

Mid-term Evaluation Report

of the UNDP-GEF project
**Building the Local Capacity for
Promoting Energy Efficiency
in Private and Public Buildings
(EE Project Bulgaria)**

Project 48788
PIMS 2940

by

Dr. Adil LARI

and

Mr. Belin MOLLOV

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This Mid-term Evaluation of the UNDP-GEF project Building the Local Capacity for Promoting Energy Efficiency in Private and Public Buildings (EE Project 48788; PIMS 2940) was carried out between 27 August, 2008 and 27 October, 2008

The evaluation has been conducted for the Bulgarian office of the United Nations Development Programme by the international consultant, Dr. Adil Lari (lari@acegroup.at) and the local expert, Mr. Belin Mollov, MSc. (belinmollov@abv.bg) .

ABBREVIATIONS AND ACRONYMS

APR	Annual Project Review
BEEF	Bulgarian Energy Efficiency Fund
CDM	Clean Development Mechanism
DPRMB	Demonstration Project for Renovation of Multifamily Buildings (UNDP)
EBRD	European Bank for Reconstruction and Development
EE	Energy Efficiency
EEA	Energy Efficiency Agency
ESCO	Energy Servicing Company
EU	European Union
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green-house Gases
MEP/MEP	Municipal Energy Efficiency Program
MRDPW	Ministry of Regional Development and Public Works
MSP	Medium Size Project
NGO	Non-Government Organization
NPRRB	National Programme for the Renovation of Residential Buildings
OECD	Organization for Economic Cooperation and Development
PD	Project Director
PM	Project Manager
PIR	Project Implementation Review
SME	Small and Medium Enterprises
ToR	Terms of Reference
UACG	University for Architecture, Construction, and Geodesy
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development Assistance
VTICC	Virtual Training, Information and Consultancy Centre
WB	World Bank

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EXECUTIVE SUMMARY

The Project and Its Context

The project 'Building the Local Capacity for Promoting Energy Efficiency in Private and Public Buildings' supported by the Global Environmental Facility - GEF (USD 975 000) began in July 2006 and is planned to run 4 years. Envisioned co-financing sources included the UNDP (USD 2.5 million cash and USD 0.5 million in kind), the Bulgarian-Dutch Sustainable Housing Management Programme (USD 0.45 million) and private sector investment (USD 2.8 million) mainly in the form of pilot projects. The goal of the project is to support a market transformation towards energy efficiency investments in buildings by:

- (i) enhancing the awareness and capacity of local architects and engineers to better adopt energy efficiency measures into the design of new buildings and retrofit of the existing ones;
- (ii) enhancing the awareness and capacity of municipalities to plan and implement sustainable energy efficiency investments in public buildings;
- (iii) supporting and promoting the renovation of private residential buildings, incorporating energy efficient technologies, including related UNDP funded activities;
- (iv) increasing the demand for energy efficiency investments in the private service sector buildings with an initial focus on hotels; and
- (v) building the capacity of the local energy service providers to effectively market their services and to meet the requirements of the targeted financiers to finance EE projects.

The project is implemented by UNDP and the Project Implementing Partner EnEffect, an NGO originally established in 1992 and which has experience in managing GEF projects including the FSP 'Energy Efficiency Strategy to Mitigate Greenhouse Gas Emissions'. This previous UNDP/GEF project was successfully completed between 1998 and 2004 and aimed at building capacities in municipalities. Currently EnEffect also co-manages the GEF/WB project, which oversees management of the Bulgarian Energy Efficiency Fund (BEEF.)

Purpose of the Evaluation

This mid-term evaluation aims to contribute to effective project implementation and ensure proper documentation of lessons learned, by assessing the relevance of the project, project performance (progress in terms of effectiveness, efficiency and timeliness), management arrangements with focus on project implementation and adaptive management, and overall success of the project with regard to results, sustainability, and contribution to capacity development. This evaluation assesses project synergies with other projects in the sector, draws attention to lessons learned and makes recommendations for further development of the project.

The approach used for the evaluation is based on the results-oriented 'outcome evaluation' approach within the framework of Results Based Management. The evaluation team included one international and one national consultant. A visit was made to Sofia by the international consultant between 8 September, 2008 and 13 September, 2008 and interviews with all relevant project stakeholders, including governmental representatives, municipal representatives, individual project beneficiaries, the Project Implementing Partner, EnEffect, the project Implementing Agency, UNDP, project staff and others were made.

The evaluation focuses on the efforts of the Project Implementing Partner, EnEffect responsible for project management, but also addresses the UNDP contribution to the outcomes. Recommendations focus on possible improvements that could be made to increase the performance of delivery of outputs but also ultimately to achieve the desired outcomes.

Details of the people interviewed and the documents reviewed are given in the lists in annex 2 and 4. The national implementing agency UNDP, and the Project Implementing Partner, EnEffect both gave excellent support during the evaluation.

Main Conclusions

The overall rating of the project is Satisfactory/Moderately Satisfactory

Subject. The scope and the subject of the evaluated project are very relevant to the needs and the conditions of the country. Bulgaria lags behind much of Europe in terms of Energy Efficiency in buildings and the cost- and energy-saving potential in this sector remains high. While integration into the EC has brought a number of positive legislative and financial changes which provide a good basis for energy efficient investment in buildings, there are still a large number of barriers - financial, legislative but also awareness - which inhibit the the large scale uptake of energy efficiency investments. In this context, it was assumed in the project document that several impending national initiatives would provide an enabling environment for large scale energy efficient investments in buildings. In particular, the implementation of the Condominium Act would have supported and promoted the organization of tenant/owners into housing associations and the National Programme for Refurbishment of Residential Buildings would have provided financial support for energy efficient investments. The Condominium Act still has not been passed and the National Programme for Refurbishment of Residential Buildings has only been partially implemented under a much-reduced budget.

A number of national stakeholders representing state and local authorities, universities, specialized agencies and NGOs, experts and citizens have been involved in project implementation

Management. While the project Implementing Partner, EnEffect, has good experience in GEF project management, discontinuity and poor adaptation have caused significant setbacks during the first two years of project execution. The resultant delays are clearly visible when comparing the realized outputs with the original work plan. While in the area of municipal support, good progress has been achieved, other objectives lag far behind schedule. Despite these delays, the project objectives remain realistic and may be reached, providing results-based management and activities are initiated immediately. Support by an international consultant with wide experience in this field is recommended.

While the project director, Mr Zdravko Genchev, has provided continuous guidance, the project manager within EnEffect has changed several times. This discontinuity in project management combined with a shortage of qualified and experienced staff in the areas of the project scope has significantly slowed effective project implementation. In order to mitigate the influence of these changes on the project implementation process, both UNDP staff and the Project Implementing Partner have made substantial efforts to maintain open communication and coordination.

Timing. Because of the delays indicated above and further setbacks caused by the withdrawal of the pilot project investors, the project is currently some 6 months behind schedule. Considering this and the additional time required to implement key recommendations to strengthen project management and focus efforts, a realistic and effective project implementation may require an extension of approximately 6 months.

Key Lessons Learned

General Lessons

1. Logical frameworks should be carefully reviewed and if necessary adjusted at project inception to ensure the project objectives, outcomes and indicators correspond to the national situation. Especially in projects where overall success is strongly linked to the expected implementation of laws or government programmes and where these are delayed, clear alternative strategies (including objectives and indicators) should be defined at the start.
2. Considering the required efficiency and short time frame of these projects, adherence to work plans and time schedules should be carefully tracked. The causes for any delays should be addressed immediately and recourse defined.
3. While the individual members of the project team cannot be expected to commit to the project for its lifetime, a clear strategy to ensure capacity and continuity of project management should be obtained from the Project Implementing Partner. Numerous or poorly coordinated hand-overs of project management and gaps in capacity can cause significant setbacks and delays.

Project Specific Lessons

4. A CO₂ emission reduction calculation should be included in the project document and tracked by the monitoring team during project implementation. A clear baseline calculation and outcome related reductions should be clear in the project document
5. Work with the municipalities has been particularly effective and positively received in this project and the previous UNDP/GEF project. There is a solid basis for further cooperation.
6. Especially in the private sector, pilot project implementation is risky and influenced by several factors outside the project scope. An alternative strategy to meet environmental and co-financing objectives in the case of 'failed' pilot projects should be defined at the project inception.

Recommendations

1. Ensure Expertise and Capacity for Adaptive Project Management.

Management discontinuity and poor adaptation have caused significant setbacks during the first two years of project execution. While the Project Implementing Partner, EnEffect, has experience in GEF project management, the appointed project manager has changed several times. This discontinuity in project management combined with a shortage of qualified and experienced staff in the areas of the project scope has significantly slowed effective project implementation. Considering the tight schedule to project completion, it is recommended that a subcontracted project manager of international capacity and familiar with UNDP/GEF requirements and procedures be integrated immediately.

2. Careful review and adaptation of the Project's Logical Framework Matrix.

Indicators were recognized as inadequate in the Project Document and these were refined at the end of the first project year. However subsequent data collection and tracking of many indicators has proven problematic, so that at the end of the second project year, indicators are still not providing adequate measurements of project impact. In several cases the baseline is also unclear. It is recommended that the project team review and adapt the project's logical framework matrix to ensure results-based effort for the remaining project implementation.

3. A clear CO2 emission reduction calculation specific to the project outcomes.

As a basis for recommendation 2 above, the CO2 emission expectation for the period to 2020 should be calculated considering a clear baseline (without project interventions) and subsequently considering each of the project outcomes individually and together. The difference will determine project and outcome specific CO2 emission reductions. Differentiating between the 5 outcomes will enable the project team to determine priorities. This calculation should be subcontracted to a competent international consultant immediately.

4. Establish a monitoring and evaluation team.

Monitoring and evaluation of project results has not been effective or consequential. This is a result of poor definition of indicators and baselines and in part because the relationship of indicators to CO2 emission reductions is not founded. A monitoring team (2 persons) should work closely with the consultant of recommendation 3 and with the project management of recommendation 1 and track project indicators to ensure project outputs are achieving the anticipated outcomes and results. This team will provide key feedback to the project management.

5. Frequent Steering Committee Meetings for the next 6 to 8 months.

Considering the need to speed up the project implementation after delays in the first 2 years, we recommend that the Steering Committee meet monthly for the next 6 to 8 months and at least once every 3 months in the period afterwards. These meetings must make decisions and track development of outputs with the clear goal of meeting stated project objectives.

6. Establish links with Industry Partners producing/distributing EE building products and technologies.

Involve industrial partners in the project. This works for the project on many levels;

- a cooperation in promoting EE investment is advantageous to the project and to the industry
- these partners will be able to provide key data for indicators of market shares and growth.
- industry involvement contributes to the country drivenness and sustainability of the project.
- cooperation in pilot projects and shared promotion and dissemination of results.

7. Concentrate training of architects and engineers to the 30 most active architectural practices in the country.

Provide a professional training workshop directed by international experts and aimed at the implementation of integrated energy efficient building design, including financial, design and quality control aspects. Offer further intensive project-specific cooperation to these offices where planned buildings can be significantly improved. These cooperations are likely to result in pilot projects either during the projects lifetime or immediately after. The training provides the basis for an integrated building design approach in these offices, ensures knowledge transfer, and supports the sustainability of the project.

8. Provide municipalities with clear guidelines how to realize EE investments in municipal buildings

While much effort has been taken to help municipalities update and refine their MEPs, there are still significant capacity gaps evident in municipal ability to contract and ensure the quality of EE investment in municipal buildings. Best practices in terms of planning, financing (structural funds, BEEF support, ESCOs etc), contracting and supervising should be available to the municipal employees with the clear goal of realizing more EE investments in buildings.

9. Involve service providers to produce models for renovation of multi-storey residential buildings.

Work with the Bulgarian Housing Association which has experience from the Dutch-Bulgarian SHM project in soft loans, with the UNDP Demonstration Project for the Renovation of Multifamily Buildings and with related ESCOs to create a model for the private owner/tenants of multi-storey residential buildings to produce guidelines for EE renovation of their buildings even before the Condominium Act is passed.

1 INTRODUCTION

1.1 PURPOSE OF THE EVALUATION

This mid-term evaluation is conducted on behalf of UNDP in accordance with the UNDP and GEF Monitoring and Evaluation Policy at the project level, applying the criteria set out in the Terms of Reference, with particular attention to whether GEF Minimum Requirements are fulfilled and SMART indicators were applied.

The mid term evaluation has two major objectives:

- a) To promote accountability for the achievement of GEF objectives through the assessment of results, effectiveness, processes and performance of the partners involved in GEF activities. GEF results will be monitored and evaluated for their contribution to global environmental benefits; and
- b) To promote learning, feedback and knowledge sharing on results and lessons learned among the GEF and its partners, as basis for decision-making on policies, strategies, program management, and projects and to improve knowledge and performance.

The objective of this Mid Term Evaluation is to measure the progress made by project activities in relation to the stated objective so far, and to produce possible recommendations on how to improve the management of the project until its completion, based on the lessons learned. Thus, the evaluation report will play a critical role in the future implementation of the project by providing advice on:

- ➔ how to strengthen the adaptive management and monitoring function of the project;
- ➔ how to ensure accountability for the achievement of the GEF objective;
- ➔ how to enhance organizational and development learning;
- ➔ how to enable informed decision – making.

The evaluation is based on five major criteria as outlined in the GEF Monitoring and Evaluation Policy;

1. Relevance – the extent to which the activity is suited to development priorities and organizational policies, including changes over time.

2. Effectiveness – the extent to which an objective has been achieved or how likely it is to be achieved.

3. Efficiency – the extent to which results have been delivered with the least costly resources possible.

4. 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.

5. 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.

1.2 KEY ISSUES TO BE ADDRESSED AND STRUCTURE OF THE EVALUATION

As outlined in the Terms of Reference for this Mid-Term Evaluation, the following aspects will be considered in the analysis:

Project concept and design

The evaluators will assess the project concept and design. They should review the problem addressed by the project and the project strategy, encompassing an assessment of the appropriateness of the objectives, planned outputs, activities and inputs as compared to cost-effective alternatives. The executing modality and managerial arrangements should also be judged. The evaluator will assess the achievement of indicators and review the work plan, planned duration and budget of the project.

Implementation

The evaluation will assess the implementation of the project in terms of quality and timeliness of inputs and efficiency and effectiveness of activities carried out. Also, the effectiveness of management as well as the quality and timeliness of monitoring and backstopping by all parties should be evaluated. In particular, the evaluation is to assess the Project team's use of adaptive management in project implementation.

Project outputs, outcomes and impact

The evaluation will assess the outputs, outcomes and impact achieved by the project as well as the likely sustainability of project results. This should encompass an assessment of the achievement of the outcomes and the contribution to attaining the overall objective of the project. The evaluation should also assess the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners. The evaluation will also examine if the project has had significant unexpected effects, whether of beneficial or detrimental character.

Replication approach

The evaluation will assess whether the lessons and experiences set to come out of the project are replicable or can be scaled up in the design and implementation of other projects. The evaluation will also assess the project's knowledge transfer mechanism including its capacity building and training provided to individuals, and institutions.

Monitoring methodology for measuring GHG emissions reductions.

The evaluation will assess whether the project uses an appropriate and robust methodology for measuring GHG emissions reductions, which is comparable with international standards, such as those available for CDM projects.

The Mid-term Evaluation also covers the following aspects:

1. Progress towards Results

Changes in development conditions. Addressing the following questions, with a focus on the perception of change among stakeholders:

Have Climate Change and energy efficiency issues been adequately addressed at regional and municipality level?

Have there been changes in local stakeholder behavior (i.e. increased energy efficiency) and have these contributed to improving CO2 reductions) If not, why not?

Is there distinct improvement in Climate Change and energy efficiency information turnover and use in decision making among stakeholders?

Has awareness on Climate Change and energy efficiency and subsequent public participation in Climate Change and energy efficiency management increased as a result of the project?

Is there adequate territorial (including municipality plans) and sectoral planning in place, or in progress, ensuring long-term benefits in Bulgaria?

Measurement of change: Progress towards results should be based on a comparison of indicators before and after (so far) the project intervention. Progress can also be assessed by comparing conditions in the project site to conditions in similar unmanaged sites.

Project strategy: how and why outcomes and strategies contribute to the achievement of the expected results. Examine their relevance and whether they provide the most effective route towards results.

Sustainability: Extent to which the benefits of the project will continue, within or outside the project domain, after it has come to an end. Relevant factors include for example: development of a sustainability strategy, establishment of, or support to, financial and economic instruments and mechanisms, mainstreaming project objectives into the local economy/planning, etc.

2. Project's Adaptive Management Framework

Monitoring Systems

-Assess the monitoring tools currently being used:

Do they provide the necessary information?

Do they involve key partners?

Are they efficient?

Are additional tools required?

-Reconstruct baseline data if necessary.

-Ensure the monitoring system, including performance indicators, at least meets GEF minimum requirements. Apply SMART indicators as necessary;

-Apply the GEF Tracking Tool and provide a description of comparison with initial application of the tool.

Risk Management

-Validate whether the risks identified in the project document and PIR are the most important and whether the risk ratings applied are appropriate. If not, explain why. Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted;

-Assess the project's risk identification and management systems:

Is the UNDP/GEF Risk Management System appropriately applied?

How can the UNDP/GEF Risk Management System be used to strengthen project management?

