial institutions, commercial financing remains a barrier to a robust energy efficiency market.

The following is a tabulated form of specific barriers to be addressed by the Project:

1.	Access to suitable credits with longer pay-back periods and lower interest rates.
2.	Lack of incentives to finance and invest on energy efficiency measures.
3.	Lack of information and experience of local banks in financing EE projects.
4.	Lack of information and experience of local companies, municipalities (incl. the housing sector) and other beneficiaries to analyze, prioritize and develop bankable energy efficiency projects, and to present them for financing to financial organizations.
5.	Lack of information and experience of local companies, municipalities and other beneficiaries to develop concrete investment strategies, taking into account the opportunities for increased energy efficiency both in the supply and demand side.
6.	Limited capacity of energy efficiency organizations in Romania to disseminate information, and to promote and support the development and implementation of relevant energy efficiency measures.
7.	Lack of specialized energy consulting services (NGOs and private) offering services such as audits and third party financing.
8.	Poor coordination of sectoral policies dealing with the energy and environment.
9.	Poor co-operation among different governmental and non-governmental organizations in promoting energy efficiency.

The expected end-of-the-Project situation foresees a body of projects under implementation that will serve as a model for project development and financing; in essence, a market for energy efficiency. This assumes an increasing interest and ability of local banks and other financial institutions to finance energy efficiency projects in Romania, as well as increased interest and capacity of local companies, municipalities and other target beneficiaries to develop and present EE projects for financing.

The immediate objectives of the Project are:

- Project Objective 1

To strengthen and enhance the capacity of local stakeholders to prepare “bankable” EE investment proposals and to manage the process of structuring financing for EE projects both in the private and the public sector.

- Project Objective 2

To leverage financing of at least US \$ 10 million for new, fully commercial private sector EE projects and \$2.5 million in public sector EE projects and to build simultaneously the capacity of the local stakeholders (through on-the-job training and otherwise) to finalize “bankable” investment proposals.

- Project Objective 3

To enhance the capacity of the local municipalities to leverage financing for EE projects in the public sector.

- Project Objective 4

To facilitate the replication of the Project activities and the expansion of the energy efficiency investments in the different sectors of the economy.

Some specific outputs of the Project with significant bearing on the reduction of barriers to EE project financing, are envisioned to be:

- (1) Demonstration of the technical, economic, financial, environmental and social feasibility of energy efficiency investments by leveraging other financial resources in a number of key energy efficiency technologies;
- (2) Increased awareness of the investment potential of energy efficiency projects among Romanian banks, with a corresponding increase in their experience and interest in financing EE projects;
- (3) Increased interest and capacity of Romanian companies, municipalities and other target beneficiaries to analyze, prioritize and develop bankable energy efficiency projects, and to present them for financing to diverse financial organizations;
- (4) Increased capacity of local stakeholders, including government institutions, NGOs, municipalities and private sector companies to promote and support the development and implementation of relevant energy efficiency measures;
- (5) Strengthened capacity of local NGOs and the private sector to provide energy consultancy services, with a specific emphasis on energy efficiency; and,
- (6) Enhanced co-operation between governmental and non-governmental organizations on energy related issues.

## B. Objective of the Independent Final Review

The objective of this review is to prepare a consistent report for the GEF Secretariat, that uses complete and convincing evidence to support its findings/ratings, and that considers the following issues:

- An assessment of the design, implementation and execution of the Project, showing relevant outcomes and achievement of the project objectives;
- An assessment of sustainability of outcomes;
- A summary of lessons and recommendations, that are supported by the evidence presented;
- The actual project costs (total and per activity) and actual co-financing used.
- Provide stakeholders with an objective view of how wisely and effectively GEF's funding for this Project was spent;
- Provide recommendations, based on the experience of this project, for the design and execution of future UNDP/GEF projects;
- Assess the overall impact of the Project in terms of *capacity building for GHG emissions reduction through energy efficiency in Romania.*

This report does not assess CO<sub>2</sub> savings resulting from the Project. A separate team of local consultants carried out that assignment. Consultation with those local consultants took place as part of the preparation of this report.

## C. Criteria for review

This evaluation addresses the following five major criteria:

- **Relevance:** The extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time.
- **Effectiveness:** The extent to which an objective has been achieved or how likely it is to be achieved.
- **Efficiency:** The extent to which results have been delivered with the least costly resources possible. Also called cost-effectiveness or efficacy.
- **Results:** The positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short- to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.
- **Sustainability:** The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally as well as financially and socially sustainable

## **II. EXECUTIVE SUMMARY AND KEY FINDINGS**

### **A. Project Results**

- Although the Project got off to a slow start and failed to meet early milestones, it accelerated implementation in the last year and substantially exceeded Project output guidelines.
- Detailed below is a summary of the Project's targets for the public and private sector, the level of implementation at the Mid-term Review (MTR), and final project implementation totals.

	<b>Project Targets</b>	<b>Mid-Term Levels</b>	<b>Project Totals</b>
Private Sector	\$ 10.0 million	\$ 2.0 million	\$ 20.0 million
Public sector	\$ 2.4 million	\$ 3.1 million	\$ 49.8 million

- This represents a substantial increase in the levels of implemented projects at the time of the MTR that took place in March, 2005. The dramatic increase in project implementation over the last 18 months was due to a number of factors including the following:
  - The Project team's capacity to screen and evaluate projects improved with experience
  - The time necessary to identify, develop and implement projects took longer than initially anticipated. As a result, a number of projects that were in the project pipeline at the time of the MTR did not materialize until the last stage of the Project
  - Continued outreach efforts generated additional projects for the pipeline
- A number of financial schemes were utilized to implement individual projects including the following:
  - Lease financing (1 project)
  - Supplier credit (3 projects)
  - Local bank financing (8 projects)
  - Build Own Operate Transfer BOOT (2 projects)
  - International Financial Institution Loans (3 projects)
  - Romanian Energy Efficiency Fund (FREE) (3 projects)
- The various financial schemes utilized to implement EE projects reflects a maturing of the commercial financial market in Romania and a broader understanding of the nature of EE projects within the market. Notwithstanding these developments, local banks and financial institutions retain conservative lending practices, do not accept energy savings as collateral, and focus primarily on balance sheet credit analysis of EE projects.

- EE projects were implemented in a wide range of sectors including the following:
  - Public lighting (3 projects)
  - Public buildings (8 projects)
  - Community heating (7 projects)
  - Water utilities (3 projects)
  - Apartment blocks (4 projects)
  - Industrial (2 projects)
  - Renewable energy (3 projects)
  - Combined heat and power (4 projects)
- This wide range of sectors covered by the Project established an impressive footprint in the Romanian EE market
- While the Project website provides a listing and brief description of all implemented projects, it does not provide information on the terms of financing for each project including maturities, interest rates and collateral requirements. In the absence of this data, it is difficult to build financial models for future projects.
- Several local governments implemented their EE projects with internal resources rather than through commercial financing. Although the Project called for increased financing of local EE projects, this is a subtext to the overall goal of carbon reduction. The fact that local governments used their own funds for this purpose suggest that they had a high comfort level with the estimated energy savings of EE projects
- The technical assistance component of the Project therefore effectively addressed the credibility gap that serves as a significant barrier to implementation of most EE projects. This element of the Project had a considerable impact on the public sector decision making process
- The impact of this development would have been enhanced with more information about how local governments came to their decisions and how they self-financed EE projects.
- The Project had a greater impact on the market than on policy. This is due to the fact that the UNDP/GEF Project Management Team (PMT) focused on project implementation and capacity building and did not interact with senior Romanian government official in policy discussions on a regular basis. This was a wise choice of priorities by the PMT as policy reform is a time consuming endeavor that can absorb substantial Project staff resource.
- The Project Document cited a lack of bank awareness of EE financing schemes and the fact that the Romanian banks do not provide “project” loans, but instead base their lending on balance sheet evaluations of the borrowers. This situation is not uncommon in developing countries where local banks take a very conservative approach to lending and rely almost exclusively on balance sheet



risk analysis. Although a few Romania banks have become more familiar with EE project financing, none of these banks will likely transition to project financing modalities in the near future. EE projects are not sufficiently large to drive this process.

