# FINAL EVALUATION

# of the UNDP/GEF Project "Public Sector Energy Efficiency Programme" Hungary (HUN/00/004 TRAC and HUN/00/G31 GEF)

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This Final Evaluation of the UNDP-GEF project 'Public Sector Energy Efficiency Programme – Hungary' was carried out between February 6 and March 31, 2009.

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# ABBREVIATIONS AND ACRONYMS

APR	Annual Project Report
AWP	Annual Work Plan
BRC	UNDP Bratislava Regional Centre Europe and CIS
CDM	Clean Development Mechanism
CIS	Commonwealth of Independent States
С	Carbon equivalent
CO	UNDP Country Office
$CO_2$	Carbon Dioxide
CST	UNDP Country Support Team
EA	Executing Agency (Ministry of Economy and Transport in this project)
EBRD	European Bank for Reconstruction and Development
ECH	Energy Centre Hungary
EE	Energy Efficiency
EEA	Energy Efficiency Agency
ESCO	Energy Servicing Company
EU	European Union
FEV	Final Evaluation
FSP	Full Size Project
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green-house Gas
IA	Implementing Agency (Energy Centre Hungary in this project)
KEOP/EEOP	Environment and Energy Operational Program (2007-2013)
KIOP/EIOP	Environment Protection and Infrastructure Operational Programme
	(2004-2006)
LFA	Logical Framework Approach
Logframe	Logical Framework Matrix
M&E	Monitoring and Evaluation
MTE	Mid-term Evaluation
MTTE	Hungarian Ministry of Transport, Telecommunication and Energy
NEP	National Energy Saving Programme
NGO	Non-Government Organization
PD	Project Director
PM	Project Manager
PIR	Project Implementation Review
RBM	Results-based Management
RCU	UNDP/GEF Regional Coordinating Unit
RES	Renewable Energy Sources
RTA	UNDP Regional Technical Advisor for Climate Change and Energy
SME	Small and Medium Enterprises
SHD	sustainable human development
TA	Technical Advisor
TJ	Terajoules
TOR	Terms-of-Reference
TPR	Tripartite Review
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollars

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# **Executive summary**

# Brief description of the project

The UNDP/GEF Full-sized Project "Hungary: Public Sector Energy Efficiency Programme" started in March 2001 and closed in June 2008. The project was funded in part by UNDP TRAC (USD 400 000) and the GEF (USD 4.1 million) with co-financing from Government and private sources. The project falls under the GEF Focal Area Climate Change (CC) and the GEF Operational Programme OP5: Removal of barriers to energy efficiency and energy conservation.

The objective of the project was to help mitigate Hungary's greenhouse gas emissions by improving the energy efficiency in public sector buildings, and to help build the capacity in municipalities to improve energy efficiency through project implementation and improved energy management of existing buildings and infrastructure. The project was expected to result in significant and sustainable annual reductions of carbon emissions estimated at 300,000 tC over the 20-year lifetime of the investment projects.

The project aimed to achieve this overall objective by means of;

1. strengthened outreach to municipalities including setting up municipal networks and regional energy advice centres

2. improving the knowledge base of municipal decision maker and energy managers through tools and training, and

3. supporting energy audits and feasibility studies to identify viable energy efficiency investment opportunities in municipal buildings and infrastructure.

The Project was executed by the Ministry of Economy and Transport (formerly the Ministry of Economic Affairs and currently within the Ministry of Transport, Telecommunication and Energy) of the Republic of Hungary and was implemented by the Energy Centre Hungary, a non-profit company set up in 1992 jointly by the Ministry of Economy and Transport, the Ministry of Environment and Water and the Hungarian Energy Office. Currently, it is the sole responsibility of the Ministry of Transport, Telecommunication and Energy.

# Context and purpose of the evaluation

This Final Evaluation has been conducted on behalf of the UNDP in accordance with the UNDP/GEF Monitoring and Evaluation Policy and with particular attention to whether GEF minimum requirements have been met. All full and medium sized projects supported by the GEF are required to undergo a Final Evaluation upon completion of implementation.

# Main conclusions

The primary advantage of the project was that it addressed the need in Hungary to improve Energy Efficiency with a combination of a clearly structured short-term support mechanism for EE implementation (audit and feasibility study fund) with capacity support at the municipal level to ensure long-term sustainability of results. The effectiveness of this solution is evident in the strong dynamic and enthusiasm observed among the municipalities to further identify and implement EE rehabilitation projects on their own.

### Project relevance

Considering Hungarian national policies and priorities, and the opinions of public and private sector stakeholders, this UNDP/GEF project has been consistent with national priorities and has reflected the high priority put on public sector energy efficiency. The project was well designed, showed good stakeholder involvement and utilized a comprehensive but flexible strategy. In the period between the design of the project (2000) and its completion (2008) the relevance has increased. This and the increased capacity resulting from the project are already showing sustainable results. Key stakeholders and, in particular, the representatives of the municipalities interviewed were satisfied with the approach and the results of the project.

### Management

Significant delays (resulting in part from ambiguities in the chain-of-command and priorities with regards the Energy Centre Hungary mandate) during the first two years of project execution were identified and acted upon by UNDP CO and the Project Management structure. These early delays did result, essentially, in a project re-start in 2003 and, subsequently, in project extensions totalling some 27 months. Within the shifted implementation period (2003-2008), project execution proceeded timely and effectively. In this respect, the project team is commended for their organization and efforts. The project was well managed and the involvement of the different stakeholders well structured. Communication between the Steering Committee, the Project Board, the Energy Centre and UNDP/GEF was well structured and implementation modalities were effectively applied. Stakeholder recommendations and suggestions were well integrated.

### Performance

The shifted implementation period (2003-2008) coincided well with partnership programmes for financing of EE measures in municipalities (in particular, EU structural funds available through KIOP, 2004-2006 and KEOP, 2008-2013) and these have been well exploited in the project implementation (the Energy Centre Hungary staff continues to manage these funds and monitor results.) Within the project, a fund totalling USD 1.5 million to finance Audits and Feasibility studies was created and managed. According to data from the M&E unit in the Energy Centre Hungary, 209 Audits and 53 Feasibility Studies were prepared with this fund. From these 130 municipal EE rehabilitation projects are either realized or underway at project close resulting in a total lifecycle benefit of 305 095 tCO<sub>2</sub> emission reduction. Substantial additional (indirect) CO<sub>2</sub> emission reduction benefits are expected to result from the project dynamic and the increased capacity evident at the municipal level.

### Financial

Despite delays and extensions in project implementation, the project retained a surplus of GEF funding of USD 120 000. Government co-financing (USD 3.14 million) was somewhat higher than originally planned and private sector investment (USD 19.3 million) in realized EE projects was double that estimated in the project document.

### Recommendations

1) The Energy Centre Hungary would benefit from a broader focus to maintain and strengthen its role with respect to the municipalities and to the central government. In particular, it is recommended that the Energy Centre Hungary assume the following mandates:

- Strengthening of international co-operation within the framework of EU projects

- Development and implementation of new local Energy Efficiency master plans in cooperation with municipalities. The core function of the Energy Centre Hungary in this activity should be the dissemination of base knowledge for EE investment implementation and the promotion of Energy Efficiency programmes and best practice.
- Collecting and processing of data and establishing a comprehensive EE database as a basis for development of governmental energy strategies.

2) The Energy Centre Hungary should be further integrated within the Ministry of Transport, Telecommunication and Energy with a clear definition of its role and mandate.

3) A broader range of financing strategies for municipal EE project implementation should be explored. By providing information for a broader range of financing models, the Energy Centre Hungary and the Regional Advice Centres can further promote municipal EE project implementation. From interviews it is clear that such networking and support would provide much desired guidance for municipalities in strategic planning of EE projects.

4) The good relationship which was established between the Chamber of Engineers and the Energy Centre Hungary during the development of the Energy Audits and Building Energy Passports should be utilized. These organizations should continue to work together to further disseminate / promote Energy Efficiency among engineers, architects and auditors.

5) It is recommended to update the one-stop-shop website established within the project. The webpage remains a useful source of base knowledge for municipalities. This webpage should be integrated in the Energy Centre Hungary and updated on a regular basis.

6) For similar projects in planning or implementation, it is recommended that a broader range of financing models be explored and promoted to realize actual EE investments.

# Lessons learned

1) A particularly successful aspect with regard to project replication and sustainability is the high level of capacity, knowledge and enthusiasm observed in the municipalities some 8 months after project closure. Local energy managers have been trained or hired and a general mandate to improve energy efficiency has been expressed by municipal officials.

2) In addition, municipalities have begun to develop their own Energy Efficiency masterplans or complete series of EE rehabilitation projects for implementation based on the success of EE investments realized in the project.

3) Municipalities are also exploring other financing models on their own including commercial co-financing or ESCOs. These positive developments contribute decisively to the overall success of the project.

4) The co-operation of UNDP and the Energy Centre Hungary was excellent. This relationship constituted a major factor towards the success of the project

5) The effectiveness and the sustainability of the project benefited from the shifted implementation period (2003-2008). Partnership programmes (KIOP and KEOP) available for municipalities in this period provided key opportunities for actual EE implementation based on the Audits and Feasibility Studies funded by the project. In addition, the mandate and capacity of the Energy Centre Hungary has been strengthened by the project

# Introduction

### Purpose of the evaluation

The mandate of this report is the Final Evaluation of the UNDP/GEF Full-sized Project, "Public Sector Energy Efficiency Programme - Hungary" (HUN/00/004 TRAC and HUN/00/G31 GEF) which started in March 2001 and ended in June 2008.

This Final Evaluation has been conducted on behalf of UNDP in accordance with the UNDP and GEF Monitoring and Evaluation Policy, applying the criteria set out in the Terms of Reference (see Annex 1), with particular attention to whether GEF minimum requirements have been met. All regular and medium sized project supported by the GEF are required to undergo a Final Evaluation upon completion of implementation.

This Final Evaluation intends to assess the relevance, performance and success of the project. It has three major objectives:

a) to look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals

b) to identify/document lessons learned and make recommendations that might improve design and implementation of other UNDP/GEF projects.

c) To identify opportunities for follow-up activities or further projects in the region which would support replication and sustainability of project impact.

This Final 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 long-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.

# Key issues addressed

This Final Evaluation focuses on the following aspects:

- Project design and its relevance in relation to:
  - a) Development priorities at the national level;
  - b) Stakeholders assess if the specific needs were met;
  - c) Country ownership / drivenness participation and commitments of government, local authorities, public services, utilities, residents;
  - d) UNDP mission to promote sustainable human development (SHD) by assisting the country to build its capacities in the focal area of environmental protection and management;

- Performance look at the progress that has been made by the project relative to the achievement of its objective and outcomes;
  - a) Effectiveness extent to which the project has achieved its objectives and the desired outcomes, and the overall contribution of the project to national strategic objectives;
  - b) Efficiency assess efficiency against overall impact of the project for better projection of achievements and benefits resulting from project resources, including an assessment of the different implementation modalities and the cost effectiveness of the use of GEF resources and actual co-financing for the achievement of project results;
  - c) Timeliness of results,
- Management arrangements focused on project implementation:
  - b) General implementation and management evaluate the adequacy of the project, implementation structure, including the effectiveness of the National Steering Committee and Consultative Forum, partnership strategy and stakeholder involvement from the aspect of compliance to UNDP/GEF requirements and also from the perspective of "good practice model" that could be used for replication
  - c) Financial accountability extent to which the sound financial management has been an integral part of achieving project results, with particular reference to adequate reporting, identification of problems and adjustment of activities, budgets and inputs
  - d) Monitoring and evaluation on project level assess the adoption of the monitoring and evaluation system during the project implementation, and its internalization by competent authorities and service providers after the completion of the project; focusing on the application of SMART performance indicators:
- Overall success of the project with regard to the following criteria:
  - a) Impact assessment of the results with reference to the development objectives of the project and the achievement of global environmental goals, positive or negative, intended or unintended changes brought about by the project intervention, (number of households benefiting, number of areas with the new technology in place, level of sensitization and awareness about the technology; any change at the policy level that contributes to sustainability of the tested model, impact in private/ public and/ or at individual levels);
  - b) Global environmental benefits reductions in green house gas emissions.
  - c) Sustainability assessment of the prospects for benefits/activities continuing after the end of the project, static sustainability which refers to the continuous flow of the same benefits to the same target groups; dynamic sustainability use and/or adaptation of the projects' results by original target groups and/or other target groups;
  - d) Contribution to capacity development extent to which the project has empowered target groups and have made possible for the government and local institutions (municipalities) to use the positive experiences; ownership of projects' results;
  - e) Replication analysis of replication potential of the project positive results in country and in the region, outlining of possible funding sources; replication to date without direct intervention of the project;
  - f) Synergies with other similar projects, funded by the government or other donors.

Issues of special consideration:

This Final Evaluation reviews and assesses the methodology for calculating  $CO_2$  emission reductions and validates direct and indirect  $CO_2$  emission reductions resulting from the project.

Considering future development support in the region, this Final Evaluation assesses the support model applied in the project, its implications for the long-term impact and the sustainability of the project results. This Final Evaluation Report also presents

recommendations and lessons learnt for broader applicability for follow-up and future support of the UNDP and/or Governments, highlighting the best and worst practices.

# Methodology of the Evaluation

This Final Evaluation was implemented according to the following procedure:

1) Preliminary documentation review

The initial stage involved the review of project documentation and associated documents (Annex 4.) The documentation was provided by the UNDP Bratislava Regional Centre and by the Energy Centre Hungary in Budapest or collected from the internet.

2) Preparations for mission

Through discussions with the Project Manager, Ms. Antónia Béres and the UNDP Country Support Team Environmental Officer, Ms. Klara Tothova at the UNDP Bratislava Regional Centre, an itinerary for the local mission was proposed and developed. The interviewees were selected so as to provide a broad sample of the different groups of people involved in the project including governmental and municipal representatives, key actors of the implementing agency, the executive agency and the project staff (the PM and other staff at the Energy Centre). Additionally, a general interview format for local stakeholders and a specific interview format for Energy Centre staff were drafted (Annex 3.) These draft interview formats were forwarded to the Energy Centre and UNDP BRC prior to the mission for review.

### 3) Mission

The local mission in Hungary lasted from March 2, 2009 to March 5, 2009. The itinerary (Annex 2) consisted of interviews with project management, key stakeholder and beneficiaries. The Project Manager Ms. Antónia Béres and Energy Centre staff kindly assisted the evaluation team by arranging interviews. The responsible departments of two municipalities were visited (Jász-Nagykum-Szolnok County and Budapest 3rd District - refer to Annex 3).

(a) Presentation and explanations by the project management

The Energy Centre made a thorough presentation of the project concept, the project outcomes and the key project products and indicators.

(b) Stakeholder interviews

Annex 6 contains a list of interviews completed

(c) Field visits to municipal offices

The responsible departments of two municipalities were visited (Jász-Nagykum-Szolnok County and Budapest 3rd District - refer to Annex 3).

(d) Collection of additional documentation

Additional data and documents were made available by project management and stakeholders during the mission.