Work Planning

-Assess the use of the logical framework (Appendix A) as a management tool during implementation and any changes made to it

-Ensure the logical framework meets UNDP/GEF requirements in terms of format and content

-Assess the use of routinely updated work-plans;

-Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities;

-Are work planning processes result-based? If not, suggest ways to re-orientate work planning;

-Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions, as well as co-financing delivery (Appendix D). Any irregularities must be noted.

Reporting

-Assess how adaptive management changes have been reported by the project management;

-Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

3. Underlying Factors

-Assess the underlying factors beyond the project's immediate control that influence outcomes and results. - Consider the appropriateness and effectiveness of the project's management strategies for these factors;

-Re-test the assumptions made by the project management and identify new assumptions that should be made;

-Assess the effect of any incorrect assumptions made by the project.

4. UNDP Contribution

Assess the role of UNDP against the requirements set out in the UNDP Handbook on Monitoring and Evaluating for Results. Consider:

Field visits

Steering Committee/TOR follow-up and analysis

PIR preparation and follow-up

GEF guidance

-Consider the new UNDP requirements outlined in the UNDP User Guide, especially the Project Assurance role, and ensure they are incorporated into the project's adaptive management framework;

-Assess the contribution to the project from UNDP "soft" assistance (i.e. policy advice & dialogue, advocacy, and coordination). Suggest measures to strengthen UNDP's soft assistance to the project management.

5. Partnership Strategy

-Assess how partners are involved in the project's adaptive management framework:

Involving partners and stakeholders in the selection of indicators and other measures of performance

Using already existing data and statistics

Analyzing progress towards results and determining project strategies.

-Identify opportunities for stronger substantive partnerships;

-Assess how local stakeholders participate in project management and decision-making; Include an analysis of the strengths and weaknesses of the approach adopted by the project and suggestions for improvement if necessary;

-Consider the dissemination of project information to partners and stakeholders and if necessary suggest more appropriate mechanisms.

6. Country Ownership/Driveness

-Asses the relevance of the project to national development and environmental agendas,

-Assess whether relevant country representatives (e.g., governmental official, civil society, etc.) are actively involved in project implementation and/or oversight

-Assess the level of company participation in the project by: receiving technical assistance, applying for financing, attending dissemination events, adopting environmental standards promoted by the project, etc.

-Assess the level of company contribution towards achieve the environmental benefits promoted by the project, including: equity invested, guarantees provided, co-funding of project activities, in-kind contributions, etc.

-Assess the project's collaboration with industry associations and municipalities

2 METHODOLOGY

This mid-term evaluation, used the following overall procedure:

A) preliminary documentation review

The initial step was the review of the project documentation and associated documents, which are listed in Annex II. This documentation, which was provided by the UNDP/GEF Bulgaria and EnEffect contributed to an intensive preparation of the field visit and interviews.

B) Logistical Arrangements for Field Visit

In order to prepare the field visit a general questionnaire for interviews was drafted and adapted to the individual interviewees, such as UNDP/GEF project officials, the EnEffect project team and several stakeholder groups.

The draft questionnaire was forwarded to UNDP Country Office in Bulgaria prior to the mission for review and comments.

C) Field Mission

The field mission in Sofia, in Bulgaria, lasted from 8. September 2008 to 13. September 2008. Annex III contains an itinerary. It consisted of interviews with key stakeholder, beneficiaries and project management. Project manager Ms Marta Stoilova and EnEffect staff kindly helped by arranging interviews at the direction of the evaluation team and UNDP. Effort was made to arrange a site visit to a pilot project but none were located within a reasonable travel distance. As the implementation of the renovation of the pilot project for a student hostel in Sofia had not started, all plans and design were reviewed.

(a) presentations by project management

EnEffect made a thorough presentations of the project concept, the project outcomes and the key project products and indicators. The main thematic areas and the internal relations between project activities were presented in a series of Power Point presentations, handouts of which were presented to the evaluators.

(b) interviews

Annex IV contains a list of interviews completed

(c) discussion groups

At a series of meetings of the evaluators and the project management various issues were discussed on a questions and answers basis and a dialog regime.

(d) collection of additional documentation

Additional data were ensured by the project management and by stakeholders visited during the mission.

(e) conference call

Because this municipality is one of the pilot municipalities in outcome 2, the deputy mayor of the municipality of Dobrich-city Ms. Nadezhda Petkova was contracted by telephone.

Two major questions were posed to clarify whether

(i) the pilot municipal energy programme has created additional added value to regular municipal practices for implementation of the obligations to the Energy Efficiency Law and if additional investments could be raised for energy efficiency improvements as a result and

(ii) the newly opened Energy Efficiency Local Focal Point contributes to the mobilization of additional private investments for energy efficiency improvements of the existing residential stock.

D) data analysis

Following the field visit, the collected data was compiled and analyzed. The multiple, complementary sources of information were evaluated to ensure an evaluation according to GEF/UNDP Monitoring and Evaluation Policy. The data was rated according to the following:

- HS - Highly Satisfactory
- S - Satisfactory
- MS - Marginally Satisfactory
- MU - Marginally Unsatisfactory
- U - Unsatisfactory
- HU - Highly Unsatisfactory
- NA - Not applicable

E) Reporting

This Mid-Term Evaluation report intends to integrate all relevant comments and suggestions raised by UNPD, EnEffect and the national stakeholders interviewed.

3 THE PROJECT AND ITS DEVELOPMENT CONTEXT

3.1 PROJECT CONTEXT

General

Bulgaria's energy intensity is 0.38 tons of oil equivalent per thousand US\$ of GDP, or more than twice the European Union average. In 2001, the country's electricity intensity was seven times higher than the OECD average, and four times higher than that of Hungary or Turkey. The Government's Three Year National Action Plan on Energy Conservation for 2004-2006 within the National Energy Conservation Program until 2010 identifies a savings potential of 50% in existing building stock, 40% in district heating and 30% in industry, and over USD 100 million in investments with a payback period of 3 years or less. Together these numbers suggest enormous, still untapped potential for cost effective and financially viable investment opportunities in energy efficiency.

While many of the recent energy efficiency initiatives have focused on municipalities and public buildings, the potential for energy savings in private residential and service sector buildings has largely remained unexploited. This has been mainly due to the prevailing institutional barriers, with no clear understanding on the role the public authorities should have with the privately owned building stock as well as the weak framework for facilitating the co-operation between the apartment owners on matters dealing with the maintenance and operation of the building as a whole. While this does not exclude the need for continuing the promotion of energy efficiency investments also in public buildings by addressing the remaining awareness, institutional and other barriers, the private residential buildings and premises of the SMEs present a new, still largely unexploited market segment.

More than 90% of the residential building stock in Bulgaria is privately owned and the predominant share of the dwellings is owner-occupied. More than 60% of the dwellings are situated in multifamily blocks of flats, while nearly 40% of the dwellings are situated in large-panel apartment blocks. According to draft National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria, the average energy savings potential will be equal to about 25-35 kWh/m²,year. The figure for the public buildings is similar. Among the SMEs, small hotels and other tourist facilities are envisaged as the initial target group.

Barriers to the implementation of EE building

A number of barriers to the implementation of EE investments in existing and new buildings have been identified.

- (a) Institutional Barriers

There is no clear understanding on the role and responsibility that the public authorities have in relation to the privately owned building stock. To apartment owners, the public areas and the exterior walls and roof of multi-storey residential buildings are grey zones in terms of ownership and maintenance responsibility. There is a weak framework for facilitating the co-operation between the apartment owners on matters dealing with the maintenance and operation of the building as a whole. The residential sector still suffers of the lack of appropriate institutional framework for building retrofit, such as the Condominium Act.

Although the building norms and regulations have been recently entirely updated and harmonized with the EU directives and practices including requirements for building audits, their implementation in practice is still unsatisfactory. In the new design and construction energy efficiency measures are often limited to the improvement of the building envelope, while many other no cost and low cost EE measures are usually neglected.

(b) Financial Barriers

Many building owners do not have the financial leverage to invest in EE improvements to their buildings. While external funding mechanisms exist they are not often tailored to the scale and collateral limitations of the building owners. The National Programme for Refurbishment of Residential Buildings which would have aided home owner groups to renovate their buildings was not implemented as expected during project design.

(c) Knowledge / Awareness Barriers

Among building professionals the poor implementation of the new norms and regulations in the design of new buildings and renovations often stems from poor awareness of the energy efficiency strategies, measures and technologies for buildings.

In the residential sector, poor awareness of the households about the real cost and comfort benefits of energy efficiency and about some easy-to-access financing sources slow-up the renovation process

For municipalities additional obstacles influence the process - the poor administrative capacity often extends the path from the project ideas through fund raising to the practical implementation of building retrofit. There is a lack of capacity in municipal project management which would allow the timely implementation of EE projects including appropriate supervision, dealings with contractors, quality control, etc.

3.2 PROBLEMS THAT THE PROJECT SEEKS TO ADDRESS

The main problems that the project seeks to address can be summarized as follows:

Poor awareness and professional knowledge and skills on sustainable building design both in the design community and at the university level.

This reflects in the training and educational programmes for students and for practicing architects and in the implementation of the new EE norms and regulations and advanced EU practices in the design for the mass building construction. The project aims at overcoming this backwardness through the development of appropriate information and training materials, elaboration of training programmes, targeted to key stakeholder groups, provision of pilot project cooperatives with the participation of prominent international consultants and the distribution of best practice guidelines.

Poor knowledge and skills in mobilization of investments for the implementation of municipal energy efficiency action plans.

This weakness is targeted by the project with an entirely updated methodology for municipal energy planning, which is focused on all main functions of municipalities and the integrated resource planning (IRP). Essential deliverables of the MEPs are the investment programmes targeted to various appropriate investment sources. Relevant training of municipal officers and managers aims at accelerating the penetration of the updated MEP methodology in municipal practices and the clear, timely investment of EE measures in municipal buildings.

Poor knowledge and skills in the design of new highly efficient buildings and in the retrofit of existing ones.

Apart from the training manuals and training, the project contributes to the building of design capacity through pilot design of selected building types – municipal, residential, hotel and SME buildings. To create conditions for shortening the path from the norms and regulations to their practical implementation in the construction market is an essential task of the project. Apart from that, the project aims at the creation of sustainable mechanisms for the multiplication of the project achievements in future, where the pilot projects serve as proofs for the realistic solutions.

Lack of a sustainable and reliable instrument for information, communication and reference for the key

stakeholders in the investment process.

To overcome this gap the project aims at the creation of a clearinghouse (Internet based portal), which consists of a Guide on Sustainable Building Design and a Virtual Market Place (Virtual Training Center and a Catalogue of Good Practices)

3.3 PROJECT START AND DURATION

The project was envisioned to start on March 31st 2006 and last 4 years. The project start was delayed to July 2006.

3.4 IMMEDIATE AND DEVELOPMENT OBJECTIVES OF THE PROJECT

The objective of this UNDP/GEF medium size project is to reduce greenhouse gas emissions through promoting Energy Efficiency in building. The project supported the implementation of EE measures in buildings in Bulgaria in the private and public sector.

The project focuses on:

- ➔ raising awareness and capacity of local architects and engineers to better adopt energy efficiency aspects into the design of new buildings and retrofit of the existing ones
- ➔ creating sustainable demand for energy efficiency investments in public buildings
- ➔ creating sustainable demand for energy efficiency investments in private residential buildings
- ➔ increasing in the demand for energy efficiency investments in the private service sector, in particular tourism facilities
- ➔ increasing the capacity of local service providers to effectively market and implement their services

3.5 MAIN STAKEHOLDERS

The main stakeholder involved in this project is the Energy Efficiency Agency, which is part of the Ministry of Economy and Energy and is responsible of co-ordinating all energy efficiency related activities and legislation in this field.

The Ministry of Economy and Energy (MEE) and the Energy Efficiency Agency (EEA) have been actively involved in project implementation and control since the very beginning of project implementation. Since the EEA is directly responsible for the energy efficiency policy of the government, it has been approached repeatedly and support has been received.

The relations with the Ministry of Regional Development and Public Works concern the work on pilot projects and all building norms and regulations related and the relations with the “National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria”.

Bulgarian municipalities have been effectively approached through the Bulgarian Municipal EE Network EcoEnergy, where EnEffect is acting as the secretariat.

The Bulgarian Housing Association, a local NGO, is the main project partner in the identification, development and the implementation of the residential pilot projects and related activities. Its activities are the support and promotion of financing, maintenance, construction and management of multi-apartment buildings.

Numerous private sector representatives (ESCOs, product/service providers, NGOs, associations, banks and other financial institutions, apartment owners, etc.) have been approached and attracted to cooperate with the project management on various project tasks. Among them are also the beneficiaries of the project.

The University for Architecture, Construction and Geodesy is a main partner in the implementation of the tasks related to outcome 1.

The Bulgarian EE Fund is the main financing partner of the executing agency and contributes to most of the tasks.

Other international donors such as World Bank, EBRD, USAID, the Dutch government etc., have contributed either directly or indirectly, to the project implementation.

For the time being the Ministry of Environment and Water and the Ministry of Labor and Social Policy, though identified as stakeholders, have not been directly involved in project implementation apart from the general information that has been provided through the Steering Committee, the Advisory Committee and the project information tools.

The beneficiaries of the project are the participating municipalities, the University of Architecture, Construction and Geodesy, architects, engineers and designers, as well as students of architecture, engineering and design, local service providers and private service sector buildings, focussing on tourism facilities.

3.6 RESULTS EXPECTED

The global environmental benefits expected from this project are:

- the reduction of CO2 emissions by 125.000t by 2020
- higher awareness of energy efficiency measures for buildings among building owners, professionals and investors
- better conditions for the implementation of the new legal and regulatory base for building design
- more energy efficient building and retrofit of buildings

The expected short term results of the project, as stated in the project document, are:

- Outcome 1: higher awareness and capacity of local architects and engineers to better adopt energy efficiency aspects into the design of new buildings and retrofit of the existing ones
- Outcome 2. creation of a sustainable demand for energy efficiency investments in public buildings
- Outcome 3: creation of a sustainable demand for energy efficiency investments in private residential buildings
- Outcome 4: increase in the demand for energy efficiency investments in the private service sector, in particular tourism facilities
- Outcome 5: increasing the capacity of local service providers to effectively market and implement their services

Each of these outcomes has a series of outputs and indicators to support it.. The project assessment according to individual outputs and indicators may be found under section 4.3 Effectiveness and section 4.4 Results in this report.

4 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This section presents the results of the evaluation and is structured following the five UNDP/GEF monitoring and evaluation criteria, namely: relevance, effectiveness, efficiency, results and sustainability.

4.1 RELEVANCE

Country / Ownership Drivenness

The Government of Bulgaria is aware of the importance of energy efficiency. It has implemented a number of measures supporting energy efficiency and further measures are planned.

The government of Bulgaria aims at enhancing energy efficiency investments, by creating conditions in which municipalities and specific enterprises/utilities (especially SMEs) will be able to plan, raise fund and invest their own resources in energy efficiency projects, accompanied by expansion of professional auditing services and further development of the municipal credit market. where energy service companies can thrive. An extra-budgetary fund is also considered for additional financial support.

The Bulgarian government has implemented various laws and programs to promote energy efficiency. There is a National Climate Change Action Plan, which was implemented in 2000, and requires energy efficiency improvements, as a means to reduce greenhouse gas emissions.

The Energy Strategy of Bulgaria, implemented in 2002, and the National Energy Conservation Program until 2010, are major strategies for improving the environment and cutting energy use.

The Energy Law (2003) ensures, among other targets, the secure supply of electricity, heat energy and natural gas, efficient use, the development of a competitive and financially stable energy market; sustainable development in the utilisation of renewable energy sources and the promotion of the cogeneration of heat energy and electricity. It contains regulations on prices and provisions for energy.

The Energy Efficiency Act (2004) defines the role of the Energy Efficiency Agency, encourages energy efficiency programmes for municipalities, introduces obligatory energy audits for large public building etc.

A Condominium Act has been drafted, it was expected in the project document to be adopted in 2005, but has not passed yet.

The legislation and programmes indicate, that the government of Bulgaria has made serious efforts over the last few years, to encourage energy efficiency and the use of sustainable energy in private and public sector.

Bulgaria's interest in project products is based on the following:

- ➔ the project shortens the period of the acceptance of the new building norms and regulations by the design and construction practice
- ➔ the project supports fulfillment of the country's obligations to the UNFCCC and builds upon environmental commitments through actions in the building sector;
- ➔ the project creates a model for sustainable increase of investments in energy efficiency in the existing residential sector, thus helping to implement the National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria.

Based on the review of all available information, the country drivenness was rated satisfactory.

HS	S	MS	MU	U	HU	N/A
	X					

Stakeholder involvement

Energy efficiency has been improved in several areas. Therefore the project has certainly contributed to the improvement of energy efficiency, and therefore more sustainable energy use. It provides advantages for the environment in general and may raise the end users comfort, while reducing the energy use.

Stakeholders' needs and participation

The involvement and needs of the stakeholders were assessed by interviews. Most interviews were face to face interviews in Sofia. As one of the stakeholders, the mayor of Dobrich municipality, was not present in Sofia, an additional telephone interview was added. Moreover, a teleconference between the regional UNDP office and the evaluators was established. The wide range of interviews has given a thorough impression of the stakeholders' needs and involvement. As the stakeholders belong to different interest group, their needs and interests vary and they are involved in the project to a different extent.

The interviews showed clearly, that the work done by the project so far, has met a number of needs of the end users and beneficiaries.