## **B. Project Design, Implementation, and Execution**

- The technical assistance (TA) component of the Project, that funded independent EE project appraisals was extremely helpful in closing the “**credibility gap**” for local officials. In view of the fact that most TA expenditures ran from \$4,000-10,000 USD, this aspect of the UNDP/GEF Project generated the best value for dollar of expenditure.
- The Direct Contribution (DC) component of the UNDP/GEF Project, which represented a large share of Project expenditures, provided incentives to project beneficiaries through partial project costs write-downs. The benefits of the DC contribution were limited to no more than 20% of the project costs or \$50,000 (whichever is lower). This component of the Project is not replicable and appeared to have marginal impact on decision makers.
- The Agreements in Principle (AP) component of the Project called on the PMT to negotiate initial agreements between lenders and potential borrowers on the general terms for moving forward with a project. This element of the Project was sound as it required lenders and borrowers to take serious stock of a project early in the process.

## **C. Outreach and Promotion**

- Many local officials were impressed with the fact that the PMT traveled to their communities to discuss potential EE projects. This outreach component of the Project was well executed and was critical to the generation of deal flow for EE project financing. In addition to outreach, the PMT stayed involved with local governments from the initial contact through project implementation. This approach increased the success rate for projects that received PMT support.

## **D. Capacity Building**

- The Project, through the TA process, helped credential a number of local firms for EE project evaluation and implementation. The transparent contracting process, which included the publishing of winning bids and contract terms, also helped establish a baseline for others to follow in the contracting of these services outside the UNDP/GEF Project.

## **E. Coordination with Governmental and Non-governmental Organizations**

- The PMT worked closely with a number of key institutions including the Romanian Energy Conservation Agency (ARCE), the Romanian Energy Efficiency Fund (FREE), lending institutions, local governments and consultants in the EE sector. The Project would have benefited from greater input from senior Ministry representatives.
- The success of the UNDP/GEF Project should be carefully reviewed by senior Romanian government officials as they move forward with the recently launched program to promote and implement EE investments in the housing sector. Consultations with the UNDP office in Romania regarding continued support for EE project implementation, particularly efforts focused at addressing the credibility gap, could be extremely helpful to the success of the EE housing initiative. .

### **III. PROJECT EVALUATION**

#### **A. Overall Performance**

The GEF and UNDP should be pleased with the overall results of this Project. It substantially exceeded investment targets which were \$10 million in new investments in the private sector and \$2.5 million in the public sector.

At the time this report was prepared, 34 investment proposals had become 'definite' investments - meaning that a final financing or works contract had been signed, or that implementation was under-way or complete. Case Studies for these projects are provided in the attachment to this report entitled "Training and Best Practice Manual" prepared by the UNDP/GEF team. A summary of the projects, as reviewed by independent consultants, is provided below.

#### **Independent Assessment - Value of Investments Assisted by UNDP/GEF**

	<b>USD</b>	<b>USD</b>
<b>Public lighting</b> (3 investments)		
Bran (223)	125,000	
Câmpulung (166)	588,430	
Salonta (190)	385,000	<b>1,098,430</b>
<b>Public buildings</b> (8 investments)		
Alba-Iulia (89)	713,342	
Maramureş (278)	186,000	
Mica (240)	24,900	
Panaci (101)	27,000	
Satu Mare (96)	140,000	
Sighişoara (14)	371,108	
Târnăveni/ (85)	277,676	

Victoria (158)	89,000	<b>1,829,026</b>
<b>Community heating</b> (7 investments)		
Brad (198)	1,025,100	
Cluj (108)	580,000	
Iași (138)	1,337,500	
Mangalia (135)	1,089,200	
Medgidia (73)	2,281,940	
Tulcea (171)	1,122,200	
Tulcea (247)	997,960	<b>8,433,900</b>
<b>Water utilities</b> (3 investments)		
Vatra Dornei (53)	3,800,000	
Focșani (221)	65,230	
Cehu Silvaniei (249)	120,000	<b>3,985,230</b>
<b>Apartment blocks</b> (4 investments)		
Cluj (26)	187,820	
Rădăuți (165)	243,560	
Târgu Jiu (20)	n/a	
Topoloveni (67)	n/a	<b>431,380</b>
<b>Industry</b> (2 investments)		
Iridex (140)	1,377,500	
Oradea (253)	366,572	<b>1,744,072</b>
<b>Renewables</b> (3 investments)		
Mangalia (168)	455,600	
NordSimex (146)	513,575	
Ulerom (137)	560,000	<b>1,529,175</b>
<b>Combined heat and power</b> (4 investments)		
Isovolta (105)	1,740,577	
Sicomed (98)	1,500,000	
Rulmenți (200)	17,500,000	
Colterm (40)	30,000,000	<b>50,740,577</b>
<b>Total investment</b>	<b>69,791,790</b>	<b>69,791,790</b>

The UNDP/GEF support for these initiatives and level of involvement varied considerably based on the project proponents, source of financing and other factors. Many of the EE projects did not rely on third-party financial institutions and were implemented instead with “own resources.” This was particularly the case where local governments funded projects from their capital budgets. This development may be viewed as falling below the UNDP/GEF Project objective of “leveraging” other financial resources. However, all of the self-financed projects achieved the fundamental goal of reducing GHG emissions.

While “leveraging” financial resources was an important aspect of the UNDP/GEF effort, and while a number of projects were financed by commercial institutions, the capacity to achieve this goal was limited by the lending practices of local commercial institutions. Nevertheless, the self-financing of EE projects represented a major accomplishment as

local governments and industries in these cases assumed performance risk for the projects. This reflected the confidence of local officials in the following:

- the viability of EE projects
- the projected savings from EE investments
- the capacity of local firms to properly implement EE projects

This development suggest that substantial savings in GHG emissions can be achieved through dedication of own resources once confidence in EE project implementation is established. Future GEF initiatives should incorporate government and industrial self-funding of EE projects as a companion objective to commercial financing.

The Project Document also cited a lack of bank awareness of EE financing schemes and the fact that the Romanian banks do not provide “project” loans, but instead base their lending on balance sheet evaluations of the borrowers. This situation is not uncommon in developing countries where local banks take a very conservative approach to lending and rely almost exclusively on balance sheet risk analysis. Although a few banks have become more familiar with EE project financing as a result of this Project, none of these banks will likely transition to project financing modalities in the near future. EE projects, by themselves, were not sufficiently large to drive this transition.

## **B. Project Design, Implementation and Execution**

### **1. Project Development Facility (PDF) Structure**

The UNDP/GEF Project was designed as a PDF for EE projects in Romania. Several PDFs have been established in a number of countries by bilateral donor agencies and international financial institutions. PDFs are generally design to provide up-front technical assistance support for infrastructure projects to address the barrier of early project development costs. The Romanian PDF is unique in that it focused exclusively on EE projects whereas other PDFs have focused more broadly on infrastructure projects or public/private partnership initiatives.