4) Telephone interviews with UNDP staff

On Tuesday, March 10, follow-up telephone interviews were conducted with Ms. Klara Tothova, the Environmental Officer, Country Support Team, UNDP Europe and the CIS Bratislava Regional Centre and with Ms. Susan Legro who between 1999 and 2003 served as UNDP-GEF Regional Coordinator for Energy and Climate Change at the UNDP Europe and the CIS Bratislava Regional Centre.

### 5) Data analysis

Following the mission, the collected data and opinions were compiled and analyzed. Multiple, sources of information were assessed to ensure an evaluation according to GEF/UNDP Monitoring and Evaluation Policy.

### 6) Reporting

This Final Evaluation is based the interviews with the relevant stakeholders as well as the review of available documentation. This Report includes relevant comments and suggestions raised by UNPD, the Energy Centre Hungary and the national stakeholders interviewed as well as the findings and opinions of the authors.

# Structure of the evaluation

The structure applied in this evaluation is based on a performance assessment approach guided by the principles of Results-based Management. The evaluation tracks impact based on the Logical Framework Approach. The contribution of project outputs and project management is evaluated with reference to the achievement of the project outcomes and overall objective. This Final Evaluation reviews the implementation experience and achievement of the results of the project in question against the project document endorsed by GEF, including any changes made during implementation.

# The project and its development context

At the time of project start, Hungary had and still has an energy intensive economy compared to other EC countries. An excellent potential for energy and GHG savings still exists in the building sector by means of the implementation of cost effective Energy Efficient measures. Local, regional and national government require the awareness, knowledge and capacity to exploit these potential benefits.

The project "Public Sector Energy Efficiency Programme" was funded by UNDP TRAC (USD 400 000) as well as from the Global Environment Facility - GEF (USD 4.1 million). The project's Executing Agency (EA) was the Ministry of Economy and Transport (formerly the Ministry of Economic Affairs and currently part of the Ministry of Transport, Telecommunication and Energy) and the project's implementation agency (IA) was the Energy Centre Hungary, a non-profit company originally owned jointly by the Ministry of Economy and Transport, the Ministry of Environment and Water and the Hungarian Energy Office. Currently, it is operated solely under the jurisdiction of the Ministry of Transport, Telecommunication and Energy.

# Project start and duration

The Project Document HUN/00/004 (for UNDP TRAC funding) was signed on December 15, 2000 and the Project Document HUN/00/G31 (for GEF funding) was signed on March 30, 2001 and the first project disbursement occurred in April 2001. The project duration was originally planned for 60 months (planned closing date in March 2006.) After extensions agreed to in 2005 and 2007, the project was officially closed in June 2008.

# Problems that the project seeks to address

### The general problem

Energy use in Hungary was very inefficient at the time of project inception due in part to the fact that energy prices were not based on their true economic cost. Privatization of the majority of industry and the increasing exposure to international competition within the EU was believed (this belief proved to be right) to drive and accelerate energy rationalization in the productive sectors. Such changes in the public sector, however, fully depend on the availability of public financial sources. The limited availability of such resources, together with the very low overall energy performance and considerable utility costs of local municipalities (including district heating, building heating and lighting and street lighting) provided an excellent point of intervention for the UNDP and the GEF to support Hungary.

Specific problems:

- Low energy efficiency of public buildings coupled with rising energy prices and deteriorating funding of local municipalities.
- Local municipalities lack capacity for the energy management of their infrastructure portfolio and are unaccustomed to such management activities.
- As a consequence local decision makers are unaware of the possible courses of actions that can be taken to alleviate the situation including the technical possibilities that required some level of funding and hence different financial management.
- Because of lack of awareness, not even no-risk measures are implemented.
- The increasing number of compulsory and immediate tasks mandated to the local municipalities (education, social services) diverts attention and resources from medium- and long-term measures.
- Even if local decision makers were aware of the need to act on energy efficiency they were reluctant to use their financial resources to explore the technical options. They were not willing to take the financial risk of audits that result in investment proposals that could not be implemented for financial or other reasons.
- Additionally, the market to provide audit services was rather underdeveloped with small number of actors. The qualification of such service providers was not standardized and that created additional risk to the municipalities.
- Lack of info services to local municipalities about the various financing options for EE investment such as commercial sources (state supported credit lines), central government tenders, international sources (e.g. IFC) and ESCO financing. The various EU funds which were available over the period (pre-accession funds and structural funds in various forms especially KIOP and KEOP) required and still require procedural capacity and guidance at the municipal level.

# Immediate and development objectives of the project

The development objective of the project is to mitigate Hungary's greenhouse gas emissions by improving the efficiency of energy use in public sector infrastructures. This will be achieved by addressing the relevant institutional, financial, technical and capacity barriers. The elimination of both demand and supply side barriers for energy efficiency in the public sector was expected to result in significant and sustainable annual reductions of carbon emissions estimated at 300,000 tC over the 20-year lifetime of the investment projects.

The UNDP/GEF project aimed to tackle the above mentioned overall objective by means of 3 main project outcomes:

- 1. Improve the development of energy efficiency policy, increase awareness, and improve co-ordination of energy efficiency programmes,
- 2. The identification, development, and financing of energy efficiency projects in Hungarian municipalities/ municipal district heating systems, and
- 3. Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

Key activities carried out to attain these outcomes and the overall objective was:

- Acquire and train the staff for the Energy Centre needed for the project implementation.
- Establishment and operation of a fund to support local municipalities to prepare energy audits and feasibility studies for their buildings/district heating systems.
- Development of energy audit guidelines with the involvement of international experts and current/future domestic auditors.
- Dissemination of auditing methods to the professional community and local municipalities.
- Development of auditor certification system to improve quality control over such services.
- Preparation of monitoring and evaluation methodology for energy efficiency projects.
- Training of local and county municipality representatives on technological option of energy efficiency, energy management and financial possibilities for such investments.
- Extend the outreach of the Energy Centre to the countryside via the support of regional energy centres to disseminate information to the local/regional community.

# Main stakeholders

The main direct beneficiaries of the project were the local municipalities of Hungary. The project intended to enhance their capacities in the field of energy management and energy efficiency via trainings, consultations, information materials and documentations. The most important tool to mobilize their activities in modernizing their energy use was to provide funding for the audits and feasibility studies that formed the basis for actual investments.

The Executing Agency, the Energy Centre Hungary based in Budapest, was another direct beneficiary of the project. During the course of the project staffs of 12 persons were recruited and trained a number of who are still employed at the Centre. These staff members have applied the experience and knowledge gained during the project to the current activities of the Energy Centre Hungary. In particular, the M&E team continues to manage KIOP and KEOP funds at the national level and to track and evaluate the results.

Other beneficiaries are the SMEs (including but not limited to ESCOs) and individual experts involved in the preparation of audits and feasibility studies. Beyond their direct benefit of contracts financed by the project, they were offered substantial training and consultation services, free of charge. That enabled them to learn about the methodology and practicalities

of auditing and often motivated them further to continue their professional advancement and receive the relevant certificate from the Chamber of Architects and the Chamber of Engineers.

Even though some regional energy advice centres were in operation before the project, their role for the local community and decision makers has been enlarged by the project activities (organizing workshops, info days and consultation services.)

Generally, the government of Hungary did benefit from the project in the form of induced GHG emission reductions and reduced energy cost of municipal infrastructure. It is important to note that although municipal governments own their institutions and buildings, their financial performance is of direct relevance to the central government, especially the Ministry of Interior (bailout experience). The Ministry of Environment and Water is responsible for the international obligation of Hungary towards the UNFCCC with respect to nationwide GHG emissions and air pollution. The Ministry of Transport, Telecommunication and Energy holds responsibility to energy efficiency policies and targets that are crucial tools to improve energy security of supply that is currently an overall political goal.

# **Results expected**

Implementing the Public Sector Energy Efficiency Programme was expected to raise awareness of energy management measures, improve energy efficiency and reduce public sector costs. It was also expected to contribute to a sustainable market for energy efficiency goods and services, and play an important facilitating role in the creation of ESCOs (Energy Service Companies). To improve the energy efficiency in public sector buildings and installations, it was necessary to conduct energy audits of the facilities, based on inspection and measurement, and then to identify and implement the relevant energy efficiency measures.

The project was expected to result in significant and sustainable reductions of carbon emissions estimated at 300,000 tC over the 20-year lifetime of the investment projects.

The UNDP/GEF project focused on 3 main stated project outcomes:

- 1. Improve the development of energy efficiency policy, increase awareness, and improve co-ordination of energy efficiency programmes,
- 2. The identification, development, and financing of energy efficiency projects in Hungarian municipalities/ municipal district heating systems, and
- 3. Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

# Findings and Conclusions

# **Project formulation**

The project was well designed with sufficient flexibility to adapt to the changing political and economic basis in the country. Hungary became an EU Member State in 2004 and the project has fit well within the opportunities and membership requirements of this unique phase in Hungary's political development. The objectives were in line with the national needs and fully harmonized with the building and energy policy of both the country and the EU. The project design and strategy were relevant and effective. The various elements of the project were well designed taking into account the needs of the stakeholders and target groups. This was also evident in the interviews during which project management and stakeholders spoke positively of the clarity and effectiveness of the project.

## Implementation approach - planning

The project addressed an urgent need in Hungary to improve Energy Efficiency in municipal buildings and district heating systems. At the time of project planning (1999-2001), the approach was somewhat revolutionary in the GEF portfolio; up until then, GEF projects of this nature typically relied on demonstration projects as a means to build capacity and promote best practice. This project proposed instead to fund Audits and Feasibility Studies for a large number of EE projects in municipalities throughout Hungary and to provide capacity support through training and networking to realize broader EE investment. In this respect the project has set and validated a valuable precedent for future GEF project development. The project combined an easily accessed short-term facility (the Audit fund) with capacity support at the municipal level to enable long-term sustainability of results. The effectiveness of this solution is evident in the strong dynamic and enthusiasm observed among the municipalities to further identify and implement EE rehabilitation projects on their own.

Based on the review of all available information, the implementation approach was rated satisfactory.						
HS	S	MS	MU	U	HU	N/A
	X					

### Analysis of Logical Framework Approach (project strategy, indicators)

The relationship between objective, outcomes, outputs and activities described in the body of the project document were not well articulated in the Logical Framework Matrix. The Logframe also lacked clearly defined indicators and verifiable targets. These issues were identified in the Mid-term Evaluation which included recommendations to retrofit indicators and improve M&E as support for project management.

The lack of verifiable indicators and targets meant that the project management had little guidance during implementation. A well structured Logical Framework Matrix with verifiable indicators would have greatly assisted in the Final Evaluation.

In addition, a need to clarify and elaborate the calculation basis for the main success indicators (quantity of GHG emission reductions, involvement of private investors in the investment project financing) was identified. GHG emission reductions were expressed in

tonnes of carbon (tC) rather than tonnes of carbon dioxide (tCO<sub>2</sub>) in the project document which resulted in some confusion during project implementation and reporting.

# Lessons from other relevant projects incorporated into project implementation

The project strategy was progressive in respect to the GEF, in that instead of financing and realizing demonstration or pilot projects, this project sought to increase the capacity of municipalities to take advantage of funding programmes and financial mechanisms which were becoming available to them largely in the form of EU structural funds. A similar GEF project - albeit focusing on a demonstration project in a single municipality - was being implemented in Bulgaria at the time of project development and the observations and lessons learned were well integrated both in the project planning and implementation. A positive synergy existed between these two projects and a good exchange of experience and feedback existed between the two implementing agencies.

### Country ownership / Drivenness / Relevance

Energy efficiency has high priority in Hungary. Reducing energy use per GDP is the one of the most powerful ways to reduce GHG emissions, while at the same time contributes to two other crucial policy goals i.e. further improvement of competitiveness (via cost reduction) and better security of energy supply.

Hungary has been an active Party since the formation of the UNFCCC and an Annex B Party to the Kyoto Protocol. As such Hungary has taken up GHG emissions reduction commitment of 6% compared to the average of 1985-1987. Being a member of the European Union since May 2004, Hungary has joined the European Emissions Trading Scheme and other efforts of the Community to provide global leadership in tackling climate change. Security of energy supply is increasingly part of the national political agenda.

The "Energy Conservation and Energy Efficiency Improvement Action Programme" approved in 2000 and was planned to run until 2010 listed 15 areas of conservation for financial support targeting 3.5% per year reduction of energy intensity.

The UNDP/GEF project was fully consistent with national measures, and reflected the high priority put on public sector energy efficiency within Hungarian energy policy. The relevance of the project to Hungary has increased during implementation.

### Stakeholder participation/public involvement

UNDP developed the project proposal based on wide stakeholder discussions back in 1999. Both municipal officials (including mayors and regional energy centres) and investment sources (banks and ESCOs) were involved in the project preparation. The outreach of the project was thus twofold; first, Energy Efficiency options and priorities for municipalities were to be identified and secondly, the roles of SMEs (auditors and other service providers) were to be supported and strengthened throughout the country.

The project was developed with the involvement of stakeholders and potential beneficiaries.

Based on the review of all available information, the Stakeholder Participation was rated satisfactory.						
HS	S	MS	MU	U	HU	N/A
	Χ					

# **Replication approach**

As discussed above, the project employed a suitable approach to secure replication after project close. By promoting EE investment in a broad number of municipalities while at the same time building the capacity and the knowledge base through training ensured a broad basis for municipalities to develop EE projects and masterplans on their own after the project end. Capacity building activities included energy management training, guidance to preparing applications for funding, networking, information collection and dissemination via the project website.

# **Cost-effectiveness**

As mentioned above, the basic idea of applying a large portion of the GEF funding to establish an Audit Fund open to all municipalities was new. The approach enabled a broad outreach to municipalities with good chances for EE investment without committing a large sum to any one project. The approach proved worthwhile; from 209 Audits and 53 Feasibility Studies performed, about half had lead to EE investments for realization by the end of the project. The total investment of these projects is over USD 35 million contributing substantially to the co-financing of the overall project.

In addition, from a financial perspective, it should be emphasized that, despite the extension of over two years, the costs of the original GEF budget were not exceeded. The budget remained within the originally set limits. After final budget consolidation, a budget surplus has been determined. This result speaks in favour of the management and the effective financial monitoring of the project.

# **UNDP** comparative advantage

The project builds upon the UNDP's active participation and experiences in projects and programmes supporting building sector EE and municipal capacity building in the Region (for example in Bulgaria) In addition, the UNDP is acknowledged for its strong ability to work at the local level with local stakeholders. As evident in this and other regional projects, UNDP is in a favourable position to assist Hungary and neighbouring countries in absorbing EU structural funds with a focus on municipalities.

# Linkages between the project and other interventions within the sector

The project is well placed in the context of both national and international programme in the field of energy efficiency. Its connection to national schemes has been primarily guaranteed by the executing agency (Energy Centre Hungary) which managed several relevant programmes in the past (Széchanyi Terv, NEP) and currently acts as executing agency for the Energy and Environment Operation Programme of the New Hungary Development Plan (KEOP, 2007-2013). The real test of synergy is the conversion rate from audit/feasibility study funded by the UNDP/GEF project to actually realized investments. Due to this institutional linkage, substantial synergy has been developed at the human resource level. For example, the Energy Centre Hungary M&E team responsible for the KEOP and KIOP funding programmes was hired and trained as part of the UNDP/GEF project.