Stakeholders' interest in energy efficiency investments in Bulgaria is evident. Private house owners' interest in energy efficiency measures can be derived from the fact that, even outside energy efficiency programmes, individual apartment owners have the facade of their apartment insulated on their own account. Apartment owners in building blocks are well aware of the need for energy efficiency measures, such as insulation.

During the interviews with Mr Petko Yovchev, the head of the Chamber of Architects in Bulgaria, and architect Mr Stefan Popov, it became evident that these stakeholders perceive a need for further information about energy efficiency in building. The Chamber of Architects in Bulgaria is eager to participate in and contribute to high quality training programmes for their members. The Chamber of Architects even suggested intensive training for architects going far beyond the scope, which is currently scheduled by the project.

The Bulgarian Housing Association is actively involved in the sector outside this project. It would be advisable for the project to intensify co-operation with the Bulgarian Housing Association, in order to obtain best synergies and make ideal use of pre-existing sources of knowledge and their potential of contacts to apartment-owners and apartment-owners' associations.

Various stakeholders recognize their specific interest in this project. For example, the Ministry of Economy and Energy (MEE) and the Energy Efficiency Agency (EEA) are most interested in bridging the new legal base to its practical implementation, while the Ministry of Regional Development and Public Works will benefit of any support and progress made in relation with the "National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria".

Bulgarian municipalities, which are involved in the project as pilot once directly (and many of the rest – indirectly) will benefit of the new MEP methodology and of the facilitated path to financing, which the new investment programmes provide.

The Bulgarian Housing Association, as one of the main project partners, will benefit of the specific technical support that the project provides to the identification, development and the implementation of the residential pilot projects and related activities.

Private sector representatives (ESCOs, product/service providers, NGOs, associations, banks and other financial institutions, households, etc.) recognize the positive effect of the project impact in their core businesses, increasing the sales, volume of services and/or the overall turnovers.

The University for Architecture, Construction and Geodesy, as well as the rest of architectural faculties benefit of the new educational programmes, training and educational materials and training of trainers, which will increase their own capacity both for students education and for postgraduate education of practicing architects.

The Bulgarian EE Fund benefits of the new projects for retrofit identified, as well as the World Bank, EBRD and numerous Bulgarian commercial banks do.

Stakeholders' participation was rated satisfactory.

HS	S	MS	MU	U	HU	N/A
	X					

Replication approach

The project is intended to have a replication effect inside Bulgaria (and maybe also in other countries). Examples demonstrated by the project in pilot project are supposed to become best practices to be applied in the refitting of multistory residential buildings. The project document indicates an estimated 650.000 dwellings to be renovated over the next 20 years with government financial support. The estimated amount of energy savings due to building refit will amount to about 25-35 kWh/m² annually.

Currently building activity is increasing. In the tourism sector in the last 3 years, 599 000 new beds have been added.

Replicability is intended through long-term availability and use of the training material created by the project, imitation of pilot projects and contact with similar projects in other countries in the region.

The project intends to replicate results by providing:

- ➔ technical assistance activities that are intended to lay the necessary foundation for further developing a supportive legal and regulatory framework (as needed) as well as institutional structures and national capacities to enhance the market for energy efficiency equipment, materials and related services for the targeted end user groups.
- ➔ training and awareness raising, including - among other activities - printed materials, on-the-job training, study tour(s), information exchange networks, workshops, seminars etc; ongoing public awareness raising efforts and effective dissemination of the project results.
- ➔ expanding the use of the municipal network created under the former UNDP/GEF project and which has successfully continued to operate since then;
- ➔ implementation of selected pilot activities to support public awareness and capacity building and to gain experience for implementation of similar projects in other areas;
- ➔ close monitoring and evaluation of the project implementation and results, thereby providing lessons learned for future action
- ➔ The project will facilitate continuing contacts and co-operation between the different stakeholder groups by organizing seminars, workshops and other public events, thereby bringing the project proponents, the policy makers and the potential investors / other donors together.
- ➔ The replication can increase significantly due to efforts to disseminate the project's approaches. Therefore, the project activities will be designed to have a regional impact (in other transitional economies), where possible.

The project's replication approach was rated satisfactory.

HS	S	MS	MU	U	HU	N/A
	X					

Analysis of logical framework

Indicators in the logframe matrix in the Project Document were already recognized as inadequate in the Project Document but based on EnEffect's management capabilities which were apparent from their previous UNDP/GEF project, allowance was given to clarify these during the project implementation. In the Project Document, the objective of the Inception Workshop was to fine-tune the logframe matrix with precise and measurable performance indicators. While the logframe and indicators were discussed at the Inception Workshop, modifications were not incorporated in the project documentation. The first changes to the project indicators were done at the end of the first project year. However subsequent data collection and tracking of many indicators has proven problematic, so that now at the end of the second project year, they are still not providing adequate measurements of project impact.

A particular problem is posed by the baselines. For many indicators no data for the baseline is available and no calculation for expected development has been completed. It is now necessary to define the baseline, expected development and project related results retroactively, considering the country's situation has evolved during the last two years, in part due to project activities and in part to other factors. Lack of verifiable data means these points are not accountable and an objective evaluation is not possible. In particular a lack of baseline, expected and project-related CO2 calculations make it impossible to assess CO2 savings.

Implementation

EnEffect has conducted intensive research on the present situation and attempted to collect data. While efforts of data collection have been made, much of the base data is still lacking and results for many of the indicators are still missing at mid term.

In many areas measuring progress is difficult, because the baselines were not defined at project start.

Follow up on the impact of activities, such as the efficiency of the one-stop information centers, should be intensified. The impact of these measures should be precisely evaluated through follow-up of the activity's success.

Conclusion on overall Proposed Implementation Approach in project formulation

In view of the analysis provided above, it is the evaluators' assessment that the proposed implementation approach for this project was marginally satisfactory.

HS	S	MS	MU	U	HU	N/A
		X				

4.2 EFFICIENCY

UNDP comparative advantage

The project builds upon the UNDP/Bulgaria's active participation and experiences in programmes to rehabilitate existing residential building stock in Bulgaria, most notably through the initiative, 'Demonstration Project for Renovation of Multifamily Buildings' in municipalities throughout Bulgaria running May 2007 through December 2009. In addition, the UNDP CO is appreciated for its strong ability to work at the local level with local stakeholders for example through the JOBS programme and through the previous UNDP/GEF project which created a Demonstration Zone for Municipal Energy Planning in Gabrovo and a Municipal Energy Efficiency Network. UNDP/Bulgaria is also well positioned to assist Bulgaria to absorb EU structural funds which continues to help focus the work with the municipalities within this project.

Linkages between project and other interventions within the sector

The project builds upon the previous UNDP/GEF project managed by EnEffect, 'Energy Efficiency Strategy to mitigate Greenhouse Gas Emissions' completed between 1998 and 2004. Among other activities, this previous project built up a strong network among Bulgarian municipalities which is still active in sharing information and strategies for implementing energy efficiency measures in municipal buildings and infrastructure. Especially in connection with outcomes 2 and 3 of the current UNDP/GEF project concerning public buildings and residential buildings, this network is a valuable tool for dissemination and replication. In addition, EnEffect is involved with the EC financed project, MODEL, Management of Domains related to Energy in Local Authorities, which is implementing action plans to improve the energy performance of municipal properties in 34 model cities in 10 central and eastern European countries.

A good cooperation exists between the current UNDP/GEF EE project and the UNDP initiative, 'Demonstration Project for Renovation of Multifamily Buildings' in municipalities throughout Bulgaria running May 2007 through December 2009. Energy audits with recommendations were prepared for several of the buildings

through the current UNDP/GEF project resulting in energy efficient investments during building rehabilitation and a high degree of interest among building tenants. Both projects share practical experience and lessons valuable for the future implementation and success of the National Programme for the Renovation of Residential Buildings, the Condominium Act and the Housing Policy in the Regional Development Operational Programme.

Management arrangements

The management arrangements are stated in the project document. Briefly summarized, they are:

The Project is executed by the NGO EnEffect, who acts as the Project Implementing Partner and receives managerial and technical support from UNDP.

The Executive Director of EnEffect, Mr Zdravko Genchev, is serving as Project Director (PD). Under his guidance the Project Manager, carries out all project activities:

The Project Manager in EnEffect has been changed four times within the first two years of project implementation. This discontinuity seems to be chiefly responsible for the significant setbacks and delays in the project implementation. In addition, the current project team is generally lacking in professional expertise in the field of this project. We strongly recommend seeking support of an international consultant with extensive experience in this field and a clear understanding of UNDP/GEF requirements in order to obtain project objectives.

According to the Project Document, project Steering Committee Meetings should occur at least once every six months. While the Steering Committee did meet at the Inception Workshop in July 2006, there have only been two subsequent meetings, the first occurring in July 2007 (1 year after project start) and the second in March 2008. It should be noted that the next meeting was scheduled to occur after the mid-term evaluation.

Considering the need to speed up the project implementation after delays in the first 2 years, we recommend that the Steering Committee meet monthly for the next 6 to 8 months and at least once every 3 months in the period afterwards.

A clear plan of activities with a time schedule for project activities has to be established. This schedule should include which data is to be obtained, from where it has to be obtained and when and how its accountability is ensured. In particular, CO2 calculations, baseline data etc have to be obtained. Regular follow up has to be done, if the project is to be completed according to schedule.

Financial planning / Cost-effectiveness

A review of financial reporting points out to overall sound financial reporting and management.

Financial Planning Cofinancing

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
- Grants	2.50	0.22			3.25	0.67	5.75	0.89	6.75	1.29
- Loans/Concessional (compared to market rate)										
- Credits										
- Equity investments										
- In-kind support	0.50	0.00					0.50	0.00	0.50	0.00
- Other (*)										
Totals	3.00	0.22			3.25	0.67	6.25	0.89	7.25	1.29

*Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Project co-financing is proceeding similar to that outlined in the Project Document. In some instances initial sources of cofinancing have been withdrawn and been replaced with others of compatible value;

-the UNDP/Municipality of Sofia joint project, 'Renovation of Residential Panel Blocks' which was to provide USD 2.5 million in cofinancing did not materialize. In its place, the UNDP project, 'Demonstration Project for Renovation of Multifamily Buildings' (duration May 2007 to December 2009) being carried out in cooperation with municipal governments and building owners has taken its place. The total budget for this project USD \$13.7 million and it intends to achieve the renovation of 30-50 multifamily buildings in at least 10 cities. Project Management is considering approx. 25% of project costs as cofinancing (USD 0.2 million to date) which corresponds roughly to the amount spent on EE measures including energy audits.

- a large cofinancing source (USD 2.8million) was expected from the private sector in the form of two new pilot projects. In the Project Document this source of co-financing was a private sector developer planning the

construction of two new buildings following energy efficient lines which would in turn act as pilot projects. At the project start the developer withdrew his intent to participate in this project and while the project team has invested much effort to replace these pilot projects with other new, planned, private sector buildings, their efforts have so far not been fruitful. Currently, this source of cofinancing is replaced with other private sector investment in building (residential and SME) rehabilitation. These projects can provide important practice examples.

-The bilateral Dutch Sustainable Housing Management project was considered as co-financing to the scale of USD 0.45 million and was completed in October 2006. While intense cooperation during project implementation was not possible because of the late start of the UNDP/GEF project, the Dutch project was influenced by the UNDP/GEF project preparation and as such still considered a cofinancing source. In addition, the lessons learned, financing models and networks formed during the dutch project are easily transferred and incorporated into this project SMEs which were involved in the Dutch project including the Bulgarian Housing Association are being included in the UNDP/GEF project.

Finally, 0.5 million in kind co-financing from the UNDP JOBS initiative is still expected. Cooperation with the 42 Business Centres and Business Incubators across the country with reference to EE SMEs is forseen.

With reference to Leveraged Resources, the project activities aimed at municipalities should help stimulate investment in municipal properties. Investments planned in the adopted Municipal Energy Programmes of Dobrich and Smolian which were partially prepared under this UNDP/GEF project amount to USD 18.6million and those planned in the MEP of Madam municipality (to be adopted soon) amount to USD 3 million. While these are still pipeline investments, the hospital in Burgas was recently renovated following MEP recommendations and specific EE recommendations of an energy audit prepared under this UNDP/GEF project with a budget of USD 0.97million.

Based on the review of all available information, the cost-effectiveness was rated satisfactory.

HS	S	MS	MU	U	HU	N/A
	X					

Management by the UNDP country office

UNDP management has been actively involved in the project and in the Steering Committee. No particular management issues were noted by project evaluators with respect to UNDP’s handling of management. Despite changes in UNDP project personnel, communication between UNDP and the Project Implementing Partner appear to be fluid and stable.

Risk Management

Two major risks identified in the Project Document have materialized; namely the Condominium Law has not been enacted as yet (although this is expected within the next months) and the National Programme for the Refurbishment of Residential Buildings is not fully operational. These problems which mainly affect the national take-up of project results in the private residential sector, are discussed in the PIR 2007 and PIR 2008 however little response is proposed. While the project's cooperation with the UNDP initiative 'Demonstration Project for Renovation of Multifamily Buildings' is providing good pilot activities, a comprehensive model for multi-storey housing block renovation based on hands-on experience should be developed now to facilitate rapid large scale up-take of best practice procedures (financing, planning, tenant organization, measures etc.) in the future.

Another risk identified in the Project Document and which has also materialized concerns the withdrawal of private sector pilot project investments for 2 new buildings. It was clear at project start that this investment was withdrawn and subsequent attempts to replace the pilot projects have taken up considerable effort and time by the project team within the past 2 years. Please refer to recommendation 7 for a possible integrated strategy to proceed with pilot projects.

The final risk identified in the Project Document concerns the project management capacity. While EnEffect has excellent experience with UNDP/GEF projects and has built up considerable networks among government agencies, funding sources, municipalities and building owners, this project has suffered from discontinuous management and inadequate capacity in the selected project team. There have been 4 Project Managers assigned within the first 2 project years. This situation is acknowledged in the PIR 2008, but the critical risk associated with it is not pursued. Please refer to recommendation 1.

Risk Management procedures including the application of the Atlas Risk Tab are being employed in the PIR as well as in quarterly reports.

Monitoring and evaluation and adaptive management

The Project Document did not include definitive project indicators but rather stipulated that one of the functions of the Inception Workshop was to discuss and define precise and measurable performance indicators. While project indicators were discussed at the project Inception Workshop, it was not until the end of the first project year that project indicators were re-defined in the Project Documents. However subsequent data collection and tracking of many indicators has proven problematic, so that at the end of the second project year, indicators are still not providing adequate measurements of project impact.

A related monitoring problem is the lack of a comprehensive and trackable CO2 calculation.

From a project management point of view, the project monitoring and evaluation procedures should have been better defined either in the Project Document or at the Inception Workshop. In particular the project logframe matrix does not appear to have defined clear indicators and sources of verification. In addition the relationship between objectives, outputs and activities described in the body of the document are poorly reflected in the project planning matrix.

The inadequacies with reference to indicators and monitoring have meant that the project management have had little guidance about project progress, and are retroactively determining indicators, baselines, expected developments and project-related developments during project implementation. Adaptive management can only be facilitated if a clear monitoring and evaluation procedure with simple, verifiable indicators related to project outcomes and a corresponding project planning matrix are developed which allowing all project team members to understand their work in relation to an overall objective. This also facilitates final project evaluation.

The GEF Tracking tool has been applied and included in the PIR 2007 and PIR 2008 (included as Annex V) however, because of the above stated inadequacies with reference to indicators and monitoring procedures, the effectiveness of this tool is limited.

The monitoring and evaluation was rated marginally unsatisfactory.

HS	S	MS	MU	U	HU	N/A
			X			

4.3 EFFECTIVENESS

The data, concerning what has been implemented so far is taken of the PIR 2008, from the UNDP Annual Project Report 2007 . The original time schedule, which is part of the project document, is included on the following 2 pages.

Quarterly Time-table for Project Implementation from the Project Document

Building the Local Capacity for Promoting Energy Efficiency Measures in Private and Public Buildings

Outputs and activities	Quarters of project implementation															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Enhancing awareness and capacity of the local architects and engineers to adopt energy efficiency aspects into the building design.																
1.1. Training and Information Centre strengthened in the Centre of Postgraduate Studies of the University of Architecture, Construction and Geodesy (UACG).																
1.2. Signing a contract for the design of new energy efficient pilot buildings with competitive costs and finalizing the design.																
1.3. Constructing new energy efficiency buildings.																
1.4. Compiling and analysing the results and lessons learnt from the construction and early operation of the new buildings.																
1.5. Developing a handbook and a training package for energy efficient design of new buildings.																
2. Creating sustainable demand for energy efficiency investments in public buildings.																
2.1. Improving guidelines and associated training of certified energy auditors for preparing more “marketing oriented” energy audits.																
2.2. Developing a database of energy audits leading to actual implementation, with the associated incentives to encourage energy auditors to promote the adoption of the recommendations.																
2.3. Improving the guidelines for developing municipal energy plans and investment programs distributed + associated training of public authorities.																
2.4. Upgrading the existing municipal energy plans to concrete, implementation oriented investment programs, including the improvement of energy efficiency of public buildings and new residential town plans drafted as per the National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria.																
3. Creating sustainable demand for energy efficiency investments in private residential buildings.																
3.1. Establishing an initial network of local focal points that are able to act as a “one-stop” support center to encourage and support the residents of private residential buildings to: i) establish housing associations or other applicable forms of co-operation, ii) develop and implement investment projects for improving the energy efficiency and refurbishment of the buildings in general; and iii) structure financing for the projects.																