This Final Evaluation Report draws on the experience of other PDFs to help shape the Report’s conclusions and recommendations..

The UNDP/GEF Project is unique from other PDFs in that it provides project support through a number of initiatives as set out below.

- Initial Project Assessments – This involved an independent assessment of EE project ideas to determine if they are technically robust and financially viable. This was normally carried out by the PMT.

- Agreements in Principal (AIP) -- If an EE project proposal was sound, the PMT helped identify commercial funding and facilitated development of an AIP between project developers and project lenders.
- Technical Assistance (TA) -- For the most promising projects only, the PMT used non-reimbursable funds to finance or co-finance business plans, energy audits, pre-feasibility studies, feasibility studies or whatever was required to turn the EE project into reality. This TA was free-of-charge or co-financed, depending on the amount of work involved and the cost of consultant support. This support was generally carried out by consultants hired by the PMT through competitive bidding.
- Direct Contributions (DC) – Cash grants equal to up to 20% of total project costs or \$50,000 USD (whichever is lower). At least 20% of the project's costs must come from the developer's own funds and at least 50% of the project's benefits must be due to energy savings

## 2. Initial Project Assessments

This element of the Project was well designed and implemented. The initial Project design called for a PMT limited to a director and support staff. This aspect of the Project was wisely revised in early implementation to build a PMT will experienced technical, financial and commercial lending experience. It allowed the PMT to more effectively review requests for TA and DC assistance and to provide initially project assessment assistance to project developers.

The PMT that ran the UNDP/GEF Project on a day-to-day basis included the following individuals:

Name	Title	Role
Mark Velody	Chief Technical Adviser	Project Manager
Laura Rădulescu	Outreach Manager	Identified investment proposals
Vasile Angheluță	Energy Efficiency Manager	Determined whether proposals were technically robust with good internal economics
Ștefania Racolța	Head of Banking Relations	Determined whether investors were solvent or creditworthy
Ciprian Ghețău	Finance Manager	Determined whether investors were committed to invest

Raluca Ghineraru (Alice Achim) (Roxana Şchiopu)	Office Manager	Hired consultants and procured equipment
Emilian Popescu (Victor Tomadini)	Logistics Officer	Carried out logistical support, took infra-red photographs and drove the project vehicle.

Given the nascent EE market in Romania, this core team of technical advisors that offered free initial project appraisals to project developers and beneficiaries was an asset in and of itself. Some **300** applications for support were reviewed by the UNDP/GEF team. Applications were analyzed to see whether three essential elements were present: An investment proposal had to be:

- Technically robust;
- Economically realistic;
- Financially viable, meaning that the project developer either had funds in place or was creditworthy and willing to use commercial financing.

Of the 300 applications reviewed, **68** proposals were considered to meet the necessary technical, economic and financing criteria to merit additional support and received Technical Assistance and/or a Direct Contribution.

The expenditure of PMT time on initial project evaluations, however, limited time available for moving viable projects to closure. The PMT indicated that an “open door” policy was important to project outreach and marketing efforts. This approach was reasonable during the initial phase of the project, but had diminishing value as the PMT shifted focus to implementation of viable projects.

Time spent on project screening can be reduced through a more selective intake process where project promoters must complete a project application document with minimal information requirements. Such a form was developed and is on the PMT’s website. Future UNDP/GEF initiatives in this area should review the application form on the Project’s website and seek to balance open door objectives with the effective use of Project team resources.

### **3. Technical Assistance (TA)**

UNDP/GEF contracted 57 studies by external consultants, including Feasibility Studies, Solutions Studies, Environmental Impact Studies, Basic Designs and a Thermal Imaging poster campaign. The total cost of these studies was 246,050 USD (+ VAT), with an average cost per study of 4,317 USD (+ VAT). The titles of the studies, the names of the

winning consultants and the value of the winning offers can be found on the UNDP/GEF Romanian Project website at [www.energie.undp.ro](http://www.energie.undp.ro)

Based on discussions with project developers and others, an independent study of a particular EE project funded and reviewed by a UNDP supported institution, gave that project greater credibility in the minds of the project beneficiaries. This effort to close the **“credibility gap”** was consider critical to the success of many projects. In view of the fact that most TA expenditures ran from \$4,000-10,000 USD, this aspect of the UNDP/GEF Project generated the best value for dollar of expenditure. It also demonstrated the unique role UNDP played in the project development and implementation process.

The Project Steering Committee should pay special attention to this issue and consider means of continuing to address the credibility gap with EE project beneficiaries. This is especially important given the introduction of the new EE housing initiative. Under this initiative, the national government will provide grants equal to 34% of total project costs, while local governments will provide additional grants up to 33% of total project costs. The balance is to be provided by housing associations. While grants for up to 67% of project costs will provide incentives for housing blocks, the need to convince housing association members of the viability of EE projects remains a critical part of the program.

In Poland and other East European countries where similar EE housing programs have been in place, one of the major barriers to program implementation has been the difficulty of getting housing association members to agree to take on debt to finance EE improvements. Independent energy audits of EE projects have proven to be an important component of successful housing programs in these countries.

Given UNDP’s experience in funding energy audits and feasibility studies, knowledge of local consultants able to perform such work, and reputation with local government officials in this sector, UNDP would be an excellent institution to continue this role for the EE housing program.

While the TA component of the Project was highly successful, it is not sustainable without the existence of additional special grant funds from the Romanian government. This is not likely. Several PDFs have used a more sustainable model, where project development assistance is provided in the form of a no interest loan that is repaid to the PDF if the project reaches financial closure.

Future UNDP/GEF projects should consider including a repayment provision in their project design. Table 3 below, demonstrates the impact of a PDF technical assistance program where repayment is required upon project financial closure. For purposes of this Table, a PDF for a revolving energy audit fund with an initial capitalization of \$500,000 USD is assumed. If the PDF experiences a 50% success rate, the initial capitalization will support nearly \$ 1 million USD in energy audits over five years. If the rate of repayment reaches 75%, total project support over five years would reach nearly exceed \$1.5 million USD. This represents a 3-1 leveraging capacity of the revolving PDF funds.

**TABLE 3: TOTAL ENERGY AUDIT FUNDING AND PROJECTS SUPPORTED \***

50% Success Rate

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Beginning Balance	\$500,000	\$375,000	\$187,500	\$93,750	\$46,875	
Outlays	\$250,000	\$375,000	\$187,500	\$93,750	\$46,875	\$953,125
Audits	10	15	7	3	2	38
Repayments	\$125,000	\$187,500	\$ 93,750	\$46,875	\$23,437	\$476,562
Interest Income	\$15,000	0	0	0	0	
<b>Ending Balance</b>	<b>\$375,000</b>	<b>\$187,000</b>	<b>\$93,750</b>	<b>\$46,875</b>	<b>\$23,473</b>	

75% Success Rate

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Total</u>
Beginning Balance	\$500,000	\$452,500	\$339,375	\$254,531	\$190,898	
Outlays	\$250,000	\$452,500	\$339,375	\$254,531	\$190,898	\$1,487,304
Audits	10	8.1	13	10	7	59
Repayments	\$187,500	\$449,375	\$254,531	\$190,898	\$143,173	\$1,115,477
Interest	\$15,000	0	0	0	0	
<b>Ending Balance</b>	<b>\$452,000</b>	<b>\$339,375</b>	<b>\$254,531</b>	<b>\$190,898</b>	<b>\$143,173</b>	<b>\$143,173</b>

**\* Assumptions**

- 1) The timeframe between completed audit and project financing is relatively short. All audits in each year are therefore assumed to result in financing or failure in the year of the audit.
- 2) Yearly averages are used. A more precise estimate would require a monthly cash flow analysis.
- 3) Management fees not included.
- 4) Repayment is made only if the project is implemented.