As far as other international efforts concerned, the GEF finances the 2 programmes run by IFC: the "Hungary Energy Efficiency Guarantee Program 1 and 2", and the "OTP Local Institution Energy Conservation Program". Both schemes target financial intermediaries in assisting energy efficiency investments to take place via financial risk sharing. The latter – targeting schools - helps to mobilize commercial sources for energy efficiency investments.

### **Management arrangements**

The project was supervised and managed by the following bodies:

- Steering Committee
- Project Board
- Project Manager

The UNDP/GEF unit of the Energy Centre Hungary consisted of 4 groups with altogether 12 staff members:

- Finance
- Monitoring
- Training
- IT

The Project Steering Committee has been established at the start of the project with the representatives of the Government, the executing agency, the implementing agency and the UNDP. The Steering Committee held meetings at least annually and provided overall guidance of the project implementation and supported up-to-date information on the political/institutional changes that might affect the project. The Project Board was fast response acting body of the project to oversee project implementation and to monitor project results. It consisted of the managing director of the Energy Centre, representatives of the UNDP and the National Director. The project manager oversaw the project on a day-to-day basis, working under the responsibility of the Programme Director of the Energy Centre.

# Implementation

### Implementation approach - practice

Management problems, decision-making and institutional factors caused significant delays during the first two years of project execution. However, following management changes made in 2002 and early in 2003, the project was able to proceed rapidly. Already in late 2003 very spectacular progress was observed in all the main outcomes including training courses, awareness raising actions, information dissemination, developing monitoring methods, operating financial tools for supporting audits and preparing feasibility studies. To compensate for this initial delay, the project was granted a 21 month extension in 2005. In 2007, the project management requested a further extension of 6 months based on delays in the disbursement of the Audit Fund and new opportunities made available through EU structural funds (KEOP/EEOP) which would improve the sustainability of project results after closing. The extension request considered the available budget remaining, a reduced staff at the EC and applications for audits and feasibility studies from municipalities which were applicable for KEOP funding. The project officially closed in June 2008.

After initial delays caused by conflicts in project management, implementation seems to have been carried out efficiently. Tripartite Reviews and Meetings were implemented regularly with representatives from UNDP, the Hungarian Government and the Energy Centre,

The completion of the project was delayed for 27 months, a fact that was partly due to the management not being fully fit for immediate project start-up, a challenge that has been known to arise in similar projects. Since projects of similar nature and size have not existed in the country before, the resources for trained personnel with a sufficient level of experience were scarce and the schedule for the training of personnel and management may have been somewhat tight. National experts had to be trained for the project where project planners could not rely on existing capacities. This problem has not been fully accounted for in the original time line of the project. The full scope of the training requirements was not perceived in the early stage of the project, it was only when the project had already started that it became evident. This challenge – since it is a known one – could have been responded at an earlier stage, even before the project's start. It is estimated that this could have saved a time span of up to two years.

The primary cause of the delay however, seems to have been a disagreement between the original Project Manager and her supervisor concerning internal allocation of GEF funding. The UNDP CO worked to address this through missions, correspondence, and through a special evaluation, but ultimately, the project was only able to progress as originally envisioned after both parties involved in the dispute had left the Energy Centre.

Based on the review of all available information, the implementation approach was rated satisfactory. HS S MS MU U HU N/A X

# The Logical Framework Matrix used during implementation as a management and M&E tool

From a project management point of view the project Logical Framework Matrix lacked an appropriate M&E structure. In particular, the Logframe Matrix lacked clearly defined indicators and verifiable targets. This deficiency was identified in the Mid-term Evaluation which included recommendations to retrofit indicators and improve project M&E. While the M&E team was able to improve the tracking of investments and realization of projects resulting from the Audits and Feasibility Studies (each of which required by contract yearly reports from the municipalities), there seems to have been little or no strategic response to the need for M&E activities aimed at the other outputs and outcomes of the project.

The lack of indicators meant that the project management had little guidance as to progress. Project management and the monitoring and evaluation team may have benefited by simple and verifiable indicators for each element of the project strategy, allowing the complete project team to concentrate efforts towards the project outcomes and objective. This would have also assisted in the Final Evaluation.

# Effective partnership arrangements established for implementation of the project with relevant stakeholders involved in the country/region

The target level of 500 participants has been achieved with the active participation of 20% of Hungarian municipalities. Energy Center has made efforts to invite (and finance) active participants to relevant conferences abroad. A more indirect but wider outreach tool was the development of the project website (www.undp.hu) that contains all information generated in the framework of the project. Unfortunately, the information was updated last in 2006 and the closure of the UNDP project meant the abandonment of this information source. Acknowledging that this is beyond the project scope, the utilization of this resource is not solved today. It is not even linked to the website of the Energy Center.

Energy efficiency has high priority in Hungary. Reducing energy use per GDP is the one of the most powerful ways to reduce GHG emissions, while at the same time contributes to two other crucial policy goals i.e. further improvement of competitiveness (via cost reduction) and better security of energy supply.

Hungary has been an active Party since the formation of the UNFCCC and an Annex B Party to the Kyoto Protocol. As such Hungary has taken up GHG emissions reduction commitment of 6% compared to the average of 1985-1987. Being a member of the European Union since May 2004, Hungary has joined the European Emissions Trading Scheme and the efforts of the Community to provide global leadership in tackling climate change. Hungary is a small open economy hence to maintain and improve its competitiveness in the global market is a key to its economic survival. It is especially true since its EU membership due to the free movement of capital and labour in the continent. Security of energy supply has surfaced gradually into the political agenda and by today it is one of the prime issues in Hungary due to recent supply interruption of Russian natural gas.

The "Energy Conservation and Energy Efficiency Improvement Action Programme" approved in 2000 and was planned to run until 2010 listed 15 areas of conservation for financial support targeting 3.5% per year reduction of energy intensity. In February 2008 the government published its new "National Energy Efficiency Action Plan" as required by the Directive 2006/32/EC. The plan includes measures that would enable Hungary to cut its energy use with 1% (1.773 GWh / 5,38 PJ) annually between 2008 and 2016. This is in full

compliance with the European Union commitment to reduce primary energy consumption by 20% (and hence GHG emissions) by 2020.

The reduction of energy use by the public sector is one of the key priorities in this Acton Plan. This was also reflected in the National Development Programme of Hungary (2004-2006) and its successor, the New Hungary Development Plan (207-2013) that provide substantial funding opportunities to the public sector. Cost reduction in the private sector has its competitiveness drives but the public sector has to improve its cost effectiveness as well to be able operate at an affordable cost (fiscal debt problem). The approximately 3200 local municipalities of the country have been and still operate at low energy efficiency whereas energy cost has increased considerably in the last decade. Hence local governments are trapped between rising operation costs and lack of own sources for investment. This is coupled with the need of technological expertise and knowledge of the available energy efficiency options.

Interviews confirmed that several long term partnerships have been created by the project among the different actors involved in it. The municipalities often continued cooperating with auditors that were contracted in the project framework. Some municipalities that started up their energy efficiency activities in the last few years recognized the need to go beyond single building audits and to start developing larger scale energy management plans (Energy Master Plans). Most notably the Jész-Nagykun- Szolnok County Municipality initiated the setup of a future "Regional Energy Management Center" covering 3 counties (Nyíregyháza, one of their partners was very active in the UNDP project itself). The Regional Energy Centers that has been involved in the project in organizing and implementing trainings, conferences, energy advice services, application preparation services, awareness raising activities and so on for the municipalities claimed that their involvement in energy issues in the local community and the local decision-maker circles became stronger and believe that this is partly due to the UNDP financed events.

The project was successful in building on and reinforcing existing structures and avoiding overlap with new institutions. The Energy Center itself has been involved in energy efficiency issues before and the RECs that had been actively participating were operating in the field before having widespread knowledge on the problems to be tackled. Several tasks were delegated to the local/regional level. For example, the organization of regional workshops was performed by the RECs and not by the Energy Centre Hungary itself.

### Feedback from M&E activities used for adaptive management

During project implementation, an M&E department was set up in the Energy Centre Hungary to assist this and other projects. This M&E unit was shared and funded equally from the UNDP/GEF project funds and the Energy Centre Hungary. Besides tracking the Energy Audits and Feasibility Studies, they focused on the management and monitoring of EU structural funding and the effective implementation of these funds. During interviews with the municipalities, a great deal of enthusiasm and dynamic was evident with regards further investments for EE in the public building stock and infrastructure. In light of the fact that the project has officially fallen short of its emission reduction goals, it is regrettable that M&E activities did not account for any addition (indirect) savings from the positive dynamic of the project.

As previously reported, this lack made it difficult for M&E activities to be used for adaptive management and for the effective final evaluation of the project.

# **Financial Planning**

From a financial perspective, an aspect to be positively emphasized is that - despite the delay of over two years - the costs of the original GEF budget have not been exceeded. The budget remained within the originally set limits. After final budget consolidation, a budget surplus has been determined. This result speaks in favour of the management and the effective financial monitoring of the project.

In addition, a few of those interviewed expressed regret that the project did not explore or propose financial models beyond EU structural funds. While the municipalities interviewed were prepared to explore other financial mechanisms (ESCOs or EE loans) for smaller projects, guidance for this approach was lacking.

### Monitoring and evaluation

Projects Indicators focus primarily on the success of the Audit and Feasibility Study Fund. Indicators, Targets and Realized Levels related to the Fund are summarized as follows;

Indicator	Target	Realized
Number of Audits and	100	209 Audits and 53 Feasibility
Feasibility Studies		Studies = $262$ total
Number of Investment	40 projects by project close	130 projects (53 completed,
Projects resulting from		64 ongoing and 13 planned
project-supported Audits and		for realization in short-term)
Feasibility Studies		at project close
Total Costs of Investment	9-13 million USD	35.45 million USD (from EU
Projects resulting from		structural funds, ESCOs,
project-supported Audits and		banks and municipal
Feasibility Studies		budgets)
direct CO <sub>2</sub> emission	1.1million tCO <sub>2</sub>	305 095 tCO <sub>2</sub> lifecycle
reductions resulting from	(300 000 tC)	emission reduction resulting
realized Investment Projects		from 130 realized projects

Fewer project indicators with focus on capacity building (Outcomes 1 and 3) were identified. While these show the realization of project activities, they are arguably less impact-based but rather implementation-based.

Target	Realized
Continues to operate with	The Energy Centre is
decisive role after project	responsible for managing and
closure	monitoring EE and RE
	funding programmes
	including KEOP (2008-2013)
500 participants from at least	2514 participants from 1008
10% of the municipalities	municipalities in 33
	organized training events
	16 cooperation agreements in
	2006 and 12 cooperation agreements in 2007
	Target         Continues to operate with decisive role after project closure         500 participants from at least 10% of the municipalities

Deficiencies with regards project indicators and recommendations to improve them and their usefulness for adaptive management were identified in the Mid-term Evaluation. There is no evidence that these indicators were retrofitted or adapted for project management purposes. The lack of indicators meant that the project management had little guidance as to progress. Project management and the monitoring and evaluation team may have benefited by simple and verifiable indicators for each element of the project strategy, allowing the complete project team to concentrate efforts towards the project outcomes and objective. This would have also assisted in the Final Evaluation.

Based on the re-	view of all availa	able information,	, the monitoring	and evaluation w	vas rated satisfac	tory.
HS	S	MS	MU	U	HU	N/A
	X					

# **Execution and implementation modalities**

The project adhered to UNDP project management protocols including good reporting of progress and finances including well structured Annual Progress Reports/Project Implementation Reports. In addition, the Project Steering Committee and the Tripartite Reviews were effectively implemented. After the initial delay, an external review of the project was completed in August 2002 and a Mid-term Evaluation was completed in 2004.

## Management by the UNDP country office

The UNDP Regional Centre was active and supportive in project implementation, management and evaluation. It is difficult to judge whether the initial delay may have been avoided or reduced with a clearer mandate on the part of UNDP; in this particular case, the chain of command between the 3 original governing bodies of the newly formed Energy Centre and the Energy Centre staff (which included the UNDP/GEF project staff) overruled the project mandate.

The co-operation of UNDP and Energy Centre Hungary can be qualified as excellent. It constitutes one of the major aspects leading the success of the project. The following claim made by the Mid-Term-Evaluation can still be said to hold true:

"The balance between the UNDP project being autonomous and being integrated part of the Energy Centre is nearly optimal, and a good basis for continues sustainability of the work after the end of the project. Many of the outputs of the UNDP project are expected to be integral part of the daily activities of the Energy Centre after the UNDP project is over. This is a good example for other countries and projects."

# Coordination and operational issues

The project suffered considerable implementation delay in its first two years due to initial management problems. The chain of reporting was not clear to the staff and the Energy Centre Hungary executives did not find the right balance between incorporating the UNDP/GEF project in to their own activities and treating it as an autonomous project run by the organization. The concern that UNDP resources not be absorbed into the Centre's general

activities was expressed by the Ministry of Environment representative as well. This was resolved by creating a UNDP/GEF unit within the Centre and hiring a new project manager.

# Results

The project M&E team at the Energy Centre has delivered the following data concerning realized investment projects resulting from Audits and Feasibility Studies supported by the UNDP/GEF project. The M&E team also provided a spreadsheet with the project-by-project breakdown. An analysis of this data conducted during the Final Evaluation is attached as Annex 7.

No. of invest- ment projects	Project Investment Costs (million USD)	Energy Saving according to Audits/FS GJ/year	Lifecycle C02 Emission Reduction (tC02)
53	10,33	110 015	194 725
64	19 44	50 556	84 270
0.	,		01210
13	5,68	19 055	26 100
130	35 45	179 626	305 095
	No. of invest- ment projects 53 64 13 130	No. of invest- ment projectsProject Investment Costs (million USD)5310,336419,44135,6813035,45	No. of invest- ment projectsProject Investment Costs (million USD)Energy Saving according to Audits/FS GJ/year5310,33110 0156419,4450 556135,6819 05513035.45179 626

The Audit and Feasibility Study Fund was used to partially finance 209 Audits and 53 Feasibility Studies. From these, a total of 130 investment projects were initiated in 90 municipalities. Implemented projects were primarily rehabilitations of municipal office buildings, cultural buildings, schools and kindergartens and included indoor lighting rehabilitation (over 40 projects), heating system rehabilitation (over 50 projects), thermal insulation and window exchange (over 45 projects) and a few projects for Renewable Energy systems (biogas, geothermal and solar). The average project size was USD 273 000 whereby the 10 most costly projects had budgets exceeding USD 1 million each and together accounted for almost 60% of the total Project Investment Costs.

- 25% 40% of the total costs of the audit or the feasibility study were covered directly from the fund (adjusted year to year based on the success of previous year);
- A further 30% 40% was granted (altogether maximum 80%), if an investment into energy efficiency was initiated (i.e. some or all of the recommendations of the audits were actually implemented.)