Quarterly Time-table for Project Implementation from the Project Document

Building the Local Capacity for Promoting Energy Efficiency Measures in Private and Public Buildings

Outputs and activities	Quarters of project implementation															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3.2. Increasing interest for EE investments through targeted public awareness raising campaigns and cost-sharing of energy audits.																
3.3. Evaluation of the available financing and associated public support and incentive schemes and, as applicable, further developing in co-operation with the project's envisaged financing partners.																
3.4. Finalizing the implementation of the first pilot projects and documenting, analysing and disseminating the results and lessons learnt.																
3.5. Institutionalising the future support needed, including further development of the National Program for Refurbishment of Residential Buildings including synergy with the National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria..																
4. Increasing the demand for energy efficiency investments in private service sector buildings with the initial focus on tourism facilities (hotels etc.).																
4.1. Increasing interest for EE investments through targeted public awareness raising campaigns and cost-sharing of initial energy audits.																
4.2. Supporting the owners/managers of the targeted service sector buildings to develop concrete investment proposals and to structure financing for the projects.																
4.3. Facilitating successful implementation of the first investment projects through required technical assistance (quality control etc.).																
4.4. Documenting and disseminating the results and lessons learnt from the implementation of the first investment projects.																
5. Increasing the capacity of the local service providers to effectively market and implement their services.																
5.1. Supporting the existing Associations of Energy Service Providers, like the Association for Energy Analysis and the Chamber of Companies Performing Energy Audits and Certification.																
5.2. Developing an internet based, virtual market place, information clearing house and training facility to support the business development of the local energy service providers in the energy efficiency field.																

Expected overall Outcome

To support market transformation towards energy efficient new building design and retrofit of the existing building stock

Expected Outcome 1

Enhanced awareness and capacity of the local architects and engineers to adopt energy efficiency aspects into the building design

Output 1.1.

A Virtual Training, Information and Consultancy Centre strengthened in cooperation with the University of Architecture, Construction and Geodesy (UACG) and other relevant institutions under the auspices of the UNDP

Initially the target was to strengthen EE awareness at the Center for Postgraduate Studies of UACG. The output was modified to a virtual training center, in order to reach a broader audience.

Output 1.2.

Providing consultation for the design of new energy efficient pilot buildings and the design of existing building retrofit with competitive costs and finalizing the design

Consulting has been provided on this topic. This output is not part of the time-table for project implementation joined to the project document, therefore no indications for when it will be finished are available in the project document. The activity is still ongoing.

Output 1.3.

Constructing new energy efficiency building and existing building retrofitted

No pilot building has been constructed.

The intended output was to construct two new, energy efficient buildings. A memorandum of agreement with investors for these two buildings had been signed. Unfortunately the pilot project could not be realized, because investors withdrew from the project. Subsequently the project team has invested a lot of effort into searching new investors for pilot projects.

The time frame in the project document expected the completion of pilot project construction at the end of 2007. Because the initial investor has removed his offer to participate in the project, this output has been delayed with no clear indication of its implementation in the future. While much effort has been spent by the project management to find a replacement pilot project, there is no clear project or project schedule to date.

We recommend a change of strategy: First to approach the 30 most active architectural offices and secondly to providing them with high quality seminars and consultation on the implementation of EE strategies, measures and technologies in building design. By convincing them to utilize EE building design practices, pilot projects are more likely to develop.

Output 1.4.

Results and lessons learnt from the construction and early operation of the new/retrofitted buildings compiled and analysed

This output was planned to be completed in early 2008. So far no analysis has been effected, because no building has been constructed. The delay is a result of the delay in output 1.3.

Output 1.5.

A handbook and a training package for energy efficient design of new buildings

According to the time-frame this output should now be completed. Several chapters have been drafted and the material is still under development. The material is planned to eventually be available online..

In the handbook, best practice is missing as well as a clear profile of the target audience. An international consultant in the field of energy efficient measures for building design has been subcontracted to the end of the project implementation. The role for this subcontractor is not yet defined.

Recommendations Outcome 1:

A lot of work has been invested into this outcome and the online training course has been completed. However, a larger audience among the architects might be reached with a better consideration of their requirements in terms of integrative design guidelines, clear investment procedures and material specifications. The virtual training

center can certainly serve as a useful base of reference for them, but an online course might not be the best means to introduce professionals to the issue. In that was has been drafted so far, the best practice is missing. From the evaluation of the outcomes and the interviews with stakeholders it has become clear, that the project is experiencing difficulties in disseminating best practice as examples for architects, because best practice is not yet available in Bulgaria. In order to reach a wide audience among architects, we suggest holding a free 2-5 days training course, led by an international specialist with experience in green building and energy efficient retrofit to provide best practise. The target group for this training course are architects of the 30 most active Bulgarian architects' offices, whose members may then incorporate energy efficiency measures on an international level into their work. The architects may convince their clients and investors to invest into energy efficiency measures in their buildings. Their buildings may then serve as pilot projects and subsequently best practise inside Bulgaria, and at the same time complete indicator 8 as well as output 1.3. This training course may be achieved in co-operation with the Chamber of Architects inBulgaria and their academy, who appeared very eager to participate and contribute during the interview.

In order to provide current best practice at a high level, an international expert has to be invited, as best practice is not yet established in Bulgaria.

The training courses, which have been initiated with the online learning platform, have to be specifically adapted to the different target groups. Students, mechanical engineers, architects and municipality officers need different aspects of information about energy efficiency. Professionals need to know how to incorporate it into their present work, whereas municipality officials, who are more concerned with inspecting and maintenance of existing buildings, have entirely different needs. Therefore training has to be highly target group oriented to reach the highest possible outcomes.

Expected Outcome 2

Sustainable demand for energy efficiency investments in public buildings created Outputs:

Output 2.1.

Municipal managers and experts trained to develop and manage the implementation of municipal energy programs

A large number of municipal energy managers have been trained. The annual project report 2007 indicates 178 municipal officers were trained. The number of municipal staff trained so far, already exceeds the project objective.

Output 2.2.

A database of energy audits leading to actual implementation, with the associated incentives to encourage energy auditors to promote the adoption of the recommendations made

The output should have been completed by quarter 6. The monthly progress report for June 2008 shows that the development had not started yet. The Project Implementing Partner agreed with EcoEnergy to develop it together.

Output 2.3.

Improved guidelines for developing municipal energy plans and investment programs distributed + associated training of public authorities

MEPs were updated and staff trained. The outcome was due in quarter 8, when an international consultant was invited to evaluate the current implementation of the current product.

Output 2.4.

The existing municipal energy plans upgraded to concrete, implementation oriented investment programs, including the improvement of energy efficiency of public buildings and new residential town plans drafted as per the National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria

Two MEPs, in Smolian and Dobrich, were updated and investments may follow based on these updates. Another one, in Madan, has not been adopted yet, but was drafted. This activity should be ongoing and should be completed at the end of 2008.

Recommendations Outcome 2

Measuring the increase in demand for energy efficiency investments in public buildings needs a clearly defined baseline. The baseline is the status at the end of the previous UNDP/GEF programme, which was carried out by EnEffect. A clear formulation of the baseline might be included, making comparison easier. So far the baseline is not clearly defined inside the project documentation. A more results-based approach ought to be adopted.

The project's objective is to reduce energy consumption by creating new and updating existing municipal energy plans. At the time when the project was designed, municipal energy plans were still not common. Between the time of project design and the start of implementation Bulgaria has joined the European Union and municipalities have drafted energy plans because it provides them with the opportunity to obtain subsidies from the European Union's structural funds.

As mentioned before, the situation has evolved between project design and implementation. When European Union legislation was adopted, energy audits became mandatory for new buildings, municipal buildings and large renovations. This change in the baseline has to be taken into account in the implementation.

Therefore, the project's goal should no longer limit itself to fulfill minimum requirements, but to go beyond the level required for European Union funding. Municipalities should be encouraged to invest beyond the legally necessary level. This may be done on providing additional, precise information about savings potential, using international best practise as examples.

The project should clearly define its role and objective, to obtain the goal of assisting municipalities in upgrading municipal buildings.

Expected Outcome 3:

Sustainable demand for energy efficiency investments in private residential buildings created

Output 3.1.

Establishing an initial network of local focal points that are able to act as a "one-stop" support center to encourage and support the residents of private residential buildings to: i) establish housing associations or other applicable forms of co-operation, ii) develop and implement investment projects for improving the energy efficiency and refurbishment of the buildings in general; and iii) structure financing for the projects.

One center in Dobrich has been established, but data on its activities is not available. Two people have been trained to work in these one stop centers. This activity is on time - it was scheduled for year 3 of the project.

However, a clear framework for monitoring of activities and successes is missing. These centres should have clear target groups and clear mandates to direct the target group(s) towards effective EE investment mechanisms for their buildings. These call centres should be directly promoting the EE renovation of buildings under the direction of this project.

Output 3.2.

Interest for EE investments increased through targeted public awareness raising campaigns and cost sharing of energy audits.

EE audits were performed on 18 buildings within the framework of this project. For example, there was an audit for the student dormitory in Sofia. However implementation of EE measures is not certain due to costs.

Information material, such as brochures, were distributed to the one-stop centers. The awareness raising campaign should be completed by now.

Output 3.3.

The available financing and associated public support and incentive schemes evaluated and, as applicable, further developing in co-operation with the project's envisaged financing partners

No additional measures are indicated for the evaluation period in quarter 3 to 5. Project calculation of potential investments (according to data in the quarterly project review January to March 2008) is on track. It appears the project team does not assume additional measures are necessary. A second evaluation period will start in quarter 11.

Output 3.4.

The implementation of the first pilot projects finalized and documenting, analysing and disseminating the results and lessons learnt

The analysis will be done on the project Block 17 in Blagoevgrad, but has not been done yet. It is scheduled for year 4 of the project.

Output 3.5.

Institutionalising the future support, including further development of the National Programme for Refurbishment of Residential Buildings in the Republic of Bulgaria including synergy with the National Program for Refurbishment of Residential Buildings

This activity is scheduled for the last year of the project, starting in quarter 11.

Recommendations Outcome 3

Even without the Condominium Act, apartment owners are interested in investing. The 10Million USD investment is realistic, provided an intensive information campaign is launched, that reaches the targeted people.

We recommend that the project should be closely co-operating with the Bulgarian Housing Association, to identify willing owners and with the Energy Efficiency Fund. The projects supported by the Dutch government could serve as best practice. The offer to willing apartment owners should include audits, advice on financing and forming an owners-association, soft-loan schemes, and provide information, if self-financing refitting is possible. (e.g. The owners Associations might finance the renovation, by adding an apartment on the newly renovated roof. Selling this apartment would return their investments.) Support must be given to help people organize themselves.

A model should be developed in cooperation with the Bulgarian Housing Association based on its experience in the Dutch-Bulgarian soft loans using the financing possibilities of the BEEF and ESCOs. The model should be a clear mechanism to renovate residential building in the period before the Condominium Act is passed.

Additionally follow up of completed activities should be intensified. The success of the one-stop information centers should be checked. Tasks are: keeping track of how many brochures were printed, how many were distributed, how many remain, and if new ones have to be printed or distributed, keeping record of how many contacts have been made, with potential investors, house owners and how many of them eventually decide to do make EE investments and which amount they are going to invest. These updates are an integral part of the project, because the impact of project activities is otherwise not accountable. As there is no feedback on the one-stop information centers yet, their effect cannot be evaluated.

Expected Outcome 4

The demand for energy efficiency investments in private service sector buildings with the initial focus on tourism facilities (hotels etc.) increased

Output 4.1.

Interest for EE investments increased through targeted public awareness raising campaigns and cost-sharing of initial energy audits

The schedule for this activity is quarter 3 to 6. A seminar was held for hotel managers and brochures were distributed to hotels and architects. Some were generally interested, but no immediate investments resulted from the awareness raising campaign. Raiski kat holiday complex and the British Residence in Sofia were audited. As can be seen from the contacts made, awareness was raised.

Output 4.2._

Supporting the owners/managers of the targeted service sector buildings to develop concrete investment proposals and to structure financing for the projects

The project retrofit of Sport Complex Lava in Samokov received a technical and financial feasibility study. The time-frame for this output is quarter ten. Work on this output is still in progress on the hotels Grant in Samokov and Raiski kat in Varna.

Output 4.3.

Facilitating successful implementation of the first investment projects through required technical assistance (quality control etc.)

In Stara Zagora and Pravetz 2 projects are under progress. The implementation of this activity is scheduled to continue till the end of the project.

Output 4.4.

Documenting and disseminating the results and lessons learnt from the implementation of the first investment projects

This activity is scheduled to start in year 3.

Output 4.5

A catalogue with model technical details, solutions and measures for EE improvement in hotels

This target has been added later, to substitute the implementation of pilot projects.

Recommendations Outcome 4

The tourism sector in Bulgaria is developing, but as in the other sectors, best practice in energy efficient building is still not established. Investors lack information and examples, and are therefore reluctant to invest into EE projects.

In order to reduce investors' reluctance towards EE projects, they have to be provided with precise data. These include best practice, illustrated by international examples, lists of potential improvements. Of particular importance in the private business sector is ensuring that the financial feasibility, financing schemes and payback times are obvious to the investors. Initially hotel chains might be targeted, who have several buildings to refit.

Expected Outcome 5

The capacity of the local service providers to effectively market and implement their services increased

Output target 5.1.

Supporting the existing Associations of Energy Service Providers, like the Association for Energy Analysis and the Chamber of Companies Performing Energy Audits and Certification

The activity is ongoing, as scheduled.

Output target 5.2.

An Internet based, virtual market place, information clearing house and training facility to support the business development of the local energy service providers in the energy efficiency field

This output is scheduled for the last project year. Development of the website has already started.

Recommendations Outcome 5

The indicators for this objective cause certain difficulties. Indicator 13 had to be specified, as it does not provide information on the basis of the calculations. The indicator may be clarified to promote accountability. After the indicator was adapted, data still was not obtained. It should be verified, if the data is available. Obtaining results for indicator 14 may be supported by convincing the ESCOs that the project is ultimately supporting their turnover and co-operation with the project will eventually benefit them, because success in the project further increases their sales.

The EnEffect should actively seek strategic partnerships with the ESCO and other service providers to cooperate in the promotion of EE materials and services. Additionally, they should create models and use the synergy to develop more EE measures.

Outcome 6: Monitoring and Reporting

Based on documents presented for review and discussions with UNDP staff, project reports are completed in a timely and clearly structured manner. The Project Implementing Partner has been submitting yearly work programmes, monthly reports, quarterly reports and PIR as well as the minutes of Steering Committee meetings.

The problem of poor definition of project baselines and indicators has meant that the reports are lacking clear analysis and tracking of achieved results in relation to project objectives. For this reason progress described in the reports is essentially output oriented but has little reference to project impact. For adaptive project management a results-based analysis is essential.

Concerning baselines, there is generally a lack of clear definition of work and results which result directly from previously completed projects and incentives (including the previous UNDP/GEF project performed by EnEffect) or from projects and incentives running parallel to the project (for example, EU structural funding for municipalities with MEPs or new laws requiring building audits). In the calculation of CO2 emission reduction contained in the 2008 PIR, the project claims

In this respect, work which has been completed is not being carefully monitored for effectiveness. For example, the number and extent of calls to the one-stop support centres or the number of visitor to the VTICC web-site are not being monitored, which would be of high importance to evaluate effectiveness.

Recommendations to improve monitoring and reporting are;

1. Careful review and adaptation of the Project's Logical Framework Matrix.

Indicators were recognized as inadequate in the Project Document and these were refined at the end of the first project year. However subsequent data collection and tracking of many indicators has proven problematic, so that at the end of the second project year, indicators are still not providing adequate measurements of project impact. In several cases the baseline is also unclear. It is recommended that the project team review and adapt

the project's logical framework matrix to ensure results-based effort for the remaining project implementation.

2. Create a CO₂ emission reduction calculation for the period to 2020 with a clear comparison of the baseline to each of the individual project outcomes and to the 5 outcomes combined. This tool will provide a means to track project impacts but also help determine the appropriateness of project indicators.

The project generally set realistic targets. However, a more results-based approach in the implementation will be necessary, in order to obtain these target.

4.4 RESULTS

The indicators to measure the impact of different measures and objectives are those indicators included in the logical framework as updated June-July 2007 which can be found in the annex and which are considered in the PIR 2007 and the PIR 2008.

Expected overall Outcome

To support market transformation towards energy efficient new building design and retrofit of the existing building stock

The main indicators to measure progress towards this Outcome are:

Indicator 1: tCO₂eq emission reductions from project supported buildings (over their lifecycle to 2020)

The target level for CO₂ reductions was set at 125,000 tCO₂eq. The current expectation of CO₂ savings, based on ongoing project activities, is 196 280 t CO₂/2020 by the project close.

The level of CO₂ reductions reached by June 2008 was indicated at 29 000 t CO₂/2020. The CO₂ reduction calculation is based on 4 renovated pilot buildings, an SME in Pravetz, Burgas hospital, the British Embassy in Sofia and Block 17 in Blagoevgrad. These are marked yellow in the energy audit list on the following page. The performances of these buildings were calculated before and after renovation, according to normative energy consumptions and the difference used to determine CO₂ savings.

The evaluators are concerned that these CO₂ emission reduction savings may not be realistic on the one hand and a direct consequence of project activities on the other.