**4. Direct Contributions (DC)**

The DC component of the UNDP/GEF Project, provided incentives to project beneficiaries through partial project costs write-downs. The benefits of the DC contribution were limited to no more than 20% of the project costs or \$50,000 whichever is lower. At least 20% of the project costs must come from the project developer's own funds and at least 50% of the project benefits need to be due to energy savings.

A total of \$487,000 USD in DC contributions was provided to 19 public projects to help lower the overall costs of the EE investment. The DC contributions were provided in the form of equipment purchased with GEF funds for particular projects



The DC grants alone would not stimulate project beneficiaries to move forward with EE investments unless they believed that the EE savings were viable and attainable. In this respect, the credibility factor for EE projects was more important to beneficiaries than a DC grant. A reasonable man would not spend \$100,000 for an EE project simply to obtain a \$20,000 grant if he did not believe the project would produce substantial energy savings. In this case, confidence in the EE project was a necessary pre-condition to a requested for DC assistance..

The DC component of the Project is not sustainable or replicable without the existence of additional special grant funds from the Romanian government. This is not likely. Once made, the GEF grant funds are absorbed by individual projects and have no measurable or lasting impact on the market. There are no re-flows from this grant component of the Project.

## **5. Financial Models**

While the UNDP/GEF Project was successful at moving projects forward to implementation, the identification of financial “models” for EE projects was not fully developed. The one page summaries of successful projects, provided during the final evaluation mission, and placed on the Project’s website were very helpful. These summaries explained the “what” for each project but not the “how.” In order to more fully develop “models” for EE project financing, the summaries should provide more information on how the projects were developed and finance.

For public sector EE projects financed from “own source” revenues, the Project’s results would have been enhanced if more information were provided about the local governmental decision making process. For example, how did the local government reach the decision to dedicate funds for EE purpose? How was the project recorded on the government’s financial statements? What level of approval was needed to make this decision? How was this approval obtained? If funding came from the government’s capital budget, how were conflicting demands on these funds handled and how did the EE projects obtain priority for capital expenditure? Were energy savings reflected in the municipalities operating budgets? Answers to these questions could be used to establish a more common model approach for local government self-financing of EE projects.

For public sector projects financed from commercial sources, the terms of financing would be helpful to other local officials to determine if their own projects could qualify for financing. Of particular concern would be the interest rates, maturities and collateral requirements for such financing.

Similarly, discussions regarding the maturities, interest rates and collateral for private sector financing of EE projects would be very helpful to future project proponents and would begin to identify financial “models” for these projects. For example, the summary of successful projects should provide a general discussion of how and what local banks consider as collateral for EE projects, what were the maximum maturities and typical

interest rates for such loans and how did annual debt service relate to annual energy savings. A brief discussion of these issues would be a very helpful addition to the packaged of successful projects.

## **6. Project Administration**

The general administrative actions set out in the Project Document including opening an office, purchasing equipment, establishing a website, hiring staff, finalizing guidelines for supporting energy efficiency projects, and construction of a partial grants program were implemented in a timely fashion. The implementation of the Project budget, however, initially fell behind projections.

In 2004, expenditures were at 82% of projections. Based on the Mid-term review, it was determined that there was no apparent programmatic problem associated with this lower spending level that required adjustments in operations. Expenditures did accelerate in 2005 as a number of municipal projects with DC disbursements were implemented. The Project continued to ramp up in 2006. This aspect of the Project reflects the general nature of a PDFs where early expenditures take time to produce final project results.

Project implementation was driven by the dual objectives of delivering successful EE projects that leverage other resources and delivering the Project budget in a timely manner. These are not necessarily conflicting mandates but required careful reconciliation of interest. This issue goes to the heart of the PMT's daily activities and focus. It required a balance of capacity building and project development and trade-off between short-term and long-term impacts on the market. The PMT was able to balance these interests and reach expenditure and project implementation goals by the end of the Project.

## **7. Exit Strategy**

There was no discernable exit strategy for the PMT contemplated in the Project Document. This was an unfortunate shortcoming in the project design as the PMT assembled to promote, evaluate and facilitate EE projects in Romania was an asset. The team possessed technical, financial and marketing skills and a unit cohesion that was unique in Romania. They were distinct from engineering firms that seek to be retained to perform studies or implement EE projects. They were also distinguishable from project promoters that focus on a limited number of projects, and seek maximum rates of return from project implementation.

The PMT acquired a unique knowledge of EE project implementation that was not available in any other institution in Romania. The PMT was also seen as an honest broker for EE projects with established credibility in the market that served as an important asset to project proponents with sound EE proposals.

In the final analysis, the ultimate objective of the PMT was to generate "deal flow." Deal flow is critical to a successful commercial lending enterprise or equity investment fund.

It is the life blood upon which these financial institutions depend to be successful. To the extent that the PMT was able to generate a critical mass of high quality EE projects for investment, they were a potential asset to a number of financial institutions.

The sustainability and overall impact of this Project would have been enhanced by a successful strategy to transition the PMT to a private sector enterprise. This issue was raised during the MTR and a number of potential exit strategies were suggested. Following the MTR, the PMT explored a number of potential exit strategies. The strategies considered and the results of each effort are summarized below.

- **City of Bucharest.** The PMT worked with the UNDP country office to try to attract funding from the City of Bucharest to create an energy master plan and investment strategy. It now appears that the City will run the project, but managed it directly rather than through UNDP.
- **UNEP/UNECE/FFEM/UNF/GEF.** A \$12 million UNEP-led initiative to support an Equity Investment Fund for EE and renewable energy projects to operate in 12 beneficiary countries, will involve UNDP Romania in some respect. The UNDP country office suggested that the PMT could be an effective “deal flow” originator for the Fund. There have been delays in issuing the Project Document; it is therefore unlikely that any activities will happen prior to the expiration of the UNDP/GEF Project and the disbandment of the PMT.
- **ARCE.** It was suggested that ARCE could request a new budget for 2006 to run a new energy efficiency project through UNDP. It is not clear whether this will be successful.
- **Carbon Financing.** Attempts to establish a possible project for Joint Implementation was initially considered but cancelled, as the Ministry of Environment is now interested mainly in the Emissions Trading Scheme, in which some 400 Romanian energy consumers will become participants upon EU Accession.
- **CEB.** The Council of Europe Development Bank (CEB) expressed interest in financing a project in Romania on the theme of energy efficiency. An outline proposal was prepared by the PMT and submitted through UNDP CO. Funding a UNDP project seems to be too large a diversion from business-as-usual for CEB.
- **FREE.** Discussions about merging with FREE were unsuccessful. UNDP/GEF continues to support FREE, feeding projects to it from time to time.
- **Private sector.** A private sector environmental company (foreign investor) expressed interest in taking over the entire PMT from November, as the nucleus of its planned operation in Romania. For a variety of reasons this did not materialize but represented an excellent exit strategy model.

### **C. Continued Outreach and Promotion of EE Projects**

The PMT engaged in extensive outreach activities through individual meetings with local project sponsors, industrial representatives and local government officials, as well as through presentations at related events and internet activities. Many local officials in smaller communities were especially impressed with the fact that UNDP Project team traveled to their communities to discuss projects.

At the close of the Project, thought should be given to means of continuation of this promotional effort. One option would be to help prepare presentation documents for local government officials who successfully implemented EE projects. These presentations could be given at regional and national meetings of local officials. Presentation of EE success stories should help stimulate interest among local officials and build confidence in undertaking EE investments. Moreover, the presenters would be able to go into considerable detail about their process of identification, development and funding of EE projects from a government perspective.