With the exception of EU structural funding (NEP, KIOP and KEOP funds which are managed by the Energy Centre itself) the funding sources for these investment projects were not systematically tracked by the M&E team. 5 of the UNDP/GEF supported projects received KIOP funding and out of 20 applications with UNDP/GEF supported Feasibility Studies, 16 received KEOP funding for implementation. The KIOP and KEOP funds supported direct subsidies to these projects - 25%-75% for renewable energy investments and 30%-75% for energy efficiency projects. The remaining costs were financed by the municipalities themselves through budget spending, bank loans or in many cases ESCOs. In most cases applications for KEOP funding were prepared for the municipalities by ESCOs with a high rate of success compared to other applications.

	KEOP application success rates		
	UNDP/GEF supported	others	
w/o ESCO support	50%	33%	
ESCO support	100%	90%	

Project-specific CO2 emission reduction is calculated on the basis of the realized investment projects and the savings anticipated in their Audits and Feasibility Studies. To help verify calculated savings, the Audit/Feasibility Study funding agreement required that municipalities report the actual energy consumptions and utility costs before and up to 3 years after the investment project implementation. Unfortunately, this verification mechanism was not integrated in the M&E activities so while the municipalities continue to send these reports, the data is not being processed at the Energy Centre following the closure of this UNDP/GEF project. At the 2 municipalities visited during this evaluation (Budapest III and Jász-Nagykun-Szolnok County), the realized projects have exceeded the energy savings anticipated in the Audits and Feasibility studies. In addition, some 13 investment projects were visited by the M&E team during the project to verify the implementation of measures.

Total GHG emission reductions from realized EE investments resulting from the Audits and Feasibility Studies supported by the project fund amount to 305 095 tCO<sub>2</sub> (=83 359TC). This figure assumes the completion of 64 projects ongoing at the UNDP/GEF project close and 13 projects planned for implementation shortly afterwards. A 20-year investment lifecycle has been assumed for all measures.

In the original Project Document it was expected that 40 investment projects would be implemented at a cost of USD 9-13 million and result in savings of 1.1million tCO<sub>2</sub> (=300 000 TC). Although the number of projects and total investments exceeded expectations by a factor of 3, the resulting CO<sub>2</sub> savings are less than 1/3 the expected amount. A comparison of investment cost per tCO<sub>2</sub> savings reveals a wide range of investment efficiencies (40% of projects are below USD100/tCO2, another 40% are between USD100 and USD400/tCO2, another 10% are between USD400 and USD1000/tCO2 and the final 10% exceed USD1000/tCO2). The most costly investment project, the rehabilitation of student residences in Tessedik Sámuel Főiskola Szarvas at a cost of USD 7.3 million, delivered only 870tCO<sub>2</sub> savings (=USD 8358/tCO<sub>2</sub>!) reinforcing the conclusion that energy savings and CO<sub>2</sub> mitigation were marginal considerations in many of the realized investment projects. That said, the original expectations translate to investment costs of USD 8 to 12/tCO<sub>2</sub> which are ambitious for rehabilitation projects; only 6 projects fell within or under this range.

In addition to the direct investment project related CO<sub>2</sub> emission reductions, the project should acheive substantial indirect savings based on strengthened capacity and the replication dynamic evident at the municipal level;

- Pipeline projects and Master Plans have already been initiated by the municipalities based on the success of realized projects. Based on local visits to 2 municipalities in the course of this evaluation, a strong dynamic to implement further Energy Efficient projects in the municipal building stock is clearly apparent.
- Municipal energy awareness and management capacity has been strengthened under the project. 33 training events were held involving 2514 participants from 1008 municipalities.
- A good network for cooperation has been established between the municipalities, Regional Energy Advice Centres, ESCOs, Auditors and Funding Sources. At least 16 Regional Energy Advice Centres cooperated in project activities (organization of training events, motivating municipalities and preparing their applications for the Audit/Feasibility fund, organizing ESCOs and Auditors, etc.) The Energy Centre has

strengthened its capacity to manage and monitor energy funds, to provide policy support and provide information on best practice. The Energy Centre continues to manage and monitor national energy saving funding schemes including the KEOP funding which is available for municipalities and open until 2013.

A calculation of potential indirect savings has not been prepared within this UNDP/GEF project. However, based on the success of realized project-related investment projects, the dynamic evident in visited municipalities to replicate that success and on the further availability of KEOP funding, the evaluation team assumes that in at least 60 of the 90 municipalities which successfully realized investment projects, a further 3 to 4 replication projects of similar or larger size will be realized in the 10 years following project closure. Applying the bottom-up CO<sub>2</sub> calculation methodology to this conservative estimate, a further 610 to 815 thousand tCO<sub>2</sub> emission reduction can be expected as indirect project benefits. This does not take into consideration spin-off projects in other municipalities benefitting from the increased knowledge base and capacities of their municipal staff or the increased activities of ESCOs and Regional Advice Centres which participated in the UNDP/GEF programme.

A rough application of the top-down  $CO_2$  calculation methodology also reveals good potential for indirect savings. According to Hungary's 4th National Communication to the UNFCCC 2005, the Hungarian energy sector  $CO_2$  emissions were 57.592 million  $tCO_2$  in 2003. According to the project document, the public, commercial, and residential sectors together account for 46% of energy consumed and the energy consumption per volume heated is typically 20-30% higher than other EU member states with similar climates. A reduction of energy consumption of just 2-3% in the combined sectors through Energy Efficiency measures or Renewable Energy applications could thereby save some 500 to 800 thousand  $tCO_2/year$ .

The conversion rate from audit/feasibility study to investment is a major indicator for the effectiveness of the UNDP/GEF project on its development objective i.e. the reduction of GHG emissions. It is important to note, however, that this factor itself is not a direct outcome of the project and partly depends on external factors such as the interest of the municipality, the capacity to develop bankable proposals, and the availability of sufficient financial resources.

The Energy Centre has supplied the following summary of municipalities which received support from both the UNDP/GEF project Audit/Feasibility Study fund and from national and EU structural funding (KIOP and/or KEOP).

The following municipalities were successful both in the UNDP/GEF and the KIOP subsidy scheme:

- 1. Budapest, III. district
- 2. Százhalombatta
- 3. Csongrád county municipality
- 4. Sátoraljaújhely
- 5. Bóly

It is also important to notice that KIOP was open not only for municipalities but for companies as well and it was open for applications from 2004 till 2006. During that period 44 applications were accepted and funded.

The following municipalities were successful both in the UNDP/GEF and the KEOP subsidy scheme:

- 1. Mórahalom
- 2. Törökszentmiklós
- 3. Sátoraljaújhely
- 4. Békéscsaba
- 5. Vésztő
- 6. Szedres
- 7. Mesztegnyő
- 8. Győr
- 9. Kisújszállás (Jász-Nagykun County)
- 10. Celldömölk
- 11. Derecske
- 12. Mernye
- 13. Alattyán
- 14. Kecskemét
- 15. Budapest, III. district
- 16. Dunaszentgyörgy
- 17.

It is important to note that KEOP is an ongoing tender launched in 2007 and planned to 2013. Currently, 99 applications were accepted and funded out of which 59 applications were turned in by municipalities or ESCO companies dealing with municipal institutions. Applications of municipalities are still very welcomed in KEOP. Workshops and information materials will encourage their participation in the following years which will be done and organized by Energy Centre Hungary.

# Attainment of objectives

OUTPUT	ASSESSMENT
Output 1.1 Preparation	Despite project management with experience in managing
for effective project	similar technical assistance projects and the sharing of start-up
implementation	experiences with a team implementing a similar UNDP/GEF
	project in Bulgaria, the project start-up was problematic
	because of a disagreement between the initial government
	appointed PM and her supervisor about allocation of project
	funding. After initial delays, a new PM and project team were
	selected by competition and quality selection in 2002-2003 and
	the project proceeded well.
Output 1.2 Improved	Within the scope of the project, a compre-hensive study of
coordination of energy	existing national EE policy and recommendations for
efficiency policy	government was prepared and presented. Also, a guidebook was
	prepared for calculating GHG emission reductions. In
	cooperation with Chamber of Engineers, the Energy Centre
	project team participated in implementing of policy through
	preparation of energy audit and building energy label standards
	and in 2006, a workshop for building professionals was held to
	demonstrate building energy calculation software conforming to
	new national building energy performance requirements. In
	addition, the Energy Centre is now responsible for management
	and monitoring of national and European Energy Efficiency

Outcome 1. Improve the development of energy efficiency policy, increase awareness, and improve coordination of energy efficiency programmes

	funding programmes and projects
Outrout 1.2 Streen ath an ad	An active dialogue with municipalities and municipal network
Output 1.5 Strengtnened	An active dialogue with municipanties and municipal network
outreach to	building is evident. Cooperation agreements were established
municipalities and	with Regional Advice Centres (16 in 2005, 12 in 2006). Results
municipal energy supply	included;
companies, and	<ul> <li>49 applications for audits and feasibility studies</li> </ul>
strengthened local	• 24 information days organized by RACs and UNDP
networks.	training team
	• 6 national conferences organized by RACs
	• 3 info days and 5 energy manager days organized by the
	training team
	<ul> <li>2514 participants from 1008 municipalities in the 33</li> </ul>
	• 2514 participants noni 1008 inunicipanties in the 55
	• preparation and distribution of information material
	(best practice series, information on EE and RE
	technologies, financing options) also available over the
	project web-site.
Output 1.4 Increase in	This Output was revised in 2003 when a survey of
the number of municipal	municipalities indicated the project could not significantly
energy managers	influence municipal employment policy. The output was
	changed to focus on monitoring of efficiency of training
	activities (see new Output 1.4 below.)
Output 1.4 (new)	This Output was introduced in 2003. A detailed description of
Monitor the efficiency of	related activities is lacking. Besides basic numbers (2514
training activities	participants from 1008 municipalities in the 33 organized
	training events) results of this output are not apparent
Output 1 5 Development	M&E team were selected and trained As outlined in the
and operation of	Project Document, the team was shared between the
monitoring evaluation	LINDP/GEE project and the other Energy Centre operations
and foodbook	(national and EC EE funding program management and
machanisms	(national and EC EE funding program management and manitoring) As anticipated in the Project Decument, this team
	is still active in the Energy Centre Hypergraved is reasonable.
	is still active in the Energy Centre Hungary and is responsible
	for M&E activities related to national funding programs.
Output 1.6 Sustainable	This output relates to activities (a long-term business plan) to
development of the	strengthen the role of the Energy Centre. Government re-
project	structuring and budget concerns in 2007 coupled with the delay
	of the KEOP funding program meant the existence of the
	Energy Centre was threatened for a number of months. When
	the KEOP program finally did start in 2008, the Energy Centre
	was assigned responsibility to manage and monitor funding.
	From the UNDP/GEF project team, only the M&E team have
	remained at the Energy Centre after project closure.

Outcome 2. The identification, development, and financing of energy efficiency projects in Hungarian municipalities/ municipal district heating systems.

OUTPUT	ASSESSMENT
Output 2.1 Increase in	The goal was a better coordination and application of already
the number of energy	available financing sources. A fund totalling USD 1.5 million
audits and feasibility	was applied to 209 Audits and 53 Feasibility Studies. The
studies undertaken in	audits were performed by contracted independent auditors.

municipalities/ district	Regional Advice Centres and ESCOs were well informed and						
heating companies	active in approaching the municipalities to assess potential						
through a fund for	projects and prepare applications for both the UNDP/GEF						
energy audits/ feasibility	funding and national EE funding programs.						
studies	• 25% - 40% of the total costs of the audit or the						
	feasibility study were initially covered directly by the						
	fund (adjusted year to year based on the success of						
	previous year).						
	• A further 200/ 400/ was granted (altereather maximum						
	• A fulfiller $50\%$ - $40\%$ was granted (altogetiler maximum $20\%$ ) if an investment into energy efficiency was						
	initiated (i.e. some or all of the recommendations of the						
	initiated (i.e. some of an of the recommendations of the						
	audits were actually implemented.)						
	• reporting of energy consumption of the project before						
	and minimum 3 years after implementation was required						
	to monitor and validate results. In practice, this						
	mechanism was difficult to apply because of the short life span of the UNDP/GEE project						
	life-span of the UNDP/GEF project.						
	At project end 130 EE and RE investment projects totalling						
	JSD 35 million were completed or under implementation.						
	Some 21 UNDP/GEF supported audits and FS were used in						
	successful applications for KIOP or KEOP funding supporting						
	neir realization.						
Output 2.2	In cooperation with the Chamber of Engineers, an audit						
Establishment of a	standard and training and certification programme for auditors						
national standard for	has been established. The Chamber of Engineers is now						
energy audits and	responsible for training, licensing and quality assurance of						
programme of	auditors. In 2006, a workshop for building professionals was						
certification of energy	held to demonstrate building energy calculation software						
auditors	conforming to new national building energy performance						
	requirements, building certification and auditing standards.						
Output 2.3	The overall goal was to establish the Energy Centre's role as the						
Establishment of a 'one-	single point of contact for applications for financing of energy						
stop shop' common	efficiency projects and to establish a common database of						
database for applications	applications and funded projects. This has been achieved - the						
for financing of energy	Energy Centre is responsible for the management and						
efficiency projects	monitoring of national EE funding programmes including the						
	KIOP KEOP fund and the M&E team and database						
	management methods implemented under the UNDP/GEF						
	project continue to operate in the Energy Centre. In addition,						
	under the UNDP/GEF project, the Energy Centre has prenared						
	and distributed guidebooks and information materials						
	(guidelines for application best practice series information on						
	EE and RE technologies financing ontions) to further promote						
	and facilitate FE and RE measure implementation						
	Unfortunately the information and dissemination has prepared						
	under the LINDP/GEE project has generally not been						
	maintained or undated after project closure						
1							

Outcome 3. Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

OUTPUT	ASSESSMENT						
Output 3.1 Improved	An International Consultant was brought in to train Energy						
knowledge base for the	Centre staff. The Project manager spent several days with the						
Energy Centre and local	team of a similar UNDP/GEF project in Bulgaria. Although						
energy efficiency advice	much of the project team has now left the ECH, the M&E team						
centres/ local networks	Il operates and other capacity improvements have been tegrated in the Energy Centre. formation and outreach programs for municipal decision						
	integrated in the Energy Centre.						
Output 3.2 Improved	Information and outreach programs for municipal decision						
knowledge base for	makers were well structured. Events were well attended and						
decision makers in	received by stakeholders.						
municipalities	• 24 information days organized by RACs and UNDP						
	training team						
	• 6 national conferences organized by RACs						
	• 3 info days and 5 energy manager days organized by the						
	training team						
	• 2514 participants from 1008 municipalities in the 33						
	organized training events						
	• preparation and distribution of information material						
	(best practice series, information on EE and RE						
	technologies, financing options) also available over the						
	project web-site.						
	In discussions with municipal stakeholders during the						
	evaluation, a high level of interest, enthusiasm and capacity to						
	further implement EE measures in municipal buildings is						
	evident.						
Output 3.3 Increased	Within the course of the evaluation, discussions with municipal						
capacities to identify,	energy managers revealed a high degree of competence and						
design, implement and	awareness of best practice in terms of technical measures and						
manage energy efficiency	financial mechanisms. In Jász-Nagykun-Szolnok County						
projects at the local	Municipality additional mid-level energy managers were hired						
level.	to work with the senior energy manager to develop new projects						
	within the overall energy strategic plan. had were met capacity						
	and dynamic was evident at the municipal level. projects are						
	being developed and financing explored. The Energy Manager						
	was informed and active in exploring the possibilities of project						
	funding (ESCOs and funding programmes)						

Generally, the project team has implemented the project as outlined in the Project Document. Deliverables have been professionally prepared and presented. The Audit and Feasibility Study Fund has been well managed and applied.