- normative results are not the actual consumptions. Real consumptions should be measured 3 years before and 3 years after renovation to provide clear indications.

- it is not clear that these EE renovations are solely consequences of the activities of this project. Energy audits are now required by law and recommendations are standard parts of these audits.

Recommendation: Data on building energy consumption should be attained for these buildings 3 years prior and 3 years after renovation to back-up audit findings. We recommend obtaining the lacking calculations by an international consultant.

ENERGY AUDITS SINCE THE PROJECTS START

JUNE 2006 - JUNE 2008

No	SITE	YEAR	FLOOR AREA	PLANNED INVESTMENTS	ENERGY CONSUMPTION BEFORE EEM MW/year	SAVED PRIMARY ENERGY MW/year	% IN ENERGY CONSUMPTION	CO2 EMISSIONS REDUCTION	CUMULATIVE CO2 EMISSIONS REDUCTION
1.	SME Pravetz	2006	1.013	268.664	543	312	57%	189	2.457
2.	Bl. 31, Lulin	2006	1.614	30.659	524	74	14%	18	234
3.	Hospital in Burgas	2007	50.525	970.000	17.707	3.703	21%	1.833	23.829
4.	Hotel Vila Roka - Bansko	2007	5.709	129.021	2.217	327	15%	151	1.963
5.	Kindergarten No 3 - Smoljan	2007	2.868	163.474	631	372	59%	152	1.976
6.	Kindergarten No 6 - Smoljan	2007	826	54.943	259	150	58%	56	728
7.	Kindergarten No 8 - Smoljan	2007	1.005	76.043	241	121	50%	49	637
8.	School No 2 - Smoljan	2007	6.706	316.982	1.273	957	75%	281	3.653
9.	School No 6 - Smoljan	2007	6.309	139.570	1.218	557	46%	173	2.249
10.	SME Orpheus, Sofia	2007	2.017	103.212	492	100	20%	36	468
11.	Building British Embassy, Sofia	2007	1.670	30.880	762	170	22%	94	1.222
12.	Block 17, Blagoevgrad	2007	3.000	174.032		105		115	1.495
13.	House in village Prolesha	2007	70	10.145		10		4	52
14.	Bl. 35, UACG	2008	8.003	470.137	3.694	1.852	50%	690	8.970
15.	Residence of British Ambassador	2008	2056	13.899	809	64	8%	18	234
Total: 15 Energy Audits			93.391	2.951.661	30.370	8.874	38%	3.859	50.167
Total: 7 Public			69.909	1.751.892	22.091	6.030	47%	2.638	34.294
Total: 5 Residential			14.743	698.872	5.027	2.105	24%	845	10.985
Total : 3 Hotels & SME			8.739	500.897	3.252	739	31%	376	4.888

Indicator 2: Adoption of the recommendations made in the frame of the project into the design of new buildings

At the initial stage obligatory building codes for new buildings existed, voluntary “best practices” for energy efficient building were not widely applied. The target level was set at project trainees including best practice project recommendations in 10 % of all new constructions they are involved with by project close.

The current data does not include a percentage of best practice application yet, but training professionals has started. So far “on the job” training and “classical short term” training were provided.

Indicator 3: Annual sale of EE related materials and equipment used for EE retrofits increased by 20 % compared to levels at year 1 (baseline)

There is no verifiable data on this indicator available. The estimated increase so far is 10-15% compared with the baseline. The estimation is based on data provided by the Energy Efficiency Agency. The project Implementing Partner should approach suppliers. In fact, this project is promoting their products and they should participate and 'take over' the project objective.

Indicator 4: m² of the floor area in public buildings; private residential buildings; and private service sector buildings covered by the project supported energy investments

The targeted floor area to be covered by the project was 132,000 m² by the project close. The current status consists of 74 799 m² which includes renovation works on the residential buildings block 17 in Blagoevgrad, part of the joint project by the Municipality of Sofia and UNDP, the residential block of flats in Liulin housing estate in Sofia, the hospital in Burgas and the buildings of British Embassy, where work has been completed, the retrofit of the building of a SME in the town of Pravetz, which is under way, and eleven cost-shared audits of public and private buildings, which were oriented to investments. This does not include floor area covered by municipal energy programmes in the municipalities of Dobrich, Smolian and Madan, which participate in the project and which will be calculated in the next project area.

Expected Outcome 1

Enhanced awareness and capacity of the local architects and engineers to adopt energy efficiency aspects into the building design

The main indicators to measure progress towards outcome 1 are:

Indicator 5: Number of students educated/trained on how to apply EE best practices (prepared by the project)

The targeted number of students over the whole duration of the project is 600 students. So far 180 have been trained. The training material is not yet completed, but it is being tested at the UACG, by project participants. The expected number of students to be trained from now on is 120 annually. It might increase if cooperation with another university, European University in Pernik, would take effect.

Indicator 6: Number of educated/trained professionals are regularly applying EE best practices in their work

The initial target was to train 30 of each architects, engineers and designers. Altogether 90 professionals. It has been changed to 45 architects and 45 engineers, as designing is usually included in these professions.

In June 2008 a EE seminar was held at the house of architects in Sofia. Lecturers were Bulgarian building professionals and professors with limited capacity in terms of effective best practice to realize energy efficient new buildings.

An international lecturer was invited, but the focus of the presentation was not clear. We recommend to focus on the 30 most active architectural offices and give them in-house project specific consultation in return for their efforts to implement pilot projects.

Indicator 7: Number of educated/trained chief municipal architects and other municipality officers are regularly applying EE best practices in their work

The target is training of 150 municipality officers on how to apply energy efficiency aspects. 178 municipality officers were trained, however the focus of the training has been on preparing MEPs. The focus of this training should be on project management (to realize municipal EE buildings renovation projects) and on inspections of building projects for building permits

Indicator 8: At least two new buildings (3,500 m² each or above) promoting EE design and making use of EE materials and equipment are under construction by the end of the project

The target is to cover at least a total of 7,000 m² of floor area by 2 new buildings of each at least 3500m² floor area. These buildings are intended to save 4,000 tons CO₂ emissions by 2020.

The PIR 2008 indicates that no building is under construction yet. A previous agreement with an investor, at project formulation, was not realized inside the project, due to the long delays between initial project formulation in 2001 and the project start in 2006.

Additionally 28 potential investors and 4 municipalities have been contacted on the subject and contacts continue. An agreement for the design for the retrofit of existing buildings and for the entire design of a new demonstration passive building has been established, situated in Stara Zagora.

Expected Outcome 2

Sustainable demand for energy efficiency investments in public buildings created

The main indicators to measure progress towards outcome 2 are:

Indicator 9: Project supported municipal energy plans upgrades and project supported energy audits leads to investments programs of at least 3.5 million US \$ in public buildings

The energy investments are supposed to amount to:

0,5 millions USD by end of year 2

1,5 millions USD by end of year 3

3,5 millions USD by end of year 4

The data which has been provided, based on the PIR 2007, indicates 12.5 Million USD planned investment. However these are not exclusively attributed to the project. It is estimated that 1/6 of these 12.5 Million can be attributed to project related improvements. Actual investments were not yet made.

The PIR 2008 data amounts to 21 616 000 US\$ (Pipeline). However it does not become clear whether these are directly project related improvements, or as above, only part of these investments is directly project related. No data on actual investments is available, as the figures given are investments in the pipeline.

The municipal energy plans, which have already been adopted in Dobrich and Smolian municipalities, are calculated to 616 000 US\$. Madan municipality energy programme, which has not been adopted yet, amounts to USD 3 million.

These realistic goals have not been reached and the baseline must be defined. No additional energy efficiency measurement outside those required by law has been identified in these projects. The projects identified are in the pipeline and do not correspond to an added-value from this project. A focus on energy efficient measures above those required by law is recommended.

Indicator 10: Duration between audit recommendations and investment decreases

The duration between audits recommendations and investment was estimated to be 90 day at project start. It is intended to decrease by 10 days as of year 2, and a further 20 days to 60 days at the end of year 4. According to data from the Bulgarian Energy Efficiency Fund, the time between audit and implementation is currently 79 days, below the mid term target of 80. However the data still does not include any audits apart from those collected by the BEEF. The indicator is an interesting one for this outcome as it directly relates to increases in municipal capacity to review audits, and ultimately to implementation.

Expected Outcome 3:

Sustainable demand for energy efficiency investments in private residential buildings created

The main indicator to measure progress towards outcome 3 is:

Indicator 11: Project supported energy audits and project interventions leads to investments in EE retrofits in private residential buildings of at least 10 million US \$

The situation in Bulgaria has changed between project design and project start. Due to outer circumstances, the lack of implementation of the Condominium Act, the state programme for renovation of buildings has been

delayed. Therefore, the conditions expected during project design have not transpired. The intended investments were:

By June 2008 investments amounted to 686,100 US\$, which include one building, where retrofit has been completed and 3 projects, which have been initiated.

In Blagoevgrad, the block of flats no 17 was refitted at total costs of 174,032 US\$. A residential building in Lyulin, student hostels in Sofia and a family house situated in the village Prolesha will be refitted as well. Total investments of all 3 projects are estimated at 512 068 US\$.

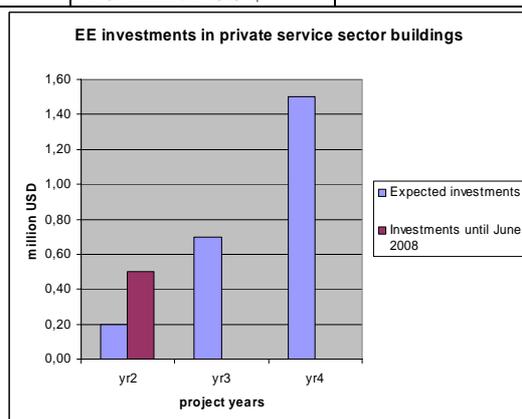
Expected Outcome 4

The demand for energy efficiency investments in private service sector buildings with the initial focus on tourism facilities (hotels etc.) increased

The main indicator to measure progress towards outcome 4 is:

Indicator 12: Project supported energy audits and project interventions leads to EE investments in private service sector buildings of at least 1.5 million US \$

Year	Expected investments	Investments until June 2008
2	0.2 million US \$	500,897
3	0.7 million US \$	
4	1.5 million US \$	



3 buildings were audited and retrofit of these buildings has started. Total investments in these buildings, located in Pravetz, Vila Roca and Orpheus amounts to 500,897 US\$. The project faces some difficulties in obtaining this target, as the development in the tourism sector lacks behind expectations. Consequently the estimations which were taken as a base for the project document have not materialized.

Efforts in the project team have been increased, to obtain the target. An information campaign was addressed to 4.500 Bulgarian hotel owners, to raise awareness.

The PIR 2008 indicates that progress has been made in the mean time. Designing “Raiski kat” holiday complex in Varna has started. CO2 emissions reductions have not been calculated yet. The floor area of the holiday complex still has to be determined, it is estimated to cover 2.000 to 3.500 m², which might reach the targeted 3.500m².

Expected Outcome 5

The capacity of the local service providers to effectively market and implement their services increased

The main indicators to measure progress towards outcome 5 are:

Indicator 13: At least 10 % reduction in energy consumption (kWh/m²) resulting from local service providers interventions

The PIR 2008 indicates savings of up to 58% with an average 38%. These reductions are due to non-specified interventions by energy service providers and saved 8 874 000 kWh/year according to estimates in the PIR 2008.

The survey, which monitors the energy savings is supposed to be completed by the end of 2008 and data was therefore not available at the time of the mid-term evaluation.

Indicator 14: The annual turnover of the local EE service providers, including ESCOs.

This indicator was supposed to rise by 10% per year. Evaluation of achievement has not been possible because no data on the subject has been attained. A survey of turnover of local EE service providers is due at the end of 2008.

Conclusions.

A concise evaluation of the project outcomes and indicators including a evaluation of the CO2 emission reduction targets has not been possible as a result of inadequate baseline data. The reporting of project success relative to objectives is not addressed in the project. This is largely due to inadequacies in the project framework and the clarity of indicators relative to outcomes.

Recommendations

Careful review and adaptation of the Project's Logical Framework Matrix.

Indicators were recognized as inadequate in the Project Document and these were refined at the end of the first project year. However subsequent data collection and tracking of many indicators has proven problematic, so that at the end of the second project year, indicators are still not providing adequate measurements of project impact. In several cases the baseline is also unclear. It is recommended that the project team review and adapt the project's logical framework matrix to ensure results-based effort for the remaining project implementation. Generally, the number of indicators could be reduced to 2 or 3 verifiable and relevant indicators per outcome.

1

The outcome/achievement of objectives is rated Moderately Satisfactory

HS	S	MS	MU	U	HU	N/A
		X				

4.5 SUSTAINABILITY

Contribution to upgrading of skills of national staff

Considerable cooperation and training efforts at the municipal level have increased the capacities of the municipal governments to plan, finance and implement energy efficient investments. The concentration of intense efforts on 4 pilot municipalities is an appropriate approach and the networks and platforms built up in the previous UNDP/GEF project are providing an excellent means of dissemination and should support rapid replication of effective mechanisms in the other municipalities.

Rating of sustainability is Satisfactory

HS	S	MS	MU	U	HU	N/A
	X					

5 LESSONS LEARNED

General Lessons

1. Logical frameworks should be carefully reviewed and if necessary adjusted at project inception to ensure the project objectives, outcomes and indicators correspond to the national situation. Especially in projects where overall success is strongly linked to the expected implementation of laws or government programmes and where these are delayed, clear alternative strategies (including objectives and indicators) should be defined at the start.
2. Considering the required efficiency and short time frame of these projects, adherence to work plans and time schedules should be carefully tracked. The causes for any delays should be addressed immediately and recourse defined.
3. While the individual members of the project team cannot be expected to commit to the project for its lifetime, a clear strategy to ensure capacity and continuity of project management should be obtained from the Project Implementing Partner. Numerous or poorly coordinated hand-overs of project management and gaps in capacity can cause significant setbacks and delays.

Project Specific Lessons

4. A CO₂ emission reduction calculation should be included in the project document and tracked by the monitoring team during project implementation. A clear baseline and outcome related results should be defined in the project document
5. Work with the municipalities has been particularly effective and positively received in this project and the previous UNDP/GEF project. There is a solid basis for further cooperation.
6. Especially in the private sector, pilot project implementation is risky and influenced by several factors outside the project scope. An alternative strategies to meet environmental and co-financing objectives in the case of 'failed' pilot projects should be defined at the project inception.

6 RECOMMENDATIONS

1. Ensure Expertise and Capacity for Adaptive Project Management.
Management discontinuity and poor adaptation have caused significant setbacks during the first two years of project execution. While the Project Implementing Partner, EnEffect, has experience in GEF project management, the appointed project manager has changed several times. This discontinuity in project management combined with a shortage of qualified and experienced staff in the areas of the project scope has significantly slowed effective project implementation. Considering the tight schedule to project completion, it is recommended that a subcontracted project manager of international capacity and familiar with UNDP/GEF requirements and procedures be integrated immediately.
2. Careful review and adaptation of the Project's Logical Framework Matrix.
Indicators were recognized as inadequate in the Project Document and these were refined at the end of the first project year. However subsequent data collection and tracking of many indicators has proven problematic, so that at the end of the second project year, indicators are still not providing adequate measurements of project impact. In several cases the baseline is also unclear. It is recommended that the project team review and adapt the project's logical framework matrix to ensure results-based effort for the remaining project implementation.
3. A clear CO₂ emission reduction calculation specific to the project outcomes.
As a basis for recommendation 2 above, the CO₂ emission expectation for the period to 2020 should be calculated considering a clear baseline (without project interventions) and subsequently considering each of the project outcomes individually and together. The difference will determine project and outcome specific CO₂ emission reductions. Differentiating between the 5 outcomes will enable the project team to determine priorities. This calculation should be subcontracted to a competent international consultant immediately.
4. Establish a monitoring and evaluation team.
Monitoring and evaluation of project results has not been effective or consequential. This is a result of poor definition of indicators and baselines and in part because the relationship of indicators to CO₂ emission reductions is not founded. A monitoring team (2 persons) should work closely with the consultant of recommendation 3 and with the project management of recommendation 1 and track project indicators to ensure project outputs are achieving the anticipated outcomes and results. This team will provide key feedback to the project management.
5. Frequent Steering Committee Meetings for the next 6 to 8 months.
Considering the need to speed up the project implementation after delays in the first 2 years, we recommend that the Steering Committee meet monthly for the next 6 to 8 months and at least once every 3 months in the period afterwards. These meetings must make decisions and track development of outputs with the clear goal of

meeting stated project objectives.

6. Establish links with Industry Partners producing/distributing EE building products and technologies.

Involve industrial partners in the project. This works for the project on many levels;

- a cooperation in promoting EE investment is advantageous to the project and to the industry
- these partners will be able to provide key data for indicators of market shares and growth.
- industry involvement contributes to the country drivenness and sustainability of the project.
- cooperation in pilot projects and shared promotion and dissemination of results.

7. Concentrate training of architects and engineers to the 30 most active architectural practices in the country. Provide a professional training workshop directed by international experts and aimed at the implementation of integrated energy efficient building design, including financial, design and quality control aspects. Offer further intensive project-specific cooperation to these offices where planned buildings can be significantly improved. These cooperations are likely to result in pilot projects either during the projects lifetime or immediately after. The training provides the basis for an integrated building design approach in these offices, ensures knowledge transfer, and supports the sustainability of the project.