### **D. Capacity Building**

The UNDP/GEF project was given the mandate to increase the capacity of various stakeholders to identify, develop, finance and implement EE projects and promote strategies to improve EE investments in different sectors. The contracting process utilized by the PMT for technical EE studies was very helpful in building a broader network of qualified local consulting firms to conduct energy audits and related studies. The Project, through the TA process, also credentialed these local firms for this type of work in the future. The transparent contracting process, which included the publishing of winning bids and contract terms, also helped establish a base line for others to follow in the contracting of these services outside the UNDP/GEF program.

This positive development was the due to the fact that the PMT possessed the technical expertise to properly construct terms of reference for technical studies and the capacity to evaluate the quality of work performed by local consultants.

In the area of capacity building for municipal governments, the PMT was involved with municipalities as closely as possible at every stage of development of their EE investment proposal. Typical projects took up to one year to travel from initial idea to final investment decision, during which time the municipal beneficiaries:

- Discussed initial technical and financing ideas with UNDP/GEF specialists;
- Discussed financing with a bank, if commercial financing was required;
- Signed Agreements-in-Principle that, subject to the outcome of a study to be financed by UNDP/GEF, the municipality would invest in energy efficiency;
- Made observations on draft of Terms of Reference;
- Participated in committees to select consultants under UNDP rules;
- Received UNDP/GEF's observations on interim and final reports by consultants

- Together with UNDP/GEF, approved the final studies;
- In many cases, went on to order additional studies (such as Basic Design);
- Presented fully-supported technical and financial proposals to the Municipal Council for a final investment decision;
- And in many cases, invested.

The UNDP/GEF project also was responsible for working closely with local financial institutions to enhance local financing capacity for EE projects and to assist industrial and municipal energy-related entrepreneurs in their discussions with financial institutions. This process was primarily accomplished through the execution of “Agreements in Principal” between project developers and lenders. This process was enhanced due to the fact that the PMT possessed the financial expertise to help developers understand the financial needs of lending institutions and to help banks understand the economics of EE projects.

During the MTE, the PMT raised a number of thoughtful questions regarding policy advocacy, capacity building, and macro-activities designed to leverage energy efficiency financing for many similar projects through pilot project initiatives.

The MTE recommended that the PMT remain focused on project implementation and not engage in extensive advocacy activities or policy deliberations. Managers of PDFs are often tempted to divert resources from project implementation to policy advocacy. This is natural as lessons learned from project development can be helpful in shaping national policy. Policy advocacy, however, can be time consuming and policy reform requires a substantial timeframe for implementation. To the extent that lessons learned from PDF activity can help shape national policy, the PDF management should communicate their acquired knowledge and insights to appropriate government officials. Policy advocacy beyond this point, however, is ill advised as it rapidly reaches the point of diminishing returns.

The MTE also recommended that resources for capacity building going forward should focus on dissemination of information on successful projects. Lessons learned, financial structures and transaction documents from these successful projects should be broadly disseminated to facilitate replication and standard practices.

### **E. Coordination with Governmental and Non-governmental Organizations Working on GHG Reduction Strategies and Initiatives**

The UNDP/GEF Project was also given the mandate to forge new links with various government and non-governmental bodies to develop joint actions and strategies for EE and GHG projects. The UNDP/GEF team worked closely with a number of key institutions including ARCE, FREE lending institutions, local governments and consultants in the EE sector. The Project would have benefited from greater input from senior Ministry representatives.

Based on meetings with senior management of FREE, ACRE, and the Romanian – American Enterprise Fund, there was clear, constructive and on-going collaboration among parties. Each party was well aware of their respective roles in the market, they did not consider other parties as competitors or rivals, and they realized the benefit of working closely together.

The Ministry of Industry and Resources had less contact with the PMT as most of the interaction between the PMT and the Romanian Government is through ARCE. This was not a factor that inhibited the ability to the PMT to achieve Project objectives which are project not policy focused.

## **F. Sustainability**

While the Project had demonstrable and impressive impacts on the EE market in Romania, it is not, on the whole, a sustainable model. Some elements of the Project will have a sustainable impact including the following:

- Enhanced capacity of local consultants to conduct EE technical studies and implement EE projects
- Enhanced capacity of local officials to engage technical consultants and evaluate their work (limited primarily to local governments directly involved in the Project)
- Enhanced capacity of some local banks to review and finance EE projects (albeit through standard lending practices)
- Enhanced interest in EE projects by local officials and industrial representatives based on dissemination of successful project summaries

Other aspects of the Project are not sustainable including the following:

- Independent technical assessments of proposed EE projects by the PMT
- Funding for technical assistance studies by local consultants
- Credibility enhancement for EE projects through independent UNDP/GEF supported assessments of EE projects
- Project buy-down assistance in the form of equipment purchases

To enhance the sustainability of future PDF–type GEF projects, the following modifications in project design should be considered:

- The Project Document should call for the formulation of an exit strategy for the PMT and this strategy should be factored into the PMT’s operation from the start of the Project
- Technical assistance provided to project beneficiaries should be provided on a reimbursable basis where the costs of studies are repaid at the time of project financing

## **G. Financial Planning**

In the first three years of operations, the Project's expenditures failed to closely track projected outlays in the Project Document. At the time of the MTE, expenditures were only 82% of projected targets. This factor, among others, led some stakeholders to suggest major revisions in the Project design and operations including a change in PMT personnel and merging of the Project with other related activities and programs in Romania.

The MTE, however, found that the Project was substantially sound and that although expenditures had fallen behind projections, this did not reflect structural problems with the Project. The MTE report stated:

“There is no apparent programmatic problem associated with this lower spending level in 2004 that merits adjustments in operations. Expenditures should accelerate in 2005 as a number of municipal projects with DC disbursements are expected to close.”

Rather than structural or serious operational problems, the shortfall in Project outlays reflected the nature of PDFs, where expenditures start slowly and ram up during the later stages of implementation. This is particularly the case where Project outlays, in the form of grants, are tied to the actual implementation of EE projects. The mismatch in actual expenditures vs the projected budget was not a sign of ineffective project implementation.

During the last year and a half of the Project, expenditures exceeded projections and the shortfall in Project outlays was recovered by the time of Project closure. This Final Evaluation therefore confirms the findings of the MTE.

Projected outlays in Project Documents are often, at best, a good guess at the pace at which a project will deploy resources. This is especially the case when Project Documents are developed by inexperienced consultants. The UNDP/GEF should be careful not to over react to, or over analyze, actual expenditure levels to budget projections in Project Documents. The failure or success of a Project's implementation will likely be evinced by factors other than outlays.

However, recognizing the importance of having sound implementation benchmarks for UNDP/GEF projects, future PDF-type projects supported by the UNDP/GEF should be designed by seasoned project developers with some experience in PDF operations.

## **H. Co-Financing**

According to the Project Document,

“The Government of Romania has set up a \$1 million Special Fund for parallel financing of EE projects. Of this, \$175,000 has already been spent and/or committed.

The balance, \$825,000, is available for supplementary funding for energy efficiency projects formulated under the UNDP/GEF Project.”

Based on discussions with PMT, the UNDP office and the Romanian government officials, the \$875,000 in co-financing from the Romanian government through the Special Fund did not materialize. Apparently other budget demands led to a termination of the Special Fund. According to the PMT, some of the shortfall in co-financing was made up through additional Romanian budget commitments to ARCE. However, without the ability to obtain or review long-term budget projections by the Romanian government at the time of Project Design, as compared to Romanian government spending during the Project’s duration, it is difficult to provide an independent evaluation or validation of this development. Nevertheless, it is certain that co-financing was not provided by the Romanian government as supplemental funding for EE projects.