Since the project was prepared with a different focus output related  $CO_2$  calculations were not established at the time of preparation. The existing basic calculations offer but a rough tool for evaluating the outcome as related to the expectations. Precise indicators, first and foremost a  $CO_2$  calculation methodology related to outputs, would have been desirable. Due to a lack of detailed calculation methodology, the transparency of the results is not fully apparent. However, the results in  $CO_2$  reduction that were calculated subsequently in two communities indicate that the goals aspired for by the project shall be exceeded.

Based on the review of all available information, the attainment of objectives was rated satisfactory.

	5						
HS	S	MS	MU	U	HU	N/A	
	Χ						

### Sustainainability

The project has initiated a dynamic development within various municipalities that has led to further expansion of Energy Efficiency measures. Energy strategic papers have been elaborated and municipalities have joined forces to form Regional Energy Centres (this is not to be mistaken for the REC that are associations independent from the municipalities, existing before project start and got involved in organizational tasks). Offering support to these newly established Regional Centres is identified as one of the main future challenges and tasks that require the development of supporting mechanisms, especially by Energy Centre Hungary. This is a crucial aspect. Energy Centre Hungary should regard the Regional Energy Centres created as a joint effort of local and county municipalities as their target group.

An aspect to be considered extremely important in the success of the project and with regard to future development is that energy competence has been introduced into municipalities. Energy managers have been hired and trained in energy efficiency. The level of energy competence in municipalities has been raised and should be preserved and enhanced.

In addition, municipalities have created and voted on energy efficiency master plans. A series of such projects, 3 in the beginning, 27 today, has been initiated on municipal level.

As a further positive consequence of the project, municipalities have found commercial cofinancing for Energy Efficiency projects and have implemented initiated projects in cooperation with ESCOs.

Positive consequences such as these have not been calculated in the early stages of the project, but they contribute decisively to the success of the project.

Regarding the conversion from audits to investment, the Energy Centre is well mandated to assist this process further as it is responsible for the project management of three application constructions (priority axes) of the Energy and Environment Operational Programme (EEOP – in Hungarian KEOP) in the framework of The New Hungary Development Plan for 2007-2013 that is the main source of funding for local municipalities to upgrade their energy use. The axis includes the following headings:

- Support of heat and/or electricity generation of RES,
- Improvement of energy efficiency, and
- Third party financing.

As discussed above, numerous municipalities involved in it were successful in attaining funds from the KEOP. Therefore, replication and sustainability of the primary target of the UNDP-GEF Project – improvement of energy efficiency of public sectors in Hungary thus mitigating of GHG emissions -is secured throughout the New Hungary Development Plan for 2007-2013.

An important result of the project, the "one stop shop"created and maintained over the project period has not been sustained beyond 2006. Upgrading of information and linking it to the sites on funding options, primarily the Energy Center website but also the sites of the ministries involved in energy efficiency or the National Development Agency, would be a rather low cost option of making extended use of this excellent resource created by UNDP financial sources.

A main bottleneck for turning audits into investments is the lack of own resources the local municipalities possess to match EU funds dispersed by the Energy Center Hungary. This is coupled with the low quality of applications and the continuous delay in launching the calls.

Based on the review of all available information, the sustainability was rated highly satisfactory.							
HS	S	MS	MU	U	HU	N/A	
X							

## Contribution to upgrading skills of national staff

The executing agency of the project, the Energy Centre Hungary has been reinforced institutionally by the 7 years long project via hiring 12 persons to form the UNDP unit within the organization and then by the training of this team to be able to carry out the task. Some of this skilled workforce remained at the Energy Centre Hungary after project completion but most them retired or were dismissed due to lack of funding. The most important contribution to the Energy Centre Hungary is the transfer of the monitoring unit of the UNDP project team to the current funding activities of the organization.

The project inevitably supported the professional level of municipality staff responsible for energy issues; although we have no data on how many new such posts have been created or maintained by the project. The number of training participants from local municipalities was above 1000 persons between 2003 and 2006. This is a considerable outreach and to place it into context it is useful to understand that the project is estimated to have reached approximately one third of local governments.

# Recommendations

The evaluators conclude that the outcome of the project is overall positive and that the project's performance – both with regard to managerial and financial aspects as well as with regard to contents – was good. The project's impact in Hungary is clearly evident.

Still, the following recommendations for improvement can be made:

1) With the project, the role of the Energy Centre Hungary was firmly established and it played an important role within the fields of Energy Efficiency and in the development of strategies and Energy Efficiency measures in Hungary. As for its current role, though, the Energy Centre requires a different focus to be set. In particular, it is suggested that the Energy Centre Hungary assume the following (additional) tasks:

- Strengthening of international co-operation within the framework of EU projects, with the aim of accumulating further knowledge in the field of Energy Efficiency and utilizing EU financial support.
- Developing and implementing of new local Energy Efficiency projects in co-operation with municipalities. This task has been assumed by the Energy Centre before, yet the evaluators suggest a modification of the roles of stakeholders in general and the focus of the Energy Centre in particular. The core competence of the Energy Centre in this activity should be the dissemination of Energy Efficiency knowledge and the fostering of Energy Efficiency measures. Its role should be defined as being more active than it currently is. It is the opinion of the evaluators that an active promotion of Energy Efficiency by the Energy Centre Hungary is desirable.
- Collecting and processing of energy data and establishing a comprehensive energy data base. Current efforts towards these aims should be rendered more efficient and professional. A comprehensive energy data base will also prove useful as a basis for governmental energy strategies.

As a further recommendation, the evaluators suggest that the integration and definition of the relationship between the Ministry of Transport, Telecommunication and Energy and the Energy Centre Hungary be further enhanced and intensified.

# Actions to follow up or reinforce initial benefits from the project

Based on the introduction of the Energy Audit within the framework of the project, a strong connection / link was established between the Chamber of Architects and Engineers and the Energy Centre Hungary. It is the evaluators' opinion that this link should be further intensified. Seminars, lectures and workshops regarding the dissemination of Energy Efficiency measures are suggested to form the core of this continued co-operation, the aim being the further dissemination / promotion of Energy Efficiency among the bodies responsible for strategic planning of new projects as well as among auditors.

It is further strongly recommended to revive the One-Stop-Shop Webpage established for the Public Sector Energy Efficiency Programme. The webpage was a great source of information and a great vehicle for the dissemination of knowledge. It is recommended to continue the web-page and to optimize its usability. The webpage is to be structurally integrated and updated on a regular basis. Giving up a tool that served well in the dissemination of knowledge would be a loss in the further evolution of Energy Efficiency awareness in Hungary.

# Proposals for future directions underlining main objectives

The project addressed many crucial questions and set activities on various levels. On the levels of municipalities, establishing of financing models is considered as one of the crucial aspects by the evaluators. These financing models are of greatest importance for the implementation of new projects. The elaboration of these models is hence to form one of the key aspects of the policy / key competences of the new Regional Energy Centres. By providing financing models, the Regional Energy Centres will offer great support for the individual municipalities in their strategic planning of new Energy Efficiency projects.

For future projects, the evaluators propose more stress to be put on the establishing of financing models, parallel to the collection of project data and results on all levels. Financing

is the crucial aspect in giving municipalities a chance to implement projects fast and efficiently. Financing models should provide for easy accessibility of funds for municipalities willing to implement Energy Efficiency measure and they should make evident the effectiveness of the measures, clearly illustrating the benefit of these measures for the municipalities.

# Lessons learned

# Best and worst practices in addressing issues relating to relevance, performance and success

An aspect to be considered extremely important in the success of the project and with regard to future development is that energy competence has been introduced into municipalities. Employees were trained in energy efficiency or new employees were hired. The level of Energy competence in municipalities needs to be kept up / preserved and further enhanced. In addition, municipalities have voted energy plans. A series of projects, 3 in the beginning, 27 today, has been initiated on municipal level.

As a further positive consequence of the project, municipalities have found commercial cofinancing for Energy Efficiency projects and have implemented initiated projects in cooperation with ESCOs.

Positive consequences such as these have not been calculated in the early stages of the project, but they contribute decisively to the success of the project.

The evaluators estimate that a major precondition for the great success of the project was the fact that it was based on covering a strong need for improving Energy Efficiency that had been felt to exist in Hungary. Covering this need required efficient joint effort from all stakeholders. Necessary preconditions for the project's implementation were established by the Hungarian Government, and all involved stakeholder such as had the strongest interest in the positive outcome of the project. With these preconditions in place, the project has come to be a great benefit for all stakeholders, first and foremost for the ministry and the Energy Centre, which has also strongly profited from the implementation of a new financial controlling structure and management structure. The Chamber of Architects was entrusted with the certification of auditors. Municipalities have been supported in their further energy planning and strategies and have further benefited from the establishing of Regional Energy Centres, another clear indicator that the project gained its own momentum and has already transcended its original scope.

The co-operation of UNDP and Energy Centre Hungary can be qualified as excellent. It constitutes one of the major aspects leading the success of the project. The following claim made by the Mid-Term-Evaluation can still be said to hold true:

"The balance between the UNDP project being autonomous and being integrated part of the Energy Centre is nearly optimal, and a good basis for continues sustainability of the work after the end of the project. Many of the outputs of the UNDP project are expected to be integral part of the daily activities of the Energy Centre after the UNDP project is over. This is a good example for other countries and projects."

# Annex 1: Terms of Reference

### **TERMS OF REFERENCE**

### for Project Final Evaluation of UNDP/GEF Project of the Government of Hungary

#### Local Consultant

Project Title:	Hungary: Public Sector Energy Efficiency Programme
Evaluation team:	International Consultant or team, and Local Consultant
Duration:	over the period of: February – March 2009 estimated working time:
	approximately 17 working days
Terms of Payment:	Lump sum payable upon satisfactory completion and approval by UNDP of all deliverables, including the Evaluation report

### 1. INTRODUCTION

(a) The Monitoring and Evaluation (M&E) policy at the project level in UNDP/GEF has four objectives: i) to monitor and evaluate results and impacts; ii) to provide a basis for decision making on necessary amendments and improvements; iii) to promote accountability for resource use; and iii) to document, provide feedback on, and disseminate lessons learned. A mix of tools is used to ensure effective project M&E. These might be applied continuously throughout the lifetime of the project – e.g. periodic monitoring of indicators -, or as specific time-bound exercises such as mid-term reviews, audit reports and final evaluations.

In accordance with UNDP/GEF M&E policies and procedures, all regular and medium-sized projects supported by the GEF should undergo a final evaluation upon completion of implementation. A final evaluation of a GEF-funded project (or previous phase) is required before a concept proposal for additional funding (or subsequent phases of the same project) can be considered for inclusion in a GEF work program. However, a final evaluation is not an appraisal of the follow-up phase.

The final evaluations are intended to assess the relevance, performance and success of the project. It looks at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It will also identify/document lessons learned and make recommendations that might improve design and implementation of other UNDP/GEF projects.

The final evaluation is to be undertaken in accordance with the "GEF Monitoring and Evaluation Policy" (see <a href="http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html">http://thegef.org/MonitoringandEvaluation/MEPoliciesProcedures/mepoliciesprocedures.html</a>).

The final evaluation is intended to assess the relevance, performance, management arrangements and success of the project. It looks at signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global and national environmental goals.

Furthermore the final evaluation also identifies/documents lessons learned and makes recommendations that project partners and stakeholders might use to improve the design and implementation of other related projects and programs.

### **(b)** PROJECT DESCRIPTION

In years 2000 - 2008 the Energy Centre Hungary implemented the GEF/Hungarian Government funded medium-sized project titled Public Sector Energy Efficiency Programme in Hungary. The project was operationally closed in June 2008.

The objective of the project was to mitigate Hungary's greenhouse gas emissions by improving the efficiency of energy use in public sector buildings and installations and to help building of capacity in municipalities to improve energy management, not only through investment projects, but also through improved energy management of existing plant and equipment.

This global objective was planned to be achieved in several ways: firstly through strengthened outreach to municipalities and strengthened local networks of energy advice centres; secondly through improving the knowledge base of municipal decision makers and energy managers through training; and thirdly through support for energy audits and feasibility studies which will identify both no and low cost measures to improve energy efficiency, and measures for which investment is required.

The institution building objective was aimed to be achieved through the funding of project staff in the Energy Centre, who will support not only the specific implementation tasks of the project, but the overall aim of expanding the range of activities, experience, and knowledge base of the Energy Centre, thus creating strong capability and expertise for monitoring, evaluation, analysis, and feedback.

The project also intended to build capacity in the still underdeveloped energy efficiency services industry in Hungary, and to encourage the development of standards that will benefit the long term growth of the industry.

The immediate objectives and outputs of the Projects were the followings:

Objective 1. Improve the development of energy efficiency policy, increase awareness, and improve coordination of energy efficiency programmes

Output 1.1 Preparation for effective project implementation

Output 1.2 Improved coordination of energy efficiency policy

Output 1.3 Strengthened outreach to municipalities and municipal energy supply companies, and strengthened local networks.

Output 1.4 Increase in the number of municipal energy managers

Output 1.5 Development and operation of monitoring, evaluation and feedback mechanisms.

Output 1.6 Sustainable development of the project.

Objective 2. The identification, development, and financing of energy efficiency projects in Hungarian municipalities/ municipal district heating systems.

Output 2.1 Increase in the number of energy audits and feasibility studies undertaken in municipalities/ district heating companies through a fund for energy audits/ feasibility studies Output 2.2 Establishment of a national standard for energy audits and programme of certification of energy auditors.

Output 2.3 Establishment of a 'one/stop shop' common database for applications for financing of energy efficiency projects.

Objective 3. Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

Output 3.1 Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

Output 3.2 Improve knowledge base for decision makers in municipalities.

Output 3.3 Increased capacity to identify, design, implement and manage energy efficiency projects at the local level.

The Project was executed by the Ministry of Economy and Transport (former Ministry of Economic Affairs) of the Republic of Hungary and was implemented by the Energy Centre Hungary. The executing agency was accountable to UNDP for the production of outputs, for the achievement of project objectives and for the use of UNDP resources. The project was managed on a day to day basis by the Project Manager, who was working under the responsibility of the Programme Director of the Energy Centre Hungary.

The Project coordination was helped by the involvement of the National Steering Committee (composed of the representatives of the key ministries, the National Bank of Hungary, the implementing authority, and UNDP/GEF) responsible for supervision, control, policy guidance, and coordination and the Consultative Forum (a wider group of stakeholders, including NGOs, representatives of municipality organisations, and the energy efficiency industry) formed by the Ministry of Economy and Transport responsible for providing input on related activities and dissemination of the Project.

The designed total project budget was 16.65 – 20.65 M USD, including 4,200,000 USD GEF, 400,000 USD UNDP/ TRAC funding. Originally, (in the Project Document) the financial sources were planned to be composed by GEF grant, UNDP/ TRAC grant, and parallel financing from Government funds and private investors.