8. Provide municipalities with clear guidelines how to realize EE investments in municipal buildings

While much effort has been taken to help municipalities update and refine their MEPs, there are still significant capacity gaps evident in municipal ability to contract and ensure the quality of EE investment in municipal buildings. Best practices in terms of planning, financing (structural funds, BEEF support, ESCOs etc), contracting and supervising should be available to the municipal employees with the clear goal of realizing more EE investments in buildings.

9. Involve service providers to produce models for renovation of multi-storey residential buildings.

Work with the Bulgarian Housing Association which has experience from the Dutch-Bulgarian SHM project in soft loans, with UNDP and with related ESCOs to create a model for the private owner/tenants of multi-storey residential buildings to produce guidelines for EE renovation of their buildings even before the Condominium Act is passed.

Annex I: Terms of Reference

Terms of Reference

for

Mid Term Evaluation of the Project

**Building the Local Capacity for Promoting Energy Efficiency
in Private and Public Buildings (EE Project)**

**Project 48788
PIMS 2940**

I. Background information on the project

I. General Context

The goal of the project is to promote energy efficiency market in buildings by (i) enhancing the awareness and capacity of local architects and engineers to better adopt energy efficiency aspects into the design of new buildings and retrofit of the existing ones; (ii) raising the awareness and building the capacity of the targeted end users to develop and structure financing for economically and financially feasible EE projects, thereby creating a sustainable demand for energy efficiency equipment, materials and related services in the buildings market; (iii) incorporating the energy efficiency aspects more strongly into the ongoing efforts to renovate the existing building stock in general, including the UNDP funded activities to support the renovation of public buildings and private residential and service sector buildings; (iv) building the capacity of the local energy service providers to effectively market their services and to meet the requirements of the targeted financiers to finance EE projects; and (iv) facilitating effective replication and dissemination of the results and institutionalizing the further support needed for the promotion of EE measures in public and private buildings through applicable legal and regulatory measures and organizational arrangements.

The focus will be on public buildings owned/managed by the municipalities, private residential and service sector buildings and premises of the local small and medium size enterprises, which together cover about 85% of the total energy use of Bulgaria's building stock.

II. Mid Term Evaluation – introduction, evaluation audience, objectives and scope, expected products

II.1. Introduction

The Monitoring and Evaluation Policy at the project level in UNDP/GEF has two overarching objectives:

- To promote accountability for the achievement of GEF objectives through the assessment of results, effectiveness, processes and performance of the partners involved in GEF activities. GEF results will be monitored and evaluated for their contribution to global environmental benefits; and
- To promote learning, feedback and knowledge sharing on results and lessons learned among the GEF and its partners, as basis for decision-making on policies, strategies, program management, and projects and to improve knowledge and performance.

This evaluation is to be undertaken taking into consideration the GEF Monitoring and Evaluation policy (<http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html>) and the UNDP/GEF Monitoring and Evaluation Policy (<http://www.undp.org/gef/05/monitoring/policies.html>).

This Evaluation is to explore five major criteria:

- (i) Relevance – the extent to which the activity is suited to local and national development priorities and organizational policies, including changes over time.
- (ii) Effectiveness – the extent to which an objective has been achieved or how likely it is to be achieved.
- (iii) Efficiency – the extent to which results have been delivered with the least costly resources possible.
- (iv) 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.
- (v) 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.2. Evaluation audience

This Mid Term Evaluation is initiated by the UNDP Bulgaria as the Implementation Agency for the EE Project and it aims to provide managers (at the Project Administration, UNDP Bulgaria Country Office and UNDP/GEF levels) with strategy and policy options for more effectively and efficiently achieving the project's outcomes and for replicating the results. It also provides the basis for learning and accountability for managers and stakeholders.

II.3. Evaluation objectives and scope

The objective of this Mid Term Evaluation is to measure the effectiveness and efficiency of project activities in relation to the stated objective so far, and to produce possible recommendations on how to improve the management of the project until its completion in end of June 2010.

The evaluation report will play a critical role in the future implementation of the project by providing advice on:

- how to strengthen the adaptive management and monitoring function of the project;
- how to ensure accountability for the achievement of the GEF objective;
- how to enhance organizational and development learning;
- how to enable informed decision – making.

The report will have to provide to the GEF Secretariat complete and convincing evidence to support its findings/ratings. The consultant should prepare specific ratings on eight aspects of the project, as described in the 'Reporting' section of this Terms of Reference. Particular emphasis should be put on the current project results and the possibility of

achieving all objectives in the established timeframe, taking into consideration the speed, at which the project is proceeding.

The evaluation should assess:

Project concept and design

The evaluators will assess the project concept and design. They should review the problem addressed by the project and the project strategy, encompassing an assessment of the appropriateness of the objectives, planned outputs, activities and inputs as compared to cost-effective alternatives. The executing modality and managerial arrangements should also be judged. The evaluator will assess the achievement of indicators and review the work plan, planned duration and budget of the project.

Implementation

The evaluation will assess the implementation of the project in terms of quality and timeliness of inputs and efficiency and effectiveness of activities carried out. Also, the effectiveness of management as well as the quality and timeliness of monitoring and backstopping by all parties to the project should be evaluated. In particular, the evaluation is to assess the Project team's use of adaptive management in project implementation.

Project outputs, outcomes and impact

The evaluation will assess the outputs, outcomes and impact achieved by the project as well as the likely sustainability of project results. This should encompass an assessment of the achievement of the outcomes and the contribution to attaining the overall objective of the project. The evaluation should also assess the extent to which the implementation of the project has been inclusive of relevant stakeholders and to which it has been able to create collaboration between different partners. The evaluation will also examine if the project has had significant unexpected effects, whether of beneficial or detrimental character.

Replication approach

The evaluation will assess whether the lessons and experiences set to come out of the project are replicable or can be scaled up in the design and implementation of other projects. The evaluation will also assess the project's knowledge transfer mechanism including its capacity building and training provided to individuals, and institutions.

Monitoring methodology for measuring GHG emissions reductions.

The evaluation will assess whether the project uses an appropriate and robust methodology for measuring GHG emissions reductions that which is comparable with international standards, such those available for CDM projects.

The Mid-term Evaluation will also cover the following aspects:

1. Progress towards Results

Changes in development conditions. Address the following questions, with a focus on the perception of change among stakeholders:

- Have Climate Change and energy efficiency issues been adequately addressed at regional and municipality level?
- Have there been changes in local stakeholder behavior (i.e. increased energy efficiency) and have that contributed to improving CO2 reductions) If not, why not?
- Is there distinct improvement in Climate Change and energy efficiency information turnover and use in decision making among stakeholders?
- Has awareness on Climate Change and energy efficiency and subsequent public participation in Climate Change and energy efficiency management increased as a result of the project?
- Is there adequate territorial (including municipality plans) and sectoral planning in place, or in progress, ensuring long-term benefits in Bulgaria?

Measurement of change: Progress towards results should be based on a comparison of indicators before and after (so far) the project intervention. Progress can also be assessed by comparing conditions in the project site to conditions in similar unmanaged sites.

Project strategy: how and why outcomes and strategies contribute to the achievement of the expected results. Examine their relevance and whether they provide the most effective route towards results.

Sustainability: Extent to which the benefits of the project will continue, within or outside the project domain, after it has come to an end. Relevant factors include for example: development of a sustainability strategy, establishment of, or support to, financial and economic instruments and mechanisms, mainstreaming project objectives into the local economy/planning, etc.

2. Project's Adaptive Management Framework

(a) Monitoring Systems

- Assess the monitoring tools currently being used:
 - Do they provide the necessary information?
 - Do they involve key partners?
 - Are they efficient?
 - Are additional tools required?
- Reconstruct baseline data if necessary¹. (Reconstruction should follow participatory processes and could be achieved in conjunction with a learning exercise²);

¹ See p.67 of UNDP's "Handbook on Monitoring and Evaluation for Results", available at <http://www.undp.org/gef/05/monitoring/policies.html>

² See Annex C of "Participatory Monitoring and Evaluation: approaches to sustainability", available at <http://www.undp.org/gef/05/monitoring/policies.html>

- Ensure the monitoring system, including performance indicators, at least meets GEF minimum requirements³. Apply SMART indicators as necessary;
- Apply the GEF Tracking Tool and provide a description of comparison with initial application of the tool.

(b) Risk Management

- Validate whether the risks identified in the project document and PIR are the most important and whether the risk ratings applied are appropriate. If not, explain why. Describe any additional risks identified and suggest risk ratings and possible risk management strategies to be adopted;
- Assess the project's risk identification and management systems:
 - Is the UNDP/GEF Risk Management System⁴ appropriately applied?
 - How can the UNDP/GEF Risk Management System be used to strengthen project management?

(c) Work Planning

- Assess the use of the logical framework (Appendix A) as a management tool during implementation and any changes made to it
 - Ensure the logical framework meets UNDP/GEF requirements in terms of format and content
- Assess the use of routinely updated work-plans;
- Assess the use of electronic information technologies to support implementation, participation and monitoring, as well as other project activities;
- Are work planning processes result-based⁵? If not, suggest ways to re-orientate work planning;
- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions, as well as co-financing delivery (Appendix D). Any irregularities must be noted.

(d) Reporting

- Assess how adaptive management changes have been reported by the project management;
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

3. Underlying Factors

- Assess the underlying factors beyond the project's immediate control that influence outcomes and results. Consider the appropriateness and effectiveness of the project's management strategies for these factors;

³ See section 3.2 of the GEF's "Monitoring and Evaluation Policies and Procedures", available at <http://www.undp.org/gef/05/monitoring/policies.html>

⁴ UNDP-GEF's system is based on the Atlas Risk Module. See the UNDP-GEF Risk Management Strategy resource kit, available as Annex XI at <http://www.undp.org/gef/05/monitoring/policies.html>

⁵ RBM Support documents are available at <http://www.undp.org/eo/methodologies.htm>

- Re-test the assumptions made by the project management and identify new assumptions that should be made;
 - Assess the effect of any incorrect assumptions made by the project.
4. UNDP Contribution
- Assess the role of UNDP against the requirements set out in the UNDP Handbook on Monitoring and Evaluating for Results. Consider:
 - Field visits
 - Steering Committee/TOR follow-up and analysis
 - PIR preparation and follow-up
 - GEF guidance
 - Consider the new UNDP requirements outlined in the UNDP User Guide⁶, especially the Project Assurance role, and ensure they are incorporated into the project's adaptive management framework;
 - Assess the contribution to the project from UNDP "soft" assistance (i.e. policy advice & dialogue, advocacy, and coordination). Suggest measures to strengthen UNDP's soft assistance to the project management.
5. Partnership Strategy
- Assess how partners are involved in the project's adaptive management framework:
 - Involving partners and stakeholders in the selection of indicators and other measures of performance
 - Using already existing data and statistics
 - Analyzing progress towards results and determining project strategies.
 - Identify opportunities for stronger substantive partnerships;
 - Assess how local stakeholders participate in project management and decision-making; Include an analysis of the strengths and weaknesses of the approach adopted by the project and suggestions for improvement if necessary;
 - Consider the dissemination of project information to partners and stakeholders and if necessary suggest more appropriate mechanisms.
6. Country Ownership/Driveness
- Assess the relevance of the project to national development and environmental agendas,
 - Assess whether relevant country representatives (e.g., governmental official, civil society, etc.) are actively involved in project implementation and/or oversight
 - Assess the level of company participation in the project by: receiving technical assistance, applying for financing, attending dissemination events, adopting environmental standards promoted by the project, etc.

⁶ The UNDP User Guide is currently only available on UNDP's intranet. However UNDP can provide the necessary section on roles and responsibility from <http://content.undp.org/go/userguide/results/rmoverview/progprojorg/?src=print>

- Assess the level of company contribution towards achieve the environmental benefits promoted by the project, including: equity invested, guarantees provided, co-funding of project activities, in-kind contributions, etc.
- Asses the project's collaboration with industry associations and municipalities

II.1. Products expected from the evaluation

The key product expected from this mid-term evaluation is a comprehensive analytical report in English that should, at least, include the following contents:

- Executive summary
 - Brief description of the project
 - Context and purpose of the evaluation
 - Main conclusions, recommendations and lessons learned
- Introduction
 - Project background
 - Purpose of the evaluation
 - Key issues addressed
 - The outputs of the evaluation and how will they be used
 - Methodology of the evaluation
 - Structure of the evaluation
- The Project and its development context
 - Project start and its duration
 - Implementation status
 - Problems that the project seek to address
 - Immediate and development objectives of the project
 - Main stakeholders
 - Results expected
- An analysis of the situation with regard to the outcomes, the outputs and the partnership strategy;
- An analysis of how recommendations from initial project evaluation have been addressed;
- Key findings (including best practice and lessons learned, assessment of performance)
 - Project formulation
 - Implementation approach
 - Country ownership/Driveness
 - Stakeholder participation
 - Replication approach
 - Cost-effectiveness

- UNDP comparative advantage
- Linkages between project and other interventions within the sector
- Management arrangements
- Implementation
 - Financial planning
 - Monitoring and evaluation
 - Execution and implementation modalities
 - Management by the UNDP country office
 - Coordination and operation issues
 - Identification and management of risks (adaptive management)
- Results
 - Attainment of objective
 - Prospects of sustainability
- Conclusions and recommendations
 - Corrective actions for the design, implementation, monitoring and evaluation of the project
 - Actions to strengthen or reinforce benefits from the project
 - Proposals for future directions underlining main objectives
 - Suggestions for strengthening ownership, management of potential risks
- Lessons learned
 - Good practices and lessons learned in addressing issues relating to effectiveness, efficiency and relevance.
- Annexes: TOR, itinerary, field visits, people interviewed, documents reviewed, etc.

The length of the mid-term evaluation report shall not exceed 30 pages in total (not including annexes).

III. Evaluation team – qualities and requirements

A team of independent experts will conduct the evaluation. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities.

The evaluation team will be composed of one Team Leader and one Additional Consultant. The consultants shall have prior experience in evaluating similar projects. Former cooperation with GEF is an advantage.

The selection of consultants will be aimed at maximizing the overall “team” qualities in the following areas:

- (i) Recent experience with result-based management evaluation methodologies;
- (ii) Experience applying participatory monitoring approaches;

- (iii) Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- (iv) Recent knowledge of the GEF Monitoring and Evaluation Policy;
- (v) Recent knowledge of UNDP's results-based evaluation policies and procedures
- (vi) Demonstrable analytical skills;
- (vii) Project evaluation experiences within United Nations system will be considered an asset;
- (viii) Excellent English communication skills.

Specifically, the Team Leader will perform the following tasks:

- Lead and manage the evaluation mission;
- Design the detailed evaluation scope and methodology (including the methods for data collection and analysis);
- Assist in drafting terms of reference of the Additional Consultant(s)
- Decide the division of labor within the evaluation team;
- Conduct an analysis of the outcome, outputs and partnership strategy (as per the scope of the evaluation described above);
- Draft related parts of the evaluation report; and
- Finalize the whole evaluation report.

The Additional Consultant will provide input in reviewing all project documentation and will provide the Team Leader with a compilation of information prior to the evaluation mission. Specifically, the Additional Consultant will perform tasks with a focus on:

- Review documents;
- Prepare a list of the outputs achieved under project;
- Organize the mission programme and provide translation/interpretation when necessary;
- Participate in the design of the evaluation methodology;
- Conduct an analysis of the outcome, outputs and partnership strategy (as per the scope of the evaluation described above);
- Draft related parts of the evaluation report;
- Assist Team Leader in finalizing document through incorporating suggestions received on draft related to his/her assigned sections.

Individual consultants are invited to submit applications together with their CV for these positions. Joint proposals from two independent evaluators are welcome. Or alternatively, proposals will be accepted from recognized consulting firms to field a complete team with the required expertise within the evaluation budget.

The evaluation will be undertaken in-line with GEF principles⁷:

- Independence
- Impartiality

⁷ See p.16 of the GEF's Monitoring and Evaluation Policy

- Transparency
- Disclosure
- Ethical
- Partnership
- Competencies and Capacities
- Credibility
- Utility

The evaluators must be independent from both the policy-making process and the delivery and management of assistance. Therefore applications will not be considered from evaluators who have had any direct involvement with the design or implementation of the project. This may apply equally to evaluators who are associated with organizations, universities or entities that are, or have been, involved in the EE Project's policy-making process and/or delivery of the project. Any previous association with the project, the Project Administration, UNDP Bulgaria or other partners/stakeholders must be disclosed in the application. This applies equally to firms submitting proposals as it does to individual evaluators.

If selected, failure to make the above disclosures will be considered just grounds for immediate contract termination, without recompense. In such circumstances, all notes, reports and other documentation produced by the evaluator will be retained by UNDP.

If individual evaluators are selected, UNDP will appoint one Team Leader. The Team Leader will have overall responsibility for the delivery and quality of the evaluation products. Team roles and responsibilities will be reflected in the individual contracts. If a proposal is accepted from a consulting firm, the firm will be held responsible for the delivery and quality of the evaluation products and therefore has responsibility for team management arrangements.

Methodology or evaluation approach

An outline of an evaluation approach is provided below however it should be made clear that the evaluation team is responsible for revising the approach as necessary. Any changes should be in-line with international criteria and professional norms and standards (as adopted by the UN Evaluation Group⁸). They must be also cleared by UNDP before being applied by the evaluation team.

The evaluation must provide evidence-based information that is credible, reliable and useful. It must be easily understood by project partners and applicable to the remaining period of project duration.