Host country failures to fulfill co-financing pledges are unfortunate and can undermine the effectiveness of GEF Projects. Every effort should be made to drive this point home to government officials when pledged co-financing is not forthcoming. However, changes in government administrations and conflicting demands on a host country’s budgetary resources over the 3-5 year GEF Project implementation schedule may result in modifications to host country’s commitment. To help avoid this circumstances, host country commitments should be sought from the highest possible level of government during Project Design and this commitment should be provided in a form that creates a moral if not a legal obligation on the part of the government to comply with these pledges.

In this instance, the Romanian government’s failure to provide co-financing did not undermine the effectiveness of the Project. The Project was able to meet all Output requirements with funding made available from the GEF.

## **I. . Project Monitoring**

Project implementation was subject to administrative review and oversight by three separate offices: UNOPS – Geneva, UNDP – Romania, and UNDP/GEF Bratislava. This created a dynamic where the PMT served three masters. Although this placed additional demands on the PMT, it also provided broader input on Project implementation, which was helpful.

The PMT had a cooperative relationship with UNOPS Geneva and worked effectively with the system. Although UNDP Romania and UNDP/GEF had different immediate objectives, they were not in conflict to the point of creating instability in, or lack of clear direction to the PMT. In fact, the dynamics generated by this structure provided healthy dialogue and useful critical assessment of ideas and policies.



#### **IV. EVALUATION MATRIX**

The matrix set forth below provides a rating for the Project in several categories. The rating given to each category is based on the information contained in this report.

1	Project design	HS
2	Implementation approach	S
3	Country ownership/drivers	S
4	Outcome/Achievement of objectives ( the extent to which the Project's environmental and development objectives were achieved)	HS
4	Stakeholder participation/public involvement	HS
5	Sustainability	US
6	Replication approach	S
7	Cost-effectiveness	S
8	Monitoring and evaluation	HS
9	Financial planning	S

#### Legend

HS	Highly Satisfactory
S	Satisfactory
MS	Marginally Satisfactory
U	Unsatisfactory
NA	Not applicable

#### **V. CONCLUSIONS AND OBSERVATIONS**

As with most innovative initiatives, Project startup is the most difficult and challenging stage of project implementation. There are few, if any, guidebooks or examples to draw from and the process involves a certain amount of trial and error. Even small decisions at this stage may have a relatively large impact on the Project's success.

Although the Project was conceived in the 1990's, its start-up did not begin until 2003. Several factors contributed to the delay in implementation that were beyond the control of the UNDP and the PMT. Nevertheless, special attention is required during the early stages of any new Project.

Mid-term reviews should not only seek to assess the performance of a project against established benchmarks, they should also offer specific recommendations to address areas where a project is underperforming. This aspect of a MTR would provide its greatest value to the project implementation team.

The Project Document calls for evaluation of the capabilities and identification of training needs of local expert institutions, engineering and consulting companies to assist the client in preparing “bankable” energy efficiency investment proposals and to manage the process of structuring financing for EE projects in the public and private sector.

Capacity building for the design of financial structures and preparing “bankable” projects must be based on the conditions in the financial markets. When interest rates are running at 25 – 30%, a perfectly designed project is not “bankable” simply because it cannot produce sufficient energy savings to support the debt service payments on the project loan. Future GEF concept documents that call for development of “bankable” projects should require an assessment of local financial market conditions. If local interest rates are exceeding high and the costs of energy is low a financial programs is not likely to succeed without financial intervention in the form of substantial grants or concessionary lending.

The Project Document cited a lack of bank awareness of EE financing schemes and the fact that the Romanian banks do not provide “project” loans, but instead base their lending on balance sheet evaluations of the borrowers. This situation is not uncommon in developing countries where local banks take a very conservative approach to lending and rely almost exclusively on balance sheet risk analysis. Although a few Romania banks have become more familiar with EE project financing, none of these banks will likely transition to project financing modalities in the near future. EE projects are not sufficiently large to drive this process.

Efforts to move banks toward project financing models, where energy savings are seen as collateral for lending, is not likely to succeed in the near term. Future GEF projects should focus instead on identifying surrogates for energy savings in financing designs that are acceptable to banks.

Successful project development involves more than simply bringing parties together. It requires the application of experience and intellect to a number of issues raised during the development and financing of a project. It requires a capacity to find common cause among parties with divergent interest, to balance the interest of lenders and borrowers and to reconcile the expectations of developers and project beneficiaries. Simply providing technical assistance for particular projects fails to recognize this reality. The makeup of the PMT and their approach was instrumental in the Project’s success. Future GEF projects should seek to replicate this example and provide a more holistic approach to project identification and development.

**ANNEX A**

**CONSULTANTS' TERMS OF REFERENCE**

UNDP/GEF\*

Capacity Building for GHG Emissions  
Reduction through Energy Efficiency  
in Romania

**Terms of Reference**

**for an**

**Independent Final Review of the Project**

*(Final version, July 11<sup>th</sup> 2006, except that the no. of  
working days has been raised from 10 to 15 and  
contractual issues section has been removed)*

**Contents**

Introduction .....	26
Objectives of the Review.....	28
Consultant profile .....	29
Duration and timing of the Review .....	29
Scope of Work.....	30
Review of documentation .....	30
Mission to Romania .....	31
Reporting.....	31
Immediate Objectives and Outputs .....	32
Appendix C.....	38
List of Documents Reviewed .....	38

## Introduction

This UNDP/GEF Project is designed to help Romanian energy consumers to design, finance and implement energy efficiency investment projects, and to build capacity for this activity to continue beyond the duration of the Project.

From the point of view of project objectives, the key stakeholders are Romanian municipalities and companies who make energy efficiency investments as a result of interaction with the project. From the point of view of the design and implementation of the project, the key stakeholders are:

- The Romanian Ministry of Economy and Trade through 'ARCE' - the Romanian Agency for Energy Conservation; (Bucharest)
- UNDP Romania (Bucharest)
- UNDP/GEF (Bratislava)
- UNOPS (Copenhagen) - as executing agency
- The UNDP/GEF Energy Efficiency Financing Team (Bucharest)
- The GEF Secretariat, who are not involved project implementation, but to whom the Final Review to be prepared under this Terms of Reference will be submitted.

The Project Document (PJ), an agreement between the Government of Romania, UNDP and UNOPS, was signed in November 2002, replacing a PJ of 1998 that was not implemented successfully. The revised PJ of 2002 introduces the Project as follows.

This project presents an innovative approach to address Romania's lack of investment in the field of energy efficiency in the municipal and industrial sectors. The project will assist Romanian industries and enterprises in obtaining commercial investment financing for their Energy Efficiency projects from international and national financial institutions, such as FREE. It will also provide limited partial funding for selected energy efficiency projects in the public sector to demonstrate their capability to leverage financial resources from other sources for energy efficiency investments. It will provide technical assistance and undertake other capacity building activities to improve local capacity for leveraging investment financing for Energy Efficiency (EE) projects/schemes in future.

The Development Objective is defined in the PJ

The development objective of the Project is to increase the energy efficiency in Romania, thereby contributing to the sustainable economic development of the country as well as to the reduction in Romania's greenhouse gas emissions in response to its commitments to the UNFCCC. The project will remove the existing technological, institutional and financial barriers that limit and prevent sustainable energy efficiency investments from being made in Romania.