At the end of the project the total budget disbursed was over 27 M USD due to increased amount of municipal and private sector investment as well as new grants received.

The geographical scope of the project was not restricted to a specific area in Hungary.

The direct beneficiaries of the project were the Hungarian municipalities, the energy service companies, the Energy Centre Hungary and the local energy advice centres, the national policy makers in the Ministry of Transport, Telecommunication and EnergyMinistry of Economy and Transport, the Ministry of Environment and Water, and other relevant Ministries, moreover the Hungarian population.

### **2.** OBJECTIVES OF THE EVALUATION

The objective of the Evaluation is to assess the achievement of project objective, the affecting factors, the broader project impact and the contribution to the general goal/strategy, and the project partnership strategy.

The Evaluation will focus on the following aspects:

- <u>Project design and its relevance</u> in relation to: a) *Development priorities* at the national level;
  - b) Stakeholders assess if the specific needs were met;
  - c) *Country ownership / drivenness* participation and commitments of government, local authorities, public services, utilities, residents;
  - d) *UNDP mission to promote sustainable human development (SHD)* by assisting the country to build its capacities in the focal area of environmental protection and management;

- <u>Performance</u> look at the progress that has been made by the project relative to the achievement of its objective and outcomes;
  - d) *Effectiveness* extent to which the project has achieved its objectives and the desired outcomes, and the overall contribution of the project to national strategic objectives;
  - e) *Efficiency* assess efficiency against overall impact of the project for better projection of achievements and benefits resulting from project resources, including an assessment of the different implementation modalities and the cost effectiveness of the utilisation of GEF resources and actual co-financing for the achievement of project results;
  - f) *Timeliness* of results,

#### • <u>Management arrangements</u> focused on project implementation:

- e) *General implementation and management* evaluate the adequacy of the project, implementation structure, including the effectiveness of the National Steering Committee and Consultative Forum, partnership strategy and stakeholder involvement from the aspect of compliance to UNDP/GEF requirements and also from the perspective of "good practice model" that could be used for replication
- f) Financial accountability extent to which the sound financial management has been an integral part of achieving project results, with particular reference to adequate reporting, identification of problems and adjustment of activities, budgets and inputs
- g) *Monitoring and evaluation on project level* assess the adoption of the monitoring and evaluation system during the project implementation, and its internalization by competent authorities and service providers after the completion of the project; focusing to relevance of the performance indicators, that are:
  - Specific: The system captures the essence of the desired result by clearly and directly relating to achieving an objective and only that objective.
  - Measurable: The monitoring system and indicators are unambiguously specified so that all parties agree on what it covers and there are practical ways to measure it.
  - Achievable and Attributable: The system identifies what changes are anticipated as a result of the intervention and whether the result(s) are realistic. Attribution requires that changes in the targeted developmental issue can be linked to the intervention.
  - Relevant and Realistic: The system establishes levels of performance that are likely to be achieved in a practical manner, and that reflect the expectations of stakeholders.
  - Time-bound, Timely, Trackable and Targeted: The system allows progress to be tracked in a cost-effective manner at desired frequency for a set period, with clear identification of particular stakeholders group to be impacted by the project.
- <u>Overall success</u> of the project with regard to the following criteria:
  - g) *Impact* assessment of the results with reference to the development objectives of the project and the achievement of global environmental goals, positive or negative, intended or unintended changes brought about by the project intervention, (number of households benefiting, number of areas with the new technology in place, level of sensitization and awareness about the technology; any change at the policy level that contributes to sustainability of the tested model, impact in private/ public and/ or at individual levels);
  - e) Global environmental benefits reductions in green house gas emissions.
  - h) Sustainability assessment of the prospects for benefits/activities continuing after the end of the project, static sustainability which refers to the continuous flow of the same benefits to the same target groups; dynamic sustainability use and/or adaptation of the projects' results by original target groups and/or other target groups;
  - i) *Contribution to capacity development* extent to which the project has empowered target groups and have made possible for the government and local institutions (municipalities) to use the positive experiences; ownership of projects' results;
  - j) *Replication* analysis of replication potential of the project positive results in country and in the region, outlining of possible funding sources; replication to date without direct intervention

of the project;

k) Synergies with other similar projects, funded by the government or other donors.

In addition to a descriptive assessment, all criteria should be rated using the following divisions: Highly Satisfactory, Satisfactory, Marginally Satisfactory, Unsatisfactory with an explanation of the rating. Also the Overall Rating of the project should be indicated.

#### Issues of special consideration:

The Evaluation Report will review and assessment the methodology for calculating CO2 emission reductions and validate direct and indirect  $CO_2$  emission reductions resulting from the project. Consultant should visit and sample set of project investments, summarise each investment in the evaluation report and assess the cost effectiveness of the emission reductions coming from this project. The evaluation should be fully supported by financial and measurement data, In addition to investment data for each of the project investments, this will include a table of planned vs. actual project financial disbursements, and planned co-financing vs. actual co-financing in this project.

For future development support in the region, UNDP is especially interested in the assessment of the support model applied in the project, its implications for the long-term impact and sustainability of the project results.

The Evaluation Report will present recommendations and lessons of broader applicability for followup and future support of UNDP and/or the Government, highlighting the best and worst practices in addressing issues relating to the evaluation scope.

### **3.** 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:

- 1. <u>Executive summary</u>
- 2. Introduction
- 3. <u>The project(s) and its development context</u>
- 4. <u>Findings and Conclusions</u> <u>4.1 Project formulation</u> <u>4.2 Implementation</u> <u>4.3 Results</u>
- 5. <u>Recommendations</u>
- 6. <u>Lessons learned</u>
- 7. <u>Annexes</u>

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

### 4. EVALUATION APPROACH

An outline of an evaluation approach is provided below; however it should be made clear that the evaluator 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 Group – Annex 3). They must be also cleared by UNDP before being applied by the evaluation team.

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

The evaluation should provide as much gender disaggregated data as possible.

The evaluation will take place mainly in the field. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with the government counterparts, the National Project Manager, Steering Committee, project team, and key stakeholders.

The evaluator is expected to consult all relevant sources of information, such as the project document, project reports – incl. Annual Reports, project budget revision, progress reports, project files, national strategic and legal documents, and any other material that s/he may consider useful for evidence based assessment.

The evaluator is expected to use interviews as a means of collecting data on the relevance, performance and success of the project. S/He is also expected to visit the project sites.

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

- Documentation reviewed;
- Interviews;
- ♣ Field visits;
- Questionnaires;
- Participatory techniques and other approaches for the gathering and analysis of data.

Although the Evaluator should feel free to discuss with the authorities concerned, all matters relevant to its assignment, it is not authorized to make any commitment or statement on behalf of UNDP or GEF or the project management.

The Evaluator should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

### 5. EVALUATION TEAM – QUALITIES AND REQUIREMENTS

A team consisting of an international consultant (already selected) and a local consultant 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 consultants shall have prior experience in evaluating similar projects. Former cooperation with GEF is an advantage.

Team Qualities:

- (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
- University degree in business, economics or energy/environment related issues;
- Recognized expertise in energy efficiency field
- familiarity with energy efficiency policies and management structures in CEE
- Work experience in relevant areas for at least 10 years;
- Experience with multilateral or bilateral supported conservation projects;
- Project evaluation experiences within United Nations system will be considered an asset;
- Excellent English communication skills;
- Computer literacy;

Specifically, the international consultant (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 national 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 National Consultant will provide input in reviewing all project documentation and will provide the International Consultant with a compilation of information prior to the evaluation mission. Specifically, the national expert 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 this position.

The evaluation will be undertaken in-line with GEF principles<sup>1</sup>:

- Independence
- Impartiality
- Transparency
- Disclosure
- Ethical
- Partnership
- Competencies and Capacities
- Credibility

<sup>&</sup>lt;sup>1</sup> See p.16 of the GEF's Monitoring and Evaluation Policy

• 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 biodiversity conservation policy-making process and/or delivery of the project. Any previous association with the project, the Ministry of the Environment, DAPHNE Institute of Applied Ecology, UNDP/GEF Regional Centre for Europe and CIS (Bratislava) 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.

### 6. IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation lies with UNDP Regional Centre for Europe and CIS (Bratislava). UNDP will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. UNDP and Energy Centre Hungary will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Ministry of Economy, etc.

The activity and timeframe are broken down as follows:

#### Activities timeframe

Desk review: approximately 4 days Briefings for evaluators by Energy Centre Hungary and UNDP: approximately 1 day Field visits, interviews, questionnaires, de-briefings: approximately 5 days Drafting of the evaluation report: approximately 2 days Validation of preliminary findings with stakeholders through circulation of draft reports for comments, meetings and other types of feedback mechanisms: approximately 4 days Finalization of the evaluation report (incorporating comments received on first draft): approximately 1 day

Working Days:

Technical experts (national consultant) – approximately 17 working days

The proposed date for the in-country mission to Hungary is in February 2009. The assignment is to begin no later than in March 31, 2009.

The evaluation will be conducted within the period of February - March 2009, according to the following plan:

#### *Preparation (home office – February 2009):*

- Collection of and acquaintance with the project document and other relevant materials with information about the project;
- Familiarization with relevant policy framework in Hungary;
- Development of methodological instruments for the evaluation;
- Set up the mission dates and detailed mission programme preparation in cooperation with the Project manager. The Project manager will organize the schedule of the mission and will arrange transportation to the consultant; will arrange for translation/interpretation when necessary
- Communication with the PMU to clarify matters

#### Mission to Hungary (5 working days February2009):

- briefing with the PMU
- visits to municipality(ies)
- meeting with the National Programme Director and stakeholder groups

#### Elaboration of the draft report (home office - till mid March 2009):

- Additional desk review
- Completing of the draft report
- Presentation of draft report for comments and suggestions
- additional information and further clarification with UNDP, project management and project staff;

#### Elaboration of the final report (home office till end of March 2009):

- Incorporation of comments and additional findings into the draft report
- Finalization of the report

Timeframe for submission of first draft of the report: within 10 working days after the mission.

The report shall be submitted to the UNDP Country Support Team (Ms. Klara Tothova, address: Grosslingova 35, 811 09 Bratislava, Slovakia, tel.: 00421-2-59337 220, e-mail: klara.tothova@undp.org)

Prior to approval of the final report, a draft version shall be circulated for comments to government counterparts and project management: project manager, National Project Director, Ministry of Environment of the SR, UNDP Country Support Team and UNDP/GEF RTA.

UNDP and the stakeholders will submit comments and suggestions within 5 working days after receiving the draft.

The finalised Evaluation Report shall be submitted latest on March 31, 2009.

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.

# Annex 2: Mission Itinerary

### March 02, 2009

### Project management, project team

10.00-15.00 Antonia Béres -Project Manager
11.00-12.00 Mrs. Tünde Horváth –head of European Union Application's Department
13.30-14.30 Mrs. Klára Haidegger, monitoring division,
14.30.15.00 Mrs. Margit Szvinyuk, financial director, Hujber Dorottya, project manager

Energy Centre Non-profit Co Implementing Agency 1134 Budapest, Váci út 45.

### March 03, 2009

### **Steering Committee members**

10.00-11.00 Dr. Miklós Poós - UNDP/GEF project director Ministry of Transport, Telecommunication and Energy 1054 Budapest, Akadémia u.3

11.00.-12.00 Antonia Béres - Climate Change and Energy unit Ministry of Environment and Water 1011 Budapest, Fő utca 44-50

12.00-12.30 Dr. Tibor Faragó - head of Strategy Department and Steering Committee member of the UNDP/GEF project *Ministry of Environment and Water* 1011 Budapest, Fő utca 44-50

14.00-15.00 Dr. László Bánhidi - vice president Hungarian Chamber of Engineers 1094 Budapest, Angyal utca1-3.

### March 04, 2009

### Site visit at municipalities

9.30.12.00 Mr. Kis András – Deputy Head of Office, Regional Development and International Affairs Jász-Nagykun-Szolnok County Municipality Szolnok, Kossuth Lajos u.2

14.00.15.00 Mrs. Andrásné Quirin – energy manager Budapest 3rd district Budapest, Fő tér 3

#### 16.00-17.30 Mr. Barnabás Vécsi – director Federation of Technical and Scientific Societies Veszprém County Branch (telephone interview)

### March 05, 2009

### Auditors and ESCO companies

Venue: Energy Centre Hungary Váci út 45

10.00-11-00	Mr. Belső Tibor - certified auditor (Eucomfort Kft.)
11.00-11.30	Mr. Rajnai Attila - managing director of Energy Centre (postponed from
	2 March)
14.00-15.00	Mr. János Prugberger – managing director (Cothec Kft.) and László Szigeti – Technical Assistant (Cothec Kft.)

#### March 10, 2009

### UNDP staff (by telephone conference)

13.15-14.00	Mrs. Klara Tothova, CST Environmental Officer
14.00-14.30	Mrs Susan Legro, Sustainable Energy Consultant

# Annex 3: List of Persons Interviewed

**UNDP** Project Management

- Ms. Klara Tothova, Environmental Officer, Country Support Team, UNDP Europe and the CIS Bratislava Regional Centre
- Ms. Susan Legro, sustainable energy consultant, Eco Ltd. (between 1999 and 2003, served as the UNDP-GEF Regional Coordinator for Energy and Climate Change at the UNDP Europe and the CIS - Bratislava Regional Centre)

National Project Management

Mr. Miklós Poós, National Project Director

Deputy Director General, Department of Environment, Renewable Energy and Energy Conservation, Ministry of Transport, Telecommunication and Energy Republic of Hungary (formerly served as National Project Director within the Ministry of Economy)

- Ms. Antonia Béres, Project Manager Climate Change and Energy Unit, Ministry of Environment and Water, Republic of Hungary (formerly served as Project Manager within the Energy Centre Hungary)
- Dr. Tibor Faragó, Director General, Ministry of Environment and Water (steering committee member)

Energy Centre Hungary Staff

- Mr. Attila Rajnai, Managing Director, Energy Centre Hungary
- Ms. Margit Szvinyuk, financial director, Energy Centre Hungary
- Ms. Dorottya Hujber, project manager, Strategy and Environmental Department, Energy Centre Hungary
- Ms. Tünde Horváth, head of European Union Applications Department KEOP/EEOP, Energy Centre Hungary
- Ms. Klára Haidegger, monitoring manager European Union Applications Department KEOP/EEOP, Energy Centre Hungary

Other National Stakeholders

Dr. László Bánhidi, Vice President, Hungarian Chamber of Architects and Engineers

- Mr. András Kis, Deputy Head, Office for Regional Development and International Affairs, Municipal Government of Jász-Nagykun-Szolnok County.
- Ms. Andrásné Quirin, Energy Manager, Budapest 3rd District Municipal Government.
- Mr. Barnabás Vécsi, Director, Federation of Technical and Scientific Societies, Veszprém County Branch

Mr. Belső Tibor, certified auditor, Eucomfort Kft. Mr. János Prugberger, Managing Director, Cothec Kft. (ESCO) László Szigeti, Technical Assistant, Cothec Kft. (ESCO)

# Annex 4: Summary of Field Visits

The evaluation mission included two site visits in order to have an impression on the ground level implementation of the project and to receive feedback from the main beneficiaries i.e. local municipalities.