The methodology to be used by the evaluation team should be presented in the report in detail. It shall include information on:

⁸ See <http://www.uneval.org/>

- Documentation review (desk study) - the list of documentation to be reviewed is included in the Appendix B to this Terms of Reference;
- Interviews will be held with the following organizations and individuals at minimum: UNDP Bulgaria, EE Project Administration (Project Management Unit and Regional Support Centers), Project Steering Committee members, National Project Director;
- Field visits;
- Questionnaires;
- Participatory techniques and other approaches for the gathering and analysis of data.

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

1	Implementation approach;
2	Country ownership/drivers
3	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

The ratings to be used are:

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

IV. Implementation Arrangements

The principal responsibility for managing this evaluation lies with UNDP Bulgaria. UNDP Bulgaria will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. UNDP Bulgaria and EE Project Administration will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

Timeframe for submission of the final report: 8 weeks upon start of the assignment 27 August 2008. The evaluation should be completed by 27 October 2008. The report shall be submitted to the UNDP Bulgaria office.

Prior to approval of the final report, a draft version shall be circulated for comments to government counterparts, project team and UNDP CO and UNDP/GEF Bratislava. If any discrepancies have emerged between impressions and findings of the evaluation team and the aforementioned parties, these should be explained in an annex attached to the final report.

The activity and timeframe are broken down as follows:

Activity	Timeframe and responsible party
Desk review	6 days by the Team Leader and 3 days by the Additional Consultant
Briefings for evaluators	1/2 day by the EE Project Administration/ UNDP
Field visits, interviews, questionnaires, de-briefings	6 days by the Team Leader and Additional Consultant
Preparation of first draft report	8 days by the Team Leader and 6 days by the Additional Consultant
Validation of preliminary findings with stakeholders through circulation of draft reports for comments, meetings and other types of feedback mechanisms	7 days Bulgarian stakeholders
Incorporation of comments from Bulgarian stakeholders	4 days by the Team Leader and 2 days by the Additional Consultant
Review and preparation of comments of second draft	14 days EE Project, UNDP, Government Counterparts and UNDP/GEF Bratislava
Finalization of the evaluation report (incorporating comments received on first draft)	4 days by the Team Leader and 2 days by the Additional Consultant

Working Days:

Team Leader – 28 working days

Additional Consultant – 19 working days

The proposed dates for the in-country mission to Bulgaria are 8-13 September 2008. The assignment is to commence no later than 27 August 2008.

APPLICATION: Please send your application, containing the following information: a recent CV, a Letter of Interest, outline of the approach and methodology to be used for the evaluation, period of availability and daily rate in USD (excluding travel and DSA expenses, which shall be negotiated according to UNDP rules and procedures) to: Viara Maneva, EE Project Manager, Building the Local Capacity for Promoting Energy Efficiency In Private and Public Buildings (EE Project), 1 Hristo Smirnensky Blvd. floor 3 Sofia 1164, PO Box 43 BULGARIA, E-mail vmaneva@eneffect.bg

Applications using the electronic format should be copied to Pavel Gospodinov, UNDP Programme Analyst on e-mail pavel.gospodinov@undp.org

Dateline for applications is **23 June, 2008**.

Appendix 1 – Logical Framework of the Project

Project Objective and Outcomes	Description of Indicator ⁹	Baseline Level ¹⁰	Target Level ⁴	Level ⁴ at 30 June 2007
<p>Objective: To support market transformation towards energy efficient new building design and retrofit of the existing building stock</p>	<p>Indicator 1: tCO₂eq emission reductions from project supported buildings (over their lifecycle to 2020)</p>	0 tCO ₂ eq	125,000 tCO ₂ eq	<p>5,181 tCO₂eq</p> <p>Comment: Most project activities involve recommendations for improving energy efficiency design. The project is currently elaborating appropriate ways for disseminating the concept of energy efficiency design of new buildings and of EE retrofit of existing buildings among the major players in the investment project.</p> <p>However, it is still early in the project implementation and marked changes towards meeting the objective still has to transpire.</p>
	<p>Indicator 2: Adoption of the recommendations made in the frame of the project into the design of new buildings.</p>	<p>Obligatory building codes in force for new buildings. Voluntary “best practices” for energy efficient building design not adequately adopted by the local professionals yet.</p>	<p>Project trainees include best practice project recommendations in 10 % of all new constructions they are involved with by project close</p>	<p>0% of new constructions include best practice project recommendations</p> <p>Comment: No people have so far been trained under the project as the basic training program and</p>

⁹ This should describe the quantitative indicator

¹⁰ This should be a quantitative numerical value

				respective training materials are under development. Training will be initiated during year two of the project. Because of this the project cannot report on this specific indicator in this year's PIR.
	Indicator 3: Annual sale of EE related materials and equipment used for EE retrofits increased by 20 % compared to levels at year 1 (baseline).	baseline	20 % increase compared to project baseline.	0 % increase Comment: The project will initiate a market survey in the fall of 2007, to collect baseline data on sales of energy efficient building materials. In addition, the project is currently, in cooperation with various specialists and company representatives, discusses analytical methods to measure the project influence on sales of EE building materials and components.
	Indicator 4: m2 of the floor area in public buildings; private residential buildings; and private service sector buildings covered by the project supported energy investments	0 m2 floor area	132,000 m2 floor area by the project close	7,726 m2 (pipeline) Comment: Two cost-shared audits of a hotel building and an SME building have been finalized. The floor area affected by the EE investments totals app. 7726 m2.
Outcome 1: Enhanced awareness and capacity of the local architects and engineers to adopt energy	Indicator 5: Number of students educated/trained on how to apply EE best practices	0 Students	At least 600 students	0 Students trained Comment: No people have so far been

efficiency aspects into the building design	(prepared by the project)			trained under the project as the basic training program and respective training materials are under development. Training will be initiated during year two of the project
	Indicator 5: Number of educated/trained professionals are regularly applying EE best practices in their work	0 architects 0 engineers 0 designers	At least 30 architects At least 30 engineers At least 30 designers	0 architects applying EE 0 engineers applying EE 0 designers applying EE Comment: No people have so far been trained under the project as the basic training program and respective training materials are under development. Training will be initiated during year two of the project
	Indicator 7: Number of educated/trained chief municipal architects and other municipality officers are regularly applying EE best practices in their work	0 municipality officers	At least 150 municipality officers	0 Municipal officers trained. Comment: No people have so far been trained under the project as the basic training program and respective training materials are under development. Training will be initiated during year two of the project
	Indicator 8: At least two new buildings (3,500 m2 each or above) promoting EE design and making use of EE materials and equipment are under construction by the end of the project	0 Buildings 0 m2 floor area 0 CO2 tons predicted comparative reduction by 2020	At least 2 new buildings with: 1. at least a total of 7,000 m2 of floor area 2. At least 4,000 CO2 tons in emission reductions by 2020	0 buildings under construction Comment: Due to the time-laps between project formulation and project start the preliminary agreement which the project had with a local constructor fell through and the project

				<p>has over the last year tried to find new potential interested contractors with which the project can work.</p> <p>In depth negotiations with 2 new contractors was held without result. However the project is currently negotiating with a third contractor.</p>
<p>Outcome 2: Sustainable demand for energy efficiency investments in public buildings created</p>	<p>Indicator 9: Project supported municipal energy plans upgrades and project supported energy audits leads to investments programs of at least 3.5 million US \$ in public buildings</p>	<p>0 US \$ in energy investment</p>	<p>Energy investments at least 0.5 million US \$ by the end of year 2</p> <p>Energy investments at least 1.5 million US \$ by the end of year 3</p> <p>Energy investment of at least 3.5 million US \$ by the end of the project</p>	<p>12..5 Million USD in energy investment (Pipeline)</p> <p>Comment: It is too early in the implementation phase to see any project related increase in EE investments.</p> <p>Currently 5 Municipal Energy Plans are being reviewed and upgraded. The overall expected investment is approximately 12.5 Million USD of which approximately 1/6 is directly resulting from recommendations made by the project</p> <p>Negotiations with 11 new municipalities is underway</p> <p>In this connection some initial investments are expected in year two of the project.</p>

	Indicator 10: Duration between Audit recommendations and investment decreases	90 days ¹¹	80 Days by end of year 2 70 Days by end of year 3 60 Days by end of year 4	85 Days (indicative) Comment An initial calculation for July 2006 – June 2007 has shown that the duration has decreased with approximately 5 days
Outcome 3: Sustainable demand for energy efficiency investments in private residential buildings created	Indicator 11: Project supported energy audits and project interventions leads to investments in EE retrofits in private residential buildings of at least 10 million US \$	0 US \$ in energy investment	Energy investments at least 1.5 million US \$ by the end of year 2 Energy investments at least 5 million US \$ by the end of year 3 Energy investment of at least 10 million US \$ by project close	37,450 USD Comment: It is too early in the implementation phase to see any marked project related increase in EE investments. The work on this outcome goes in parallel with the activities of the Bulgarian Housing Association (BHA) and a series of meetings and consultations have been carried out with various housing blocks (associations) to discuss possible project formulation and further implementation. 3 existing buildings have so far been selected as pilot sites under the project and construction work of 2 pilot buildings are currently underway in accordance with signed MOUs.

¹¹ The 90 days is based on statistical data received from the Bulgarian Energy Efficiency Fund and the project will use similar data from the fund in the coming years and use it as a measure although the fund only handles a proportions of the audits that leads to investments

				<p>In addition 6 municipal authorities have committed themselves to open municipal information and consultation offices as part of the existing “one-stop” service centres / business centres / business incubators. These centers should help further increase stakeholder interests in undertaking EE investments in their homes.</p> <p>Furthermore, a Manual on Financing of EE Building Projects (electronic version) was developed.</p>
<p>Outcome 4: The demand for energy efficiency investments in private service sector buildings with the initial focus on tourism facilities (hotels etc.) increased</p>	<p>Indicator 12: Project supported energy audits and project interventions leads to EE investments in private service sector buildings of at least 1.5 million US \$</p>	0 US \$ in energy investment	<p>Energy investments at least 0.2 million US \$ by the end of year 2</p> <p>Energy investments at least 0.7 million US \$ by the end of year 3</p> <p>Energy investment of at least 1.5 million US \$ by project close</p>	<p>221,000 USD (pipeline)</p> <p>Comment: Two cost-shared audits of hotel building and a SME building have been finalized. The needed EE investments totals 221 000 USD and negotiations with the owners are currently under way.</p>
<p>Outcome 5: The capacity of the local service providers to effectively market and implement their services increased.</p>	<p>Indicator 13: At least 10 % reduction in energy consumption (kWh/m2) resulting from local service providers interventions</p>	Baseline	10 % reduction in energy consumption compared to project baseline	<p>Comment: This indicator was only identified in July 2007 and so the project is now in the process of establishing the project baseline.</p>
	<p>Indicator 14: The annual turnover of the</p>	Limited growth and capacity of the local EE service	The annual turnover of the local EE service providers	<p>Comment: It is too early in the</p>

	local EE service providers, including ESCOs.	providers to effectively market and implement their services.	increasing with the average annual rate of 10%.	<p>implementation phase to see any project related increase in EE service provider's turnover.</p> <p>In addition, the information collection system for this indicator is under development.</p>
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Appendix B - List of documents to be reviewed by the Evaluators

General documentation

UNDP Handbook on Monitoring and Evaluation for Results
UNDP-GEF Risk Management Strategy resource kit

Project documentation

Original Project Document
Project Inception Report
UNDP Annual Reports (2007)
Project Implementation Reviews (2007)
Project Benchmark Documents
UNDP Quarterly Project Reports
Examples of Monthly Reports
Steering Committee and Advisory Board Meeting minutes

Appendix C -Financial Planning Cofinancing

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	<i>Planned</i>	<i>Actual</i>	<i>Planned</i>	<i>Actual</i>	<i>Planned</i>	<i>Actual</i>	<i>Planned</i>	<i>Actual</i>	<i>Planned</i>	<i>Actual</i>
- Grants										
- Loans/Concessional (compared to market rate)										
- Credits										
- Equity investments										
- In-kind support										
- Other (*)										
<u>Totals</u>										

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Leveraged Resources

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

Annex II

List of Documents Reviewed

General documentation

UNDP Handbook on Monitoring and Evaluation for Results
UNDP-GEF Risk Management Strategy resource kit

Project documentation

Original Project Document
Project Inception Report
UNDP Quarterly Project Report (Jan-March 08)
Monthly Progress Report (June 2008)
Minutes of Steering Committee meeting 12.07.2007
Protocol Steering Committee Meeting 11 Mar 2008, 12 July 2007
Project Implementation Review 2008
Project Implementation Review 2007
Revised Project Logframe Final-August 2007
Energy Audits June 2006-2008
Ministry of Energy and Energy Resources, Ministry of Regional Development and Public Works, Ordinance No 18 for energy characteristics of sites, Section IV
Municipal Energy Programme of Dobrich Municipality 2008-2013
Municipal Energy Efficiency Programme of Madan Municipality 2008-2013
National Programme for the Renovation of the Panel Buildings in the Republic of Bulgaria, 2004
Project Description Municipality of Sofia / UNDP Project "Renovation of Residential Panel Blocks"
Audit reports for Blagoevgrad, Block 17 (in Bulgarian language, not available in English)
Audit report for Burgas hospital (in Bulgarian language, not available in English)
Design of pilot project student residence (reviewed during mission)

Annex III
Itinerary

Mid Term Evaluation of the Project
Building the Local Capacity for Promoting Energy Efficiency in Private and Public Buildings (EE Project)
Sofia, 8 – 13 September, 2008

Mid Term Evaluation of the Project
Building the Local Capacity for Promoting Energy Efficiency in Private and Public Buildings (EE Project)

Sofia, 8 – 13 September, 2008

PRELIMINARY AGENDA

of the meetings of project evaluators in Bulgaria

International project evaluator: Adil Lari

National project evaluator: Belin Mollov

Sunday, 7th September

Arrival to Sofia, Bulgaria

Monday, 8th September

09:00 – 11:00 Meeting with the National project evaluator Belin Mollov

11:00 – 11:30 *Location: EnEffect's Office*

Adoption of the programme

Introduction of the main project implementation team

Hosts: Zdravko Genchev, Executive Director, Marta Stoilova, Project Manager, Zoya Giurova, Desislava Borisova, Galia Dimitrova, Galina Slavova (leading specialists of EnEffect for various project outputs)

11:30 – 13:00 Project presentation

The origin of the project idea. Project concept.

Questions and answers

13:00 – 14:00 Lunch break

14:00 – 16:00 Project presentation (continuous)

Presentation of project outcomes

Introduction of key products and impacts

16:00 – 17:00 Meeting project indicators

Planned activities by the end of project implementation

17:00 – 18:00 Questions and answers, discussion

Tuesday, 9th September

09:15 – 09:45 **Location: Ministry of Regional Development and Public Works**

Review of current national technical standards and norms for energy efficiency in buildings programs and projects

Host: Violeta Angelieva – Head of Directorate “Technical rules and norms in buildings”

From EnEffect: Zdravko Genchev and Marta Stoilova

10:00 – 12:00 **Location: UNDP Office, Sofia**

Conference call with Gordie Colville, UNDP, Bratislava

Brief presentation of the project. Discussion

Hosts: Pavel Gospodinov, Portfolio Manager, Carsten Germer, Programme Analyst, Nevena Alexieva, Project Associate, International and National Evaluators; UNDP officers involved in the project management

12:00 – 14:00 Lunch break

14:00 – 15:00 **Location: University of Architecture, Civil Engineering and Geodesy**

Hosts: Prof. Dimitar Nazarski, Prof. Jordan Radev

From EnEffect: Zdravko Genchev and Marta Stoilova

Discussion on future opportunities for the use of project findings and deliverables in the educational programmes of the university

Pilot project for block 35, student’s hostel in Sofia

16:00 – 17:00 **Location: Stefan Popov and Partners’ design office**

Host: Prof. Stefan Popov

From EnEffect: Zdravko Genchev

Cooperation with Bulgarian architectural faculties. European University in Pernik

Wednesday, 10th September

09:30 – 10:30 **Location: Energy Efficiency Agency**

Hosts: Snezhana Todorova, Director of Programmes, Projects, Analyses and Boyiana Uzunova, International Co-operation Division

From EnEffect: Zdravko Genchev and Marta Stoilova

Brief presentation of the national policy for energy efficiency in buildings

The role of the project in MEP and building efficiency

11:00 – 12:00 **Location: EnEffect's Office**

Host: Georgi Georgiev, President, Bulgarian Housing Association

From EnEffect: Zdravko Genchev and Marta Stoilova

The National Programme for Renovation of the Residential Building Stock

12:00 – 12:30 Lunch break

12:30 – 17:00 **Location: EnEffect's office**

Wrap-up meeting of evaluators

From EnEffect: Zdravko Genchev, Marta Stoilova

Thursday, 11th September

11:00 – 12:30 **Location: EnEffect's Office**

Wrap-up meeting of evaluators

From EnEffect: Zdravko Genchev, Marta Stoilova

12:30 – 13:45 Working lunch with the National evaluator Belin Mollov

14:00 – 15:00 **Location: Bulgarian Energy Efficiency Fund**

The impact of the project on the local service providers. How financial institutions benefit of the project outcomes.