Four Immediate Objectives, with related Outputs, are defined in the PJ:

1	Strengthen and enhance the capacity of the local stakeholders to prepare "bankable" energy efficiency (EE) investment proposals and to manage the process of structuring financing for EE projects both in the private and the public sector.
2	Leverage financing of at least US \$ 10 million for new, fully commercial EE projects and to build simultaneously the capacity of the local stakeholders (through on-the-job training and otherwise) to finalize "bankable" investment proposals and to manage otherwise the process of further developing and structuring financing for the projects.
3	Enhance the capacity of the local municipalities to leverage financing for the EE projects in the public sector.
4	Facilitate the replication of the project activities and the expansion of the energy efficiency investments in the different sectors of the economy

Associated with these Immediate Objectives are a number of Outputs (*Appendix*), progress towards which are reported in successive Interim Reports.

The Expected end-of-project situation is also defined in the PJ

The expected end-of-the-Project situation foresees a body of projects under implementation that will serve as a model for project development and financing; in essence, a market for energy efficiency. This assumes an increasing interest and ability of the local banks and other financial institutions to finance energy efficiency projects in Romania, as well as increased interest and capacity of the local companies, municipalities and other target beneficiaries to develop and present EE projects for financing. Some other specific outputs of the Project with significant bearing on the reduction of barriers to EE project financing, are envisioned to be:

- Demonstration of the technical, economic, financial, environmental and social feasibility of energy efficiency investments by leveraging other

financial resources in a number of key energy efficiency technologies;

- At least \$10 million new investments in energy efficiency leveraged through the Project from national and international financing sources, such as FREE;
- Increased awareness of the investment potential of energy efficiency projects among the Romanian banks, with a corresponding increase in their experience and interest in financing EE projects;
- Increased interest and capacity of the Romanian companies, municipalities and other target beneficiaries to analyze, prioritize and develop bankable energy efficiency projects, and to present them for financing to diverse financial organizations;
- Increased capacity of local stakeholders, including government institutions, NGOs, municipalities and private sector companies to promote and support the development and implementation of relevant energy efficiency measures;
- Strengthened capacity of the local NGOs and private sector to provide energy consultancy services, with a specific emphasis on energy efficiency; and,
- Enhanced co-operation between governmental and non-governmental organizations on energy related issues.

The Project is scheduled to close at the end of October 2006, so an independent expert will be recruited under this Terms of Reference to prepare a short Final Review Report.

### **Objectives of the Review**

The objective of the Review is to prepare a consistent report for the GEF Secretariat, that uses complete and convincing evidence to support its findings/ratings, and that considers the following issues:

- An assessment of the design, implementation and execution of the Project, showing relevant outcomes and achievement of the project objectives
- An assessment of sustainability of outcomes
- A summary of lessons and recommendations, that are supported by the evidence presented
- The actual project costs (total and per activity) and actual co-financing used.
- Provide stakeholders with an objective view of how wisely and effectively GEF's funding for this Project was spent;

- Provide recommendations, based on the experience of this project, for the design and execution of future UNDP/GEF projects.
- Assess the overall impact of the Project in terms of *capacity building for GHG emissions reduction through energy efficiency in Romania*;

The consultant should prepare specific **ratings** on eight aspects of the project, as described in the 'Reporting' section of this Terms of Reference.

The Consultant should note that the objective of the Review is not to assess CO<sub>2</sub> savings resulting from the project, as this work is being carried out by a separate team of local consultants (CO<sub>2</sub> Evaluation Team). However, the Final Report of the CO<sub>2</sub> Evaluation Team (due on September 10<sup>th</sup> should be taken into consideration by the Consultant as one of the items for review.

### Consultant profile

The Final review will be carried out by an independent expert who is experienced in the design and management of internationally-funded, energy-efficiency-related and/or greenhouse gas-related development projects. The expert should have GEF experience, know both GEF and UNDP/UNOPS procedures, and have carried out similar task in the past.

### Duration and timing of the Review

The Review, will involve a level of effort of **15 working days**, to commence in July 2006, and to be fully completed by October 16<sup>th</sup> 2006.

The following chart describes, in more detail, the level-of-effort required and scheduling considerations for the Review. The Consultant will have some flexibility about the exact allocation of the working days, but the final deadline of October 16<sup>th</sup> (by which time all activities should be complete and a final invoice submitted) must be respected.

Activity	Timing
Desktop review of documentation	
Mission to Romania to interview key stakeholders.	No later than September 15 <sup>th</sup> .
Preparation and issue of a Draft Review Report for observations	No later than September 20 <sup>th</sup>
Collecting observations and issuing the Final Review Report	First week of October (no later than October 16 <sup>th</sup> )



## Scope of Work

### *Review of documentation*

The Consultant will be provided with the following documentation for the 'desktop research' phase.

- Project Document, 1998
- Revised Project Document of 12<sup>th</sup> November 2002 (key working document)
- Inception/First Interim Report of October 2<sup>nd</sup> 2003; and
- Second Interim Report of December 18<sup>th</sup> 2003
- Third Interim Report of April 22<sup>nd</sup> 2004
- Fourth Interim Report of August 1<sup>st</sup> 2004
- Fifth Interim Report of November 25<sup>th</sup> 2004
- Sixth Interim Report of March 24<sup>th</sup> 2005
- Seventh Interim Report of July 28<sup>th</sup> 2005
- Eighth Interim Report of March 30<sup>th</sup> 2006
- Ninth Interim Report of June 30<sup>th</sup> 2006 (draft - to be finalised)
- Descriptions - with photos, CO<sup>2</sup> savings, financial savings - about investments assisted by the Project
- Mid-Term Evaluation Terms of Reference
- Mid-Term Evaluation Final Report
- Final CO<sub>2</sub> Emissions Reduction Evaluators' Terms of Reference
- Final CO<sub>2</sub> Emissions Reduction Final Report (scheduled to be completed by mid-September)

The consultant should also refer to the Website at [www.energie.undp.ro](http://www.energie.undp.ro), which has a large amount of documentation that can be used to help assess the progress of the project, including:

"Results of Applications"	Details of all energy efficiency project ideas that have been submitted to UNDP/GEF so far, and how they have been processed.
"Results of Calls for Offers"	Terms of Reference for all Feasibility Studies by external consultants that have been contracted by UNDP/GEF to support the best energy efficiency investment proposals. The Terms of Reference are always published in both English and Romanian languages.
"Events"	Details many of UNDP/GEF's outreach activities, with presentations from the many conferences, round tables, training courses, workshops and meetings that the team has supported so far. The minutes of Annual Steering Committees are also available on this page.

(The Consultant may request a copy of the entire website on CD for offline browsing)

### ***Mission to Romania***

The Consultant should liaise with the UNDP/GEF Energy Efficiency Financing Team (EEFT) - Tel. +40 21 231 2008 - to determine a suitable time for the short mission to Romania. In view of the summer vacation season, it is important to identify a time when key stakeholders will be available.

The duration of the mission will be three days (up to five hotel nights). Logistical support (hotel arrangements, car transportation etc) will be provided by the EEFT.

Additional documentation will be available for review in Bucharest, such as Agreements in Principle between the CTA, financiers, and investors; studies by external consultants; publicity materials used by the team; and administrative and budgetary documents.

### ***Reporting***

The Consultant should prepare a short Final Review Report with key findings and recommendations. Issues described in 'Objective of the Review', above, should be addressed in the Report.