### 1. Jász-Nagykun-Szolnok County Municipality

contact: Mr. Kis András – Deputy Head of Office, Regional Development and International Affairs Jász-Nagykun-Szolnok County Municipality Szolnok, Kossuth Lajos u.2

Mr. Kis is responsible for the energy management of the approx. 400 buildings (16 institutions) owned by the county municipality. His task includes the preparation and execution of energy efficiency and renewable energy investments as well. The municipality is quite active in attaining funding for such projects, currently 7 project application is filed or under preparation for KEOP (operational program of energy and environment). They have received UNDP/GEF funding for 4 project audits/feasibility study: 2 projects has been closed after the investment has been made, the other 2 audits has been used in their KEOP application (one submitted and one is under preparation).

Mr. Kis emphasised that audits are the only means to persuade county decision makers (Council) to go forward to develop the investment project (prepare funding proposal) and as such are crucial to mobilize stakeholders inside the municipality. Even the preparation of feasibility studies mean considerable financial risk for the seriously under financed municipality. Decision makers are hardly allotting funds for such preparatory work when it is not automatically is turned into investment (in case it is not profitable). In this respect UNDP finance was crucial for the projects to get started. They always contract external experts to do the audits and the UNDP project has contributed to the establishment of such professional contacts. Current KEOP applications are prepared by the very same experts, together with a company specializing in developing funding proposals. The staff of the municipality dealing with energy management issues has been developed over the years now comprising of 2 full time persons working closely with the external technical experts. They are initiating smaller projects (mainly lighting modernization or partial window change) that are financed from own sources. Whenever the project costs exceed 60-70 MHUF than the county municipality has to apply for EU funding (KEOP). Their experience is that project proposals are not financially viable for them under 25 MHUF as preparation cost (4-5 MHUF) eat up the grant element.

Apart from the direct investment, the avoided CO2 results and the human development aspects mentioned above, the UNDP project had a role is starting up strategic planning processes both at the county and regional levels. First, the county municipality prepared its energy strategy up to 2020 (in Dec. 2008) including targets for energy saving, avoided CO2 and share of renewable sources in total energy consumption. The strategy is based on the UNDP experience of listing potential projects that are to be considered for energy efficiency investments. The strategy uses this approach containing project list for the next 2 (and consecutive) years. Second, the Jász-Nagykun-Szolnok county government initiated together with two neighbouring counties (Hajdú-Bihar and Szabolcs-Szatmár) to establish a Regional Energy Centre with the mandate of coordinating and planning energy management or the whole region.

### 2. Budapest 3<sup>rd</sup> District

contact: Mrs. Andrásné Quirin – energy manager Budapest 3rd district Budapest, Fő tér 3

Mrs. Quirin acted formerly as EU advisory staff of Óbuda District in Budapest and was responsible for the UNDP project. In this framework 25 audits has been conducted and so far 6 has been turned into investment that are closed officially. The investments comprised of window change and roof insulation of 6 schools but no facet insulation or heating system modernization. The main parameters of these investments are:

Total investment cost 274 MHUF Natural gas saving: 19 370 GJ/y C emission mitigation: 317,5 T/y

According to Mrs. Quirin, the UNDP project created the much needed initial dynamic within the municipality to deal with energy use rationalization and lead to actual investments funded by EU sources. She has participated in several conferences and workshops organized in the UNDP framework and claimed that it has enabled her to keep updated on the options and resources.

Similarly to the Szolnok County Municipality, the UNDP project has created institutional impetus as well. The 3<sup>rd</sup> District has prepared its own short and long term environmental strategy and started up awareness raising activities such as help-desk for the local community on energy saving options and renewable source utilization issues. Additionally, she has created the Association of Energy Efficient Local Municipalities.

Regarding the future direction of UNDP in Hungary, she believes that UNDP should simply continue the project with the same content i.e. database development, audits and feasibility studies. Local governments still do not have the sufficient human resources to match the technical and financial knowledge to carry out such energy rationalization projects. Additionally, the EU directive on building passport will not force underfinanced local municipalities to do these audits themselves.

# Annex 5: List of Documents Reviewed

Project outcomes:

- Budapest III. kerület intézményi épületeinek korszerű hőszigetelési eljárások szerinti felújítása [Investment project summary document of the 3<sup>rd</sup> District of Budapest]
- Állapotfelmérés: Energetikai veszteségfeltáró audit of Kiserdei Általános Iskola Eurokonfort Kft., 2004. április [Energy audit of Kiserdei Primary School]
- Energiahatékonysági témájú megvalósíthatósági tanulmány terve, Jász-Nagykun-Szolnok megyei Önkormányzati Hivatal Székháza – Energiaplan Kft., 2005. július [Feasibility study on the energy rationalization of the municipal building of Jász-Nagykun-Szolnok County]
- 4. Mezei K.: Energiahatékonyságról Önkormányzatoknak, Energia Központ Kht., 2005 [On energy efficiency for local municipalities - guidebook]
- 5. Dr. Zöld A.: Az új épületenergetikai szabályozás, BAUSOFT, 2006 [New regulation on energy passports for buildings]
- Megvalósíthatósági tanulmány, Petőfi Sándor Művelődési Központ, Gödöllő, Innoterm Kft., 2006. szeptember [Feasibility study on the energy rationalization of Petőfi Sándor Cultural Center in Gödöllő]
- Sűlysáp Nagyközség közintézményeinek energetikai átvilágítása, SAVE-REMA Energiaügynökség, 2007. május [Energy audit of Sülysáp Local Municipality buildings]
- 8. Üvegházhatást okozó légköri szennyezőanyag kibocsátás csökkentés meghatározása, Energia Központ Kht. [Methodological guide for calculating GHG emission reductions]
- EGI Contracting/Engineering Co. Ltd., Energy Club Environmental Association, GOND-OLD Consulting, Development and Service Co.: Analysis of the execution of the 1107/1999. (X.8.) Governmental Decree on the Energy Saving and Energy Efficiency Enhancement Strategy till 2010, and its supplement Energy Saving and Energy Efficiency Enhancement Strategy Action Programme (June 2005)
- Az épületek hőtechnikai tanúsítása, Magyar Mérnöki Kamara (<u>http://www.mmk.hu/hir/article/287/az-epuelete.html</u>) [Energy passports for buildings – information paper]
- XII. Országos Energiatakarékossági Konferencia és Ausztriai Energiatakarékossági Szakvásár, Sopron – Wels, 2007. március 1 - 2. [Conference programme of the 12<sup>th</sup> National Energy Efficiency Conference]
- 12. Energiatakarékossági Információs Nap, 2007. április 3., Veszprém, Pannon Egyetem, Egyetem u. 10. [Programme of the Energy Efficiency Information day in Veszprém]
- 13. Issues of the "Best practice" series prepared in the framework of the project:
  - a. Energia liberalizáció [Energy liberalization]
  - b. Megvalósíthatósági tanulmányok Energiahatékonysági beruházások előkészítése közintézményekben [Feasibility studies – Preparation of Energy Efficiency Investments in Public Buildings]
  - Monitoring Energiahatakényosági programok monitoring és értékelési rendszere [Monitoring – The Monitoring and Assessment Methods for Energy Efficiency Programmes]
  - d. Villamosenergia termelés szélenergiával [Electricity Production from Wind]
  - e. Közvilágítás [Public Lighting]
  - f. A geotermikus energia hasznosítása Magyarországon [Ulitization of Geothermal energy in Hungary]
- 14. Website: www.undp.hu (the project website)

Project internal documents:

- 1. Project Document
- 2. Quarterly reports (2002-2008)
- 3. Annual reports (2002-2008)
- 4. Mid-term evaluation (February 2004)
- 5. Minutes of Steering Committee meetings and Tripartite review reports (2001-2006)

Governmental documents:

- 1. "Energy Conservation and Energy Efficiency Improvement Action Programme" 1107/1999. (X. 8.) Governmental Order
- 2. "National Energy Efficiency Action Plan" February 2008

The Fourth National Communication of the Republic of Hungary on Climate Change 2005

# **Annex 6: Interview Templates**

### **General Interview Template**

The Final Evaluation is a planned part of all GEF-funded projects. The objective of the Final Evaluation is to measure the effectiveness and efficiency of project activities in relationship to the overall project objective, and to make recommendations which could improve the project or help plan similar projects.

This Final Evaluation of the UNDP-GEF project 'Public Sector Energy Efficiency Programme' is initiated by UNDP Hungary and aims to find project strategies which most effectively and efficiently achieve climate change targets. It will serve as a basis for learning and assessment for UNDP and the stakeholders.

1. Please give your name, your role in the project and a short description of your responsibilities with reference to the project.

- 2. Project actions address 3 overall target objectives;
  - 1) Improving the development of EE policy and coordination of programmes
  - 2) Identification, development and financing of EE projects in municipalities.
  - 3) Improve the knowledge base of municipal decision makers.

In your opinion, what is the most significant accomplishment of the project? Which project actions are most effective in terms of meeting energy saving targets? Which are less effective?

3. Are national stakeholders (municipal governments, building owners, financial institutions, etc.) accepting and actively participating in the project? Are stakeholders informed of progress? Do the stakeholders have an adequate role in project decision-making?

4. Have there been clear indications of increased energy efficiency as a result of the project? Has public awareness on climate change and energy efficiency increased as a result of the project?

5. Has the project created long-term, sustainable benefits for Hungary? Were there links between this project and other interventions in the building/energy sector? What project-created measures or actions (legislation, institutions, web-sites, etc.) continue to provide benefits?

6. Has the project encountered problems with its implementation? If so, has Adaptive Management been applied to meet the challenges?

7. Which lessons and good practice have emerged from the project? Are these relevant for similar projects outside of Hungary?

8. Do you have any further comments of suggestions?

### Interview Outline for Staff of the Energy Centre Hungary (Monday, March 2, 2009)

1. The grounding of the Energy Centre Hungary was one of the outputs of the project? How has the end of the project affected its operation? Do you continue to conduct audits? on a cost-sharing basis? Are there other funding sources? Is there a solid future for the Centre? Is it involved in further legislation development? Will the Web-site be updated?

2. Considering CO2 emission benefits; from first review of the provided documents it seems the benefits are calculated:

- a) exclusively on the basis of cost-sharing audits which have lead to realized or soon to be realized implementations (there are no other sources which are considered)
- b) based on a 20 year lifecycle for EE measures
- c) does <u>not</u> include EE pipeline rehabilitations which result from the dynamic created by the project (10 year indirect savings?) Can we meet the 300 000 tCO2 goal if we consider these?

3. Have legislative changes resulted from the project? Which? Was there a standard EE audit form or auditor certification in place when the project started? and now?

4. Do you see opportunities to develop certain aspects of the project further? Are there positive aspects which cannot continue now that the project is closed?

5. Have the recommendations of the mid term evaluation been taken into consideration?

- a) concentration on realization (fast-tracking projects, focusing on larger municipalities)
- b) indicators improved for easy tracking and adaptive management
- c) monitoring of progress (was a monitoring team established?)
- d) benchmarking of monitoring, training and funding for municipalities
- e) less focus on renewable energy

6. Can the project be applied in other countries? What changes if any are recommended?

7. In the final PIR (p. 19) there is a comment that 'most of the EE investments have been Grants and as such investors have often used these funds for investments with longer payback periods.' Please explain about the sources of grants and the types of investments with longer payback periods referred to.

8. What effects have been achieved through training of municipal staff? Has there been positive results (implemented EE projects outside the scope of the project or improved energy management at the municipal level?) Has this been quantified and included in the CO2 benefits.

# Annex 7: Analysis of Realized Investment Project Data

The Energy Centre M&E team supplied the project-by-project breakdown of investment projects implemented during the term of the UNDP/GEF project. This includes projects which were completed, ongoing (expected to be completed within 9 months of the project close) and planned for immediate implementation (again expected to be under implementation within 9 months of the project close). The data made available is summarized in the following chart.

	No. of invest- ment projects	Project Investment Costs (million USD)	Energy Saving according to Audits/FS GJ/year	Lifecycle C02 Emission Reduction (tC02)
Completed projects				
	53	10,33	110 015	194 725
Ongoing projects				
(completion in 2009 foreseen)	64	19,44	50 556	84 270
Planned projects				
(start in 2008/2009 foreseen)	13	5,68	19 055	26 100
Total investment projects	130	35,45	179 626	305 095

Project Investment costs were recorded from project reports sent by the municipalities to the Energy Centre. These reports were required in order to receive the maximum support (up to 80%) from the UNDP/GEF Audit/Feasibility fund. Sources of financing were not recorded and end costs were not verified within the project.

Energy Savings resulting from the project investment were recorded according to the figures in the Audits and Feasibility Studies. These were prepared by sub-contracted and certified Auditors. Although municipalities were required under the UNDP/GEF Audit/Feasibility Study funding scheme to report energy consumptions prior to and up to 3 years after the project implementation, because of the short time-span of the UNDP/GEF project it was generally impossible to systematically verify the Energy Savings expected in the Audits and Feasibility Studies against actual consumptions. However, based on discussions with municipalities during the Final Evaluation (see annex 4) the expected energy savings in realized projects have been achieved and exceeded.

During the course of the UNDP/GEF project, the M&E team visited some 20 municipalities to verify implementation of measures.

Lifecycle CO2 emission reductions are calculated according to the following formula;

Energy Savings (GJ/year) x CO<sub>2</sub> intensity for energy mix (1.7 tCO<sub>2</sub>/GJ) x 20 year lifecycle

The Audit and Feasibility Study Fund was used to partially finance 209 Audits and 53 Feasibility Studies. From these, a total of 130 investment projects were initiated in 90

municipalities. Implemented projects were primarily rehabilitations of municipal office buildings, cultural buildings, schools and kindergartens and included indoor lighting rehabilitation (over 40 projects), heating system rehabilitation (over 50 projects), thermal insulation and window exchange (over 45 projects) and a few projects for Renewable Energy systems (biogas, geothermal and solar). The average project size was USD 273 000 whereby the 10 most costly projects had budgets exceeding USD 1 million each and together accounted for almost 60% of the total Project Investment Costs.