Host: Dimitar Dukov, Executive Director

From EnEffect: Zdravko Genchev, Marta Stoilova

15:30 – 17:00 **Location: UNDP office, Sofia**

Debriefing meeting with Ms Lene Jespersen, Deputy Resident Representative

Participants: Project evaluators, UNDP officers

Friday, 12th September

09:15 – 10:30 **Location: Enemona AD**

Host: Bogdan Prokopiev, Manager

From EnEffect: Zdravko Genchev and Marta Stoilova

Project impact on ESCO practices / LESP in Bulgaria. Possible cooperation in pilot project development and analyses

11:00 – 11:30 **Location: EnEffect**

The impact of the project on the local energy efficiency policy. The benefits of the new EE offices

Telephone interviews with the Deputy Mayor of the Municipality of the City of Bobrich Mrs. Nadejda Petkova

From EnEffect: Zoia Giurova and Marta Stoilova

11:30 – 12:30 **Location: EnEffect's Office**

Wrap-up meeting. Findings and recommendations

Host: EnEffect's staff

12:30 – 14:00 Lunch break

14:00 – 15:00 **Location: EnEffect's Office**

Wrap-up meeting. Findings and recommendations (*continuation*)

Host: EnEffect's staff

15:30 – 16:30 **Location: UNDP office, Sofia**

Wrap-up meeting. Findings and recommendations

Debriefing meeting with Carsten Germer and Pavel Gospodinov

Participants: International project evaluator and UNDP officers

17:00 – 19:00 **Working meeting**

Location: tbd

Opportunities for the use of project findings and deliverables in the design practice

Host: Petko Jovchev, Architect, Chairman of the Chamber of Architects in Bulgaria

From EnEffect: Zdravko Genchev

Saturday, 13th September

Departure from Sofia airport

Annex IV

List of Interviews

Pavel Gospodinov, IT Portfolio Manager, UNDP Bulgaria
Carsten Germer, Programme Analyst, Technical Advisor (GEF), UNDP, Bulgaria
Nevena Alexieva, Project Associate, National Evaluator, UNDP Bulgaria
Geordie Colville, UNDP Bratislava, teleconference
Lene Jespersen, Deputy Resident Representative, UNDP Bulgaria
Maria Zlatareva-Pernishka, Assistant Resident Representative

Zdravko Genchev, Executive Director EnEffect
Marta Stoilova, Project Manager, EnEffect
Zoia Giurova, (leading specialist of EnEffect for various project outputs)
Dessislava Borisova, (leading specialist of EnEffect for various project outputs)
Galia Dimitrova, architect, Expert, International projects and programmes, (leading specialist of EnEffect for various project outputs)
Galina Slavova, Architect designer, (leading specialist of EnEffect for various project outputs)

Prof. Dr. Dimitar Nazarski, University of Architecture, Civil Engineering and Geodesy, Steering committee member
Prof. Dr. Yordan Radev, MSc., University of Architecture, Civil Engineering and Geodesy
Prof. Stefan Popov, architect, designer, consultant
Arch. Dr. Georgi Georgiev, Manager, Bulgarian Housing Association
Violeta Angelieva, Head of Directorate for “Technical rules and norms in buildings”, Ministry of Regional Development and Public Works
Petko Yovchev, Chairman of the Chamber of Architects In Bulgaria
Dipl. Eng. Bogdan Prokopiev, Manager pilot project, Enemona AD
Snezhana Todorova, MSc., Head of Directorate “Programs, projects & Int. Cooperation”, Energy Efficiency Agency
Boriana Koeva-Uzunova, Head of Department “Projects, programs and international relations”, Energy Efficiency Agency
Dimitar Doukov, Executive Director, Bulgarian Energy Efficiency Fund
Detelina Nikolova, Mayor of Dobrich city, telephone interview

Annex V

FINANCIAL INFORMATION TO JUNE 2008

(Source PIR 2008)

Financial Information: cumulative from project start to 30 June 2008.

<i>Name of Partner or Contributor (including the Private Sector)</i>	<i>Nature of Contributor¹</i>	<i>Amount used in Project Preparation (PDF A, B)</i>	<i>Amount committed in Project Document²</i>	<i>Additional amounts committed after Project Document finalization¹¹</i>	<i>Estimated Total Disbursement to 30 June 2008</i>	<i>Expected Total Disbursement by end of project</i>
GEF Contribution	GEF	\$0.03m	\$0.97m		\$0.40m	\$1.00m
Cash Cofinancing – UNDP Managed						
UNDP (TRAC)						
Cash Cofinancing – Partner Managed						
UNDP	UN Agency		\$2.50m		\$0.22m	\$2.50m
<i>Housing and Dutch housing organizations</i>	Bilateral		\$0.45m		\$0.45m	\$0.45m
Private sector	Private sector		\$2.8m		\$0.22m	\$2.8m
In-Kind Cofinancing						
UNDP	UN Agency		\$0.50m		\$0.00m	\$0.50\$
Total Cofinancing			6.25		\$0.89m	6.25
Total for Project		0.03	7.22		\$1.29m	7.25

¹ Specify if: UN Agency, other Multilateral, Bilateral Donor, Regional Development Bank (RDB), National Government, Local Government, NGO, Private Sector, Other.

² Committed amounts are those shown in the approved Project Document. These may be zero in the case of new leveraged project partners.

Annex VI

ANNEX VI: PROGRESS TOWARDS ACHIEVING PROJECT OBJECTIVES

(Source PIR 2008)

Progress towards achieving project objectives

Project Objective and Outcomes	Description of Indicator ¹	Baseline Level ²	Target Level ⁴	Level ⁴ at 30 June 2008
<p>Objective: To support market transformation towards energy efficient new building design and retrofit of the existing building stock</p>	<p>tCO₂eq emission reductions from project supported buildings (over their lifecycle to 2020)</p>	<p>0 tCO₂ eq</p>	<p>125,000 tCO₂ eq</p>	<p style="text-align: center;">29 000 t CO₂/2020</p> <p>Comments: Quoted figures are based on 3 buildings (hospital in Burgas, SME in Pravetz and residential block of flats in Blagoevgrad), which have been audited and their retrofit has been completed and/or in progress.</p> <p>In coming years the project expects that 196 280 t CO₂/2020 will materialize based on the following ongoing project activities: - Buildings with completed project supported energy audits, which are going to be retrofitted; - Partial implementation of the Municipal Energy programs (MEP) of Dobrich and Smolian, which have been adopted (Spring 2008) - emission reductions for the whole programme period (2008-2013) estimated at 158 520 t CO₂/2020; - Furthermore, Madan’s MEP has been finalized (expected to be adopted by the Municipal council in the fall 2008) - emission reductions for the whole programme period (2008-2013) estimated at 14 400 t CO₂/2020.</p>
	<p>Adoption of the recommendations made in the frame of the project into the design of new and in the retrofit of existing buildings</p>	<p>Obligatory building codes in force for new buildings</p> <p>Voluntary “best practices” for energy efficient building design not adequately</p>	<p>Project trainees include best practice project recommendations in 10% of all new constructions they are involved with by project close</p>	<p style="text-align: center;">Percentage has not been obtained so far but will feature in the 2009 PIR</p> <p>Comment: So far 9 people have had “on the job training” in the design for the construction of new buildings and the design for the retrofit of existing buildings and 16 people have passed “short term” classical training on energy efficiency in buildings.</p> <p>The project experience has shown that the most effective and most</p>

¹ This should describe the quantitative indicator

² This should be a quantitative numerical value

		adopted by the local professionals yet		acceptable training format for practicing designers is via “on the job training”. The classical training, as well as training manuals and guides and the catalogue of best practices are going to serve as complementary in the overall capacity building process.
	Annual sale of EE related materials and equipment used for EE retrofits increased by 20 % compared to levels at year 1 (baseline).	Baseline	20 % increase compared to project baseline.	<p style="text-align: center;">10-15% (indicative)</p> <p>Comment: The project has experienced difficulties in obtaining verifiable data for this indicator. Data has been requested from the National Statistics Institute however, it became clear that there was not available information appropriate for the necessary analyses. The assistance of specialized research company was requested for the collection and the processing of the adequate information about annual sales. However, there has been a marked reluctance to provide the needed information to the research company thus data from this has also not materialized.</p> <p>Nevertheless, the project estimates that there has been and increase in the annual sale of EE related materials and equipment used for EE retrofits increased of 10-15 % compared to levels at year 1 (baseline). This estimate is based on the following: (a) the increased number of energy audits - according to data from Energy Efficiency Agency (EEA) in 2006 the number of public buildings and SME audited reached 1 334; during 2007, the total number of buildings of various ownership (state, municipal, private and mixed) increased to 1 745; (b) the visible growth of energy efficiency building retrofit – based of EEA data 55% of the audited buildings have obtained the highest category certificate, namely, "A" certificate;</p>
	m ² of the floor area in public buildings, private residential buildings, and private service sector buildings	0 m ² floor area	132,000 m ² floor area by the project close	<p style="text-align: center;">74 799 m²</p> <p>Comments: The above figures are based on the following: (a) The renovation works on the residential buildings bl. 17 in Blagoevgrad, the hospital in Burgas and on the buildings of British Embassy were completed in 2008 (total floor area 55 195 m²).</p>

	covered by the project supported energy investments			<p>(b) One of the first pilot projects (SME, an agreement under this project signed in 2006) for the retrofit of the building of a SME in the town of Pravetz (total floor area 1 013 m²) started the construction works in March 2008.</p> <p>(c) Eleven cost-shared audits of public and private buildings with the total floor area of 37 183 m², which were oriented to investments, have been performed. We assume that 50% of total floor area has been covered until now (18 591m²)</p> <p>In addition to the above, investments for the energy efficiency retrofit of buildings with total floor area of 110 000 m² is expected to be directly influenced by the project in the future. This estimate is based on the following:</p> <ul style="list-style-type: none"> - Municipal energy programmes for the municipalities of Dobrich and Smolian (already approved by the municipal councils) foresee by the end of the project retrofit of buildings at approximately 80 000 m²; - Municipal energy programme of Madan municipality foresee by the end of the project building retrofit at approximately 30 000 m².
Outcome 1: Enhanced awareness and capacity of the local architects and engineers to adopt energy efficiency aspects into the building design	Number of students educated/trained on how to apply EE best practices (prepared by the project)	0 Students	At least 600 students	<p style="text-align: center;">180 students</p> <p>Comments: Although the training programme is not finalized the lecturers from the University of Architecture, Construction and Geodesy (UACG) that are taking part in the development of the training Guide on energy efficiency building design for architects are using and testing the material in their regular long-term educational practices. The approximate number of students influenced on an annual basis is 120 people annually.</p> <p>It is expected that the number of students trained will increase at a larger rate in the next years as cooperation with European University in Pernik has been established.</p>
	Number of educated/trained professionals are	0 architects 0 engineers 0 designers	30 architects 30 engineers 30 designers	<p style="text-align: center;">10 architects 15 engineers</p>

	regularly applying EE best practices in their work			<p>Comments: In developing this indicator - designers was included as a separate occupation. However in reality the building design is a shared responsibility of the architects and the engineers. Thus the indicator should be app. 45 architects and 45 engineers.</p> <p>The above figure is based on the following: (a) 5 architectural design teams have been selected and registered to take part in the design of pilot buildings (new and existing). The register is updated periodically with new teams and individuals. For the time being 9 architects and engineers (designers) have been directly influenced by the project passing on the job training; they have been also proven to apply energy efficiency solutions in their regular design practices. (b) 16 other practicing architects and engineers (not necessarily designers) have been informed and trained in cooperation with the UACG and the Union of Architects in Bulgaria (UAB).</p>
	Number of educated/trained chief municipal architects and other municipality officers are regularly applying EE best practices in their work	0 municipality officers	At least 150 municipality officers	<p style="text-align: center;">77 municipal officers</p> <p>Comment: During the reported period the municipal officers have primarily been trained in the updated methodology for municipal energy planning. This training will continue and upon the publication of the EE portal the use of the lessons of the good practices are going to penetrate faster into the design practices (since the year 2009)</p>
	At least two new buildings (3,500 m2 each or above) promoting EE design and making use of EE materials and equipment are	0 Buildings 0 m2 floor area 0 CO2 tons predicted comparative reduction by	At least 2 new buildings with: At least a total of 7,000 m2 of floor area At least 4,000	<p style="text-align: center;">1 group of new buildings</p> <p style="text-align: center;">2000 – 3500 m2 floor area</p> <p style="text-align: center;">CO2/ 2020 (to be determined)</p> <p>Comments: The design of the Holiday complex “Raiski kat” in Varna has been</p>

	under construction by the end of the project	2020	CO2 tons of emission reductions by 2020	<p>initiated - total floor area is estimated between 2000 – 3500 m2 emission reduction to be determined (tbd).</p> <p>In addition, contacts with investors for the identification of new buildings to design and existing buildings for EE retrofit continue. During the reporting period a series of meetings have been organized with 28 potential investors and 4 municipalities; Recently, a contact with ZSK Borui in Stara Zagora has been established. After a visit to the enterprise an agreement has been initiated for the design for the retrofit of existing buildings and for the entire design of a new demonstration passive building.</p>
Outcome 2: Sustainable demand for energy efficiency investments in public buildings created	Project supported municipal energy plans upgrades and project supported energy audits leads to investments programs of at least 3.5 million US \$ in public buildings	0 US \$ in energy investment	<p>Energy investments at least 0.5 million US \$ by the end of year 2</p> <p>Energy investments at least 1.5 million US \$ by the end of year 3</p> <p>Energy investment of at least 3.5 million US \$ by the end of the project</p>	<p align="center">21 616 000 US\$ (Pipeline)</p> <p>Comments: Based on the current project work it is expected that project influenced municipality investments will amount to at least 21 616 000 US \$ based on following:</p> <ul style="list-style-type: none"> - investments planned in the adopted municipal energy programs of Dobrich and Smolian account at 18 616 000 US\$; - investments planned in the ME Programme of Madan's (to be adopted soon) accounts at 3 000 000 US\$
	Duration between audit	90 days ³	80 Days by end of year 2	79 days

³ The 90 days is based on statistical data received from the Bulgarian Energy Efficiency Fund and the project will use similar data from the fund in the coming years and use it as a measure although the fund only handles a proportions of the audits that leads to investments

	recommendations and investment decreases		70 Days by end of year 3 60 Days by end of year 4	Comment: It has proven very difficult to obtain verifiable documentation as to the decrease in duration. The figure above is based on data from the BEE Fund management only but should be seen as a representative sample.
Outcome 3: Sustainable demand for energy efficiency investments in private residential buildings created	Project supported energy audits and project interventions leads to investments in EE retrofits in private residential buildings of at least 10 million US \$	0 US \$ in energy investment	Energy investments at least 1.5 million US \$ by the end of year 2 Energy investments at least 5 million US \$ by the end of year 3 Energy investment of at least 10 million US \$ by project close	686,100 US\$ Comments: Due to the delay of the National programme for the renovation of the residential building stock the targets under this indicator is becoming more difficult to obtain. As the national programme initiation and implementation is out of the project's control it can not exert any influence towards expediting the matter. However, the Project is trying to identify other funding sources which can assist owners in financing initiatives in private residential buildings. The above figures are based on the following: (a) The residential block of flats No 17 in Blagoevgrad was fully repaired and its facade renovated. The overall cost of construction and renovation works amounts at 174,032 US\$. (b) based on project performed audits, construction work on three residential buildings have been initiated (total investments of 512 068 US\$) - residential building in the Lyulin housing estate; students hostel in Sofia student's campus and a family house in the village Prolesha.
Outcome 4: The demand for energy efficiency investments in private service sector buildings with the initial focus on tourism facilities (hotels etc.) increased	Project supported energy audits and project interventions leads to EE investments in private service sector buildings of at least 1.5 million US \$	0 US \$ in energy investment	Energy investments at least 0.2 million US \$ by the end of year 2 Energy investments at least 0.7 million US \$	500,897 US\$ Comments: The above figure is based on the ongoing retrofitting of the three audited buildings (Pravetz, Vila Roca and Orpheus). The achievement of the projects end target might face some serious obstacles due to the decline in the growth of the tourist sector. However, the project has increased its efforts towards contacting hotel owners. In addition indirect impact of the project on practical utilization of hotel buildings is expected as a result of the

			by the end of year 3 Energy investment of at least 1.5 million US \$ by project close	information campaign, which was carried out within the project with direct and indirect influence on the owners of 4 500 Bulgarian hotels.
Outcome 5: The capacity of the local service providers to effectively market and implement their services increased.	At least 10 % reduction in energy consumption (kWh/m2) resulting from local service providers interventions	Baseline	10 % reduction in energy consumption compared to project baseline	<p>20 - 58% (average 38%) energy savings 30,8% increase of the turnover of the local energy service providers (energy auditors), based on data of the EEA</p> <p>Comment: During the reported period energy savings at amount of 8 874 000 kWh/year have been estimated. These savings are results of energy consumption reduction from 20 to 58%. The reduction has been caused by energy service providers' interventions. A targeted survey has been initiated to monitor the reduction in energy consumption compared to project baseline. Results will be reported by the end of the year 2008.</p>
	The annual turnover of the local EE service providers, including ESCOs.	Limited growth and capacity of the local EE service providers to effectively market and implement their services.	The annual turnover of the local EE service providers increasing with the average annual rate of 10%.	<p>Not yet determined</p> <p>Comment: During the reported period we have not been able to collect direct data of the annual sales of EE related materials and equipment used for EE retrofits. The main obstacle to the achievement of the indicator was the reluctance of the companies to provide such commercial information. A new targeted survey is under preparation to provide first outcomes by the end of the year 2008.</p>