GEF evaluations address five major evaluation criteria. The evaluation terms of reference should explain how the criteria will be analysed in each case:

**Relevance:** The extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time.

**Effectiveness:** The extent to which an objective has been achieved or how likely it is to be achieved.

**Efficiency:** The extent to which results have been delivered with the least costly resources possible. Also called cost-effectiveness or efficacy.

**Results:** The positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short- to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.

**Sustainability:** The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally as well as financially and socially sustainable

The consultant should also provide **ratings** of Project achievements according to GEF Project Review Criteria. Aspects of the Project to be rated are:

1	Project design
2	Implementation approach;
3	Country ownership/drivers
4	Outcome/Achievement of objectives (meaning the extent to which the project's environmental and development objectives were achieved).
4	Stakeholder participation/public involvement
5	Sustainability;
6	Replication approach;
7	Cost-effectiveness;
8	Monitoring and evaluation
9	Financial planning

The ratings to be used are:

HS	Highly Satisfactory
S	Satisfactory
MS	Marginally Satisfactory
U	Unsatisfactory
NA	Not applicable

The Final Review Report should be issued in draft form to UNOPS, who will circulate it for observations from key project stakeholders - UNDP Romania; ARCE; UNDP Bratislava, UNOPS Copenhagen, the CTA and GEFSEC New York. The consultant should finalise the report after receiving observations.

## Immediate Objectives and Outputs

Source: Project Document, 2002

### Output 1.1

A constituted Project Management Team (PMT) and Project Steering Committee (PSC).

### Output 1.2

A finalised work plan and compilation of a list of national institutions and experts that may be engaged in the implementation of the Project activities.

### Output 1.3

Public outreach and enhanced capacity of the local stakeholders to implement the project.

## **Immediate Objective 2**

To leverage financing of at least US \$ 10 million for new, fully commercial EE projects and to build simultaneously the capacity of the local stakeholders (through on-the-job training and otherwise) to finalize “bankable” investment proposals and to manage otherwise the process of further developing and structuring financing for the projects.

### **Output 2.1**

A pipeline of at least 80 “bankable” EE project concepts of the total value of at least USD 40 million.

### **Output 2.2**

Preliminary investment decisions made for at least 30 projects of the total value of at least US\$15 million -- subject to the final evaluation of the detailed feasibility studies and (as applicable) business plans.

### **Output 2.3**

Finalized feasibility studies, business plans and other project documentation for facilitating the final investment decisions for at least 20 projects worth of at least 10 million.

## **Immediate Objective 3**

Enhance the capacity of the local municipalities to leverage financing for the EE projects in the public sector.

### **Output 3.1**

A pipeline of at least 40 project concepts worth of at least 10 million (in total) that are eligible for the existing public sector EE financing schemes.

### **Output 3.2**

Preliminary financing structure and investment decisions completed for at least 10 projects worth of at least 2.5 million (in total) - subject to the final evaluation of the detailed feasibility studies and (as applicable) business plans.

### **Output 3.3**

Finalized feasibility studies, business plans and other project documentation for facilitating the final investment decisions for at least 10 public sector projects worth of at least USD 2.5 million.

**Output 3.4**

Implementation and evaluation of at least 8 demonstration projects worth of at least USD 2 million in total in the public sector.

**Immediate Objective 4**

To facilitate the replication of the project activities and the expansion of the energy efficiency investments in the different sectors of the economy

**Output 4.1**

Final project report on the results and lessons learnt.

**Output 4.2**

A training package/manual published and distributed

**Output 4.3**

Dissemination of the results and the lessons learnt through public media, seminars, workshops and other appropriate channels.

**ANNEX B**  
**ITINERARY**

<b>Monday September 11th 2006</b>			
13:50	Otopeni Airport	- Emil Popescu (who will wear a white UNDP baseball cap).	International number + 40 727 171 618
18:00	Early dinner/meeting	- Mark Velody, who will pick up Brad at his hotel.	Tel. 0722 280 461
<b>Tuesday September 12th 2006</b>			
10:00	Kick-off - UNDP	- Soknan Han Jung, UNDP Resident Representative, UN Resident Coordinator.	Boulevard Primavarii 48a, Tel. 201 7872
11-30	USAID	- Gianina Moncea	Opera Business Center - 316 1222
14:30	One of the three independent CO2 evaluators.	- Cerna Mladin	UNDP/GEF Project Office, Washington 45.
16:00	Global Environment Services who carried out 9 studies 24/2006 (Sinmartin) 22/2006 (IMGB) 17/2006 (Plastor) 14/2006 (Metalul M) 12/2006 (Zoppas) 10/2006 (Expur) 06/2006 (Romiterm) 15/2005 (Metalica) 03/2005 (Viromet)	- Mircea Scripcariu, Managing Director	UNDP/GEF Project Office, Washington 45.
<b>Wednesday September 13th 2006</b>			
9-30	Romanian Agency for Energy Conservation (ARCE)	- Silviu Lefter - President - Corneliu Radulescu, UNDP/GEF National Project Director and Acting President of ARCE. - Corneliu Rotaru	Boulevard Balcescu 16, ground floor. Tel. 0723 267 300 (GSM), 314 5929, 313 6002
11-30	Romanian Energy Efficiency Fund (FREE).	- Mihai Voronca, Executive Director.	Str. Johann Strauss 2a., Tel. 233 8801, GSM 0743-145 494
2-00	Romanian Industrial Energy Efficiency Company	- Alin Giurgiu - Managing Director. - Adrian Ghita - Project Manager. (Mark set this up with Adrian, who will ask Alin if he would like to participate).	B-dul Aviatorilor 33 Tel. 207 7100 (switchboard), 0726 135170 (mobile, Adrian).
<b>Thursday September 14th 2006</b>			
2-30	Project Team	Brad wants to give the team a chance to respond to any issued raised during his mission, and to discuss: - Lessons learned form the experience?	

		<ul style="list-style-type: none"> <li>- What would you do differently if you were just starting the process again?</li> <li>- What advice would we give others responsible for establishing a similar program in another country?</li> <li>- What was the biggest success of the initiative?</li> <li>- What was the biggest mistake made in the process?</li> </ul>	
4-30	Wrap-up - UNDP	<ul style="list-style-type: none"> <li>- Soknan Han Jung</li> <li>- Roxana Suciu</li> </ul>	Boulevard Primavarii 48a, Tel. 201 7872
<b>Friday September 15th 2006</b>			
04:00	Pick up at hotel for a flight at 0600 hrs.	- Emil Popescu	Tel. 0727 171 618



## Appendix C

### List of Documents Reviewed

- Project Document, 1998
- Revised Project Document of 12<sup>th</sup> November 2002 (key working document)
- Inception/First Interim Report of October 2<sup>nd</sup> 2003; and
- Second Interim Report of December 18th 2003
- Third Interim Report of April 22<sup>nd</sup> 2004
- Fourth Interim Report of August 1<sup>st</sup> 2004
- Fifth Interim Report of November 25<sup>th</sup> 2004
- Sixth Interim Report of March 24<sup>th</sup> 2005
- Seventh Interim Report of July 28<sup>th</sup> 2005
- Eighth Interim Report of March 30<sup>th</sup> 2006
- Ninth Interim Report of June 30<sup>th</sup> 2006 (draft - to be finalised)
- Descriptions - with photos, CO<sup>2</sup> savings, financial savings - about investments assisted by the Project
- Mid-Term Evaluation Terms of Reference
- Mid-Term Evaluation Final Report
- Final CO<sub>2</sub> Emissions Reduction Evaluators' Terms of Reference
- Final CO<sub>2</sub> Emissions Reduction Final Report (scheduled to be completed by mid-September)