The following table summarizes the Investment Project data supplied by the M&E team.

	aud or		planned ongoing or	USD	lifecycle tCO <sub>2</sub>
Municipality	FS	Short description of the project	complete	Investment.	saved
B.A.Z. County	af	Municipality building change of doors and windows	0	207212	1043
Babócsa	а	Primary school change of doors and windows	с	87273	798
Bács-Kiskun County	f	Heating awareness raising among the workers	0	11758	0
Bács-Kiskun County	f	Windows' change	o	7394	0
Bács-Kiskun County	f	Windows' gap insulation	с	1333	57
Bács-Kiskun	-		-		
County	f	Gap insulation of the windows	с	6545	78
Bács-Kiskun County	f	Biomass-solar collector supported heating installation	р	197727	125
Bács-Kiskun Countv	f	Heating modernisation	с	5091	2327
Bács-Kiskun		Rationalisation of the heating system by applying heat pumps			
County	f	and solar collectors	р	233333	4508
Bacs-Kiskun County	f	Heating modernisation with heat pumping system	р	1581212	8590
Bács-Kiskun County	f	Heating modernisation in the psychiatric home	с	6000	10114
Balatonalmádi	f	Heating modernisation of the store-building with own boiler	0	12297	122
Békéscsaba	f	Change of doors and windows	n	436364	4723
Békéscsaba		CHP plant reconstruction of heating and hot water supply	р С	1151515	14820
Berzence	а	Window-change and fascade insulation of the elementary and music school	0	90242	329
		Water supply modernisation of the kindergarten & elementary	•		010
Bodrog-Osztopán	а	school	0	1333	0
Böhönye	а	modernisation	0	606	6
Budapest		Lighting modernisation of the classrooms	0	20545	149
Budapest III	af	Change of doors and windows, external thermal insulation	с	1660606	23244
Budapest VII	f	Lighting modernisation of the pension's house	0	272061	0
Budapest XIV	а	Windows' changing, insulation & heating reconstruction	0	20606	0
Budapest XIV	а	nodernisation of the heating and cooling system with geothermic energy usage; win	ро	1707636	2520
Budapest XIX	f	Reconstruction of heating and cooling system of the municipality office building	р	1363636	7880
Budapest XV	f	Lighting modernisation	0	12788	3
Budapest XV	а	Lighting modernisation	0	6061	4
Budapest XV	f	Hot water supply reconstruction	с	5939	82
Budapest XV	f	Wall modernisation, modernisation of the informatics park	с	19758	468
Budapest XXI	f	Water saving	с	0	0
Budapest XXI	f	Heating reconstruction in the swimming-pool	с	1806	14
Budapest XXI	f	Lighting modernisation of the Laitha László elementary school	с	624	22
Budapest XXI	f	Windows' change in the Apraiafalva kindergarten	c	3576	107
Bük	a	Lighting modernisation of the school	0	958	13
Celldömölk	a	Lighting modernisation of the kindergarten	0.0	2424	.0

Csákánydoroszló	а	Lighting modernisation in the mayor's office	с	988	0
Csengőd	а	Energetic renovation, change of windows in the culture centre and library	0	17879	163
Csombárd-Hetes	а	Lighting modernisation in the elementary school and kindernarten	c	19394	0
Csombárd-Hetes	ŭ	Lighting modernisation	0	2545	4
Csombárd-Hetes		Reconstruction of heating system (change of boiler)	0	52727	1400
		Application of geothermal energy, reconstruction of indoor			
Csombárd-Hetes	а	lighting, heating and hot water supply	0	839988	11880
Csombard-Hetes	а	Lighting modernisation of the child-care house at	0	3509	8
Csombárd-Hetes	а	Hódmezővásárhely	0	1891	13
Csombárd-Hetes	а	Boiler change in the Kastély home	0	42976	15
Csombárd-Hetes	а	Lighting modernisation in The Batsányi secondary school	0	2121	22
Csombárd-Hetes	а	Lighting modernisation	0	1727	72
Csombárd-Hetes	а	Windows' change in the Zsoldos F. secondary school	0	2545	80
Csombárd-Hetes	а	Ópusztaszer	o	8327	80
Csombárd-Hetes	а	Lighting modernisation	0	2327	131
Coombérd Llotos		Lighting modernisation in the Bedő Albert secondary school and		770	75
Csombard-Hetes	a	nostel	0	170	/5
CSOPOTNEK	а	Lighting modernisation in the elementary school of Magyarlak	C	43030	10
Csörötnek	а	and kindergarten of Csörötnek	с	33333	33
Csorvás	f	Lighting modernisation	р	364	45
Csorvás	а	Heating reconstruction, windows' insulation and lighting modernisation in the kindergarten	0	1939	102
Dánszentmiklós	а	Lighting modernisation	с	364	5
Derecske	f	Heating modernisation in the culture house and library	с	1212	0
Dombóvár	f	School modernisation	с	28303	233
Dombóvár	af	Change of doors and windows, external thermal insulation in primary school.	с	48545	249
Dombóvár	af	Change of doors and windows, external thermal insulation in primary school.	с	75758	386
Dunabogdány	а	Lighting modernisation in the sport hall and heating control in the	c	1521	0
Erdőkertes	a	Change of doors and windows, external thermal insulation	c	260606	3354
Fót	а	Reconstruction of indor lighting and heating	p	31212	935
Gödöllő	f	Heating reconstruction in the Petőfi Sándor elementary school	0	15758	155
Gödöllő	f	Heating reconstruction in the social institutions	0	39394	514
Cödöllő	f	Energy and heating rationalisation in the Petőfi Sándor culture	0	16070	624
Godolio	1	Health Centre change of doors and windows, external thermal	0	10970	024
Görgeteg	а	insulation	0	12121	161
Gyöngyös	а	Reconstruction of heating, external thermal insulation	С	1323030	9435
Győrség	f	Windows' change	С	3636	10
Hárskút	а	Hot-water supply of the kindergarten's kitchen by solar collectors	0	14182	5
Hárskút	а	biomass boiler	р	23152	239
Hernád	а	School: doors, windows; external thermal insulation; reconstruction of heat/hot water	р	568667	4291
Hódmezővásárhely	а	Thermal water utilization for heating pool and office	0	126182	1477
Hódmezővásárhely	а	Indoor lighting reconstruction	с	2261	1494
Hódmezővásárhely	а	Window-change of the dining hall of the Th. No.1	с	970	3
Igal	f	Windows' changing in the mayor's office and wedding register office	0	15212	86
Inke	а	heating system reconstruction	0	0	0
Szolnok	f	Building No.1 and No.2.	с	297394	1632
Jász-Nagykún-	£	Reconstruction of heating system in Pusztataksony mental		252452	2045
SZOINOK	T	External thermal insulation, reconstruction of heating and hot	C	353152	3245
Kapuvár	а	water supply	с	448485	5772
Karád	а	External thermal insulation, reconstruction of heating and hot	С	256061	662

Kasskenéd         Lybing modernisation in the sport hall         c         14545         502           Kismaros         a         and heating system in otors & windows, reconstr. of lighting         c         17779         73           Kismaros-Szokoja         a         Heating reconstruction of the Gesztenys kindergarten         c         1567         70           Kuta         a         Modernisation of the Castzenys kindergarten         c         60033         60           Mayroritäd         a         Wodernisation of the Castzenys kindergarten         c         60033         60           Mayroritäd         a         Modernisation of the Castzenys kindergarten         c         60033         60           Mayroritäd         a         Bacomatruction of the heating system in vocational secondary school         c         25333         940           Merrito         a         Brimary schood charge of doors and windows         c         360666         778           Martio         a         Reconstruction of the mayor's office         p         0         208596         0           Monck         a         Reconstruction of the mayor's office         p         0         4484         360           Maryoldin         a         Reconstruction of the mayor's office			water supply			
Kimaracs         Comm. big: exchange dors & windows, reconstr. of lighting kimaracs. Szokolwa         Intering reconstruction of the mayor's office         C         17879         73           Kimaracs. Szokolwa         a.         Heating reconstruction of the mayor's office         c         60033         60           Kusta         a.         Modernisation of the culture house         c         60033         60           Magyaratd         a.         w         c         68044         200           Martfü         a.         w         c         68044         200           Martfü         a.         Reconstruction of heating system in vocational secondary school         c         44727         478           Martfü         a.         feants/houses)         c         30394         4341           Martfü         a.         gasis         640014         300         4341           Martfü         a.         Community house change of doors and windows         c         11676         320           Marcle         a.         Community house change of doors and windows         c         118789         336           Marcle         f         Reconstruction of theating and hou water supply in primary school         c         118790         336	Kecskemét		Lighting modernisation in the sport hall	с	14545	502
Kamaros-Szekolya         a         Heating reconstruction of the mayor's office         c         1576         14           Kunas         a         Modernastion of the culture house         c         68037         70           Martío         a         Modernastion of the culture house         c         68848         200           Martío         af         Reconstruction of healing system in vocational secondary chool c         44727         478           Martío         af         Reconstruction of the healing syst. (electricity to denote the system in vocational secondary school c         22333         940           Mende         a gas         Community house change of doors and windows         c         11576         320           Mextegnyod         a         Community house change of doors and windows         c         11576         320           Miskolc         f         Reconstruction of heating and hot water supply         o         208909         0           Miskolc         f         Beat insulation of the culture house         p         0         48           Nagykorios         a         Reconstruction of heating and hot water supply in primary school         c         103030         1328           Nagykorios         a         Reconstruction of heating anyter wore sthouse	Kismaros	а	Comm. bldg: exchange doors & windows, reconstr. of lighting and heating system.	с	17879	73
Koma'oom         I         Heating modernisation of the Calura house         C         63897         70.           Kutas         a         Modernisation of the culure house         c         60393         60.           Martfü         af         Reconstruction of heating system in vocational secondary school         c         44727         478.           Martfü         af         Reconstruction of heating syst. (electricity to         0         33.         440.           Mende         a         Qas)         Community house change of doors and windows         c         2333.         440.           Merney         a         Primary school change of doors and windows         c         11576.         320.           Messtegnyó         a         Community house change of doors and windows         c         12712.         36.           Monka         a         Reconstruction of heating and hot water supply         o         208060.         10.           Mayaktiló         f         Heatingander mayor's office         p         0         1286.         10.           Nagyktörid         a         Reconstruction of heating and hot water supply in primary school.         c         103930.         1326.           Nagyktörids         a         Reconstruction on sintwore suppl	Kismaros-Szokolya	а	Heating reconstruction of the mayor's office	с	1576	14
kutas         a         Modernisation of the outure house         c         603033         60.           Magyaratid         a         w         c         88848         200           Martiu         af         Reconstruction of heating system in vocational secondary school         c         44727         478.           Martiu         af         (teanist houses)         c         25333         940           Mende         a         qasi         (teanist houses)         c         33394         44341           Merny         a         Primary school change of doors and windows         c         17716         320           Mesztegnyö         a         Community house change of doors and windows         o         208069         0           Morkaha         a         Reconstruction of heating and houster supply         o         208069         0           Morahidom         a         Reconstruction of the anyor's office's baler         p         0         48           Nagykörös         a         Reconstruction of heating and houster supply in primary school         c         103030         1326           Nyrégyháza         a'syst.; new dis and windows in Kindergarten, Primary School,         c         70758         316           Orobi	Komárom	f	Heating modernisation of the Gesztenyés kindergarten	с	3697	70
Magyaritid         a         w         c         88848         200           Martíü         df         Reconstruction of heating system in vocational secondary school         c         44727         478           Martíü         df         Heating system reconstruction using thermal water in 3 hotels         c         25333         G40           Mende         a         gas         Gf         23394         4341           Merny         a         Primary school change of doors and windows         c         60066         78           Mesclegnyó         a         Community house change of doors and windows         c         60066         78           Miskolc         f         Reconstruction of heating and hot water supply         o         208909         0           Martial         a         Reconstruction of the anyor's office         p         0         4381           Nagykórös         a         Reconstruction of the may's office's boler         c         149301         3328           Nagykórös         a         Reconstruction of the anyor's office's boler         c         149301         3328           Nysykórös         a         Reconstruction or lighting in vocating anyot song a	Kutas	а	Modernisation of the culture house	с	60303	60
Martio         af         Reconstruction of heating system in vocational secondary school c         44727         44727         44727         44727         44727           Martin         af         (tenants' houses)         c         2333         940           Mende         a         gas)         disting system reconstruction of the heating syst. (electricity to memory school change of doors and windows         c         11576         320           Mescle         f         Reconstruction of Indoor lighting in vocational secondary school         c         7212         36           Monok         a         Community house change of doors and windows         o         208000         0           Marcha         a         Fascade heat insulation of the culture house         o         128060         10           Nagykelind         f         Heating adds fast school fast schoo	Magyaratád	а	w	с	88848	200
Martiü         Heating system reconstruction using thermal water in 3 hotels         C         25333         940           Mende         a         qass	Martfű	af	Reconstruction of heating system in vocational secondary school	с	44727	478
Mende         a         assist         reconstruction of the nearing syst. (electricity to a         c         33334         4341           Menye         a         Primary school change of doors and windows         c         11576         320           Mesztegnyő         a         Community house change of doors and windows         o         60606         78           Miskolc         f         Reconstruction of indoor lighting in vocational secondary school         c         7212         36           Monok         a         Reconstruction of the duiture house         o         120806         0           Mayberki         f         Heat insulation of the mayor's office         p         0         48           Nagykótio         a         Reconstruction of heating and hot water supply in primary school         c         143031           Nagykótio         a         Reconstruction of heating and hot water supply in primary school         c         103030         1326           Nigykótio         a         Reconstruction of heating and hot water supply in primary school         c         600661         97733           Sinvestments-new indoor lighting in vocational secondary school         c         600061         97733         316           Oroshaz         f         Electric modernisation in	Martfű	af	Heating system reconstruction using thermal water in 3 hotels (tenants' houses)	с	25333	940
Mernye         a         Primary school change of doors and windows         c         11576         320           Mestegnyó         a         Community house change of doors and windows         o         60006         78           Miskolc         f         Reconstruction of indoro lighting in vocational secondary school         c         7212         38           Monok         a         Reconstruction of heating and hot water supply         o         208909         0           Morahalom         a         Fascade heat insulation of the culture house         o         128006         0           Nagykélit         f         Lighting modernisation in two institutes         c         2788         341           Nagykélitos         a         Reconstruction of the mayor's office's bolier         c         149091         396           Nylegyháza         a         Reconstruction of heating and hot water supply in primary school         c         103030         1326           Orbottyán         a         Comport doors and windows in Kindergarten. Primary School         c         73330         611           Órbottyán         a         Community Centre         o         196727         2376           Órsoldaz         f         Iestafing condernisation in the Boysugar kindergarten	Mende	а	gas)	с	39394	4341
Mesztegnyő         a         Community house change of doors and windows         o         606066         78           Miskoic         f         Reconstruction of indoor lighting in vocational secondary school         c         7212         36           Monok         a         Reconstruction of the any or's office         p         0         208909         0           Márahalom         a         Fascade heat insulation of the mayor's office         p         0         128006         0           Nagykörös         a         Reconstruction of the mayor's office's boiler         c         14909         396           Nagykörös         a         Reconstruction of the mayor's office's boiler         c         103030         1326           Nyiregyháza         af         Reconstruction of the mayor's office's boiler         c         606061         91733           Örbottyån         a         Reconstruction of the mayor's office's boiler         c         73030         611           Örbottyån         a         Community Centre         c         73030         611           Örbottyån         a         Community Centre         o         0         0         0           Orsetaza         f         Installation in the Gyparos spa         c <td< td=""><td>Mernye</td><td>а</td><td>Primary school change of doors and windows</td><td>с</td><td>11576</td><td>320</td></td<>	Mernye	а	Primary school change of doors and windows	с	11576	320
Miskolc         f         Reconstruction of indoor lighting in vocational secondary school         c         7.212         36           Monok         a         Reconstruction of heating and hot water supply         o         206909         0           Morkahalom         a         Fascade heat insulation of the culture house         o         128606         0           Nagyberki         f         Heat insulation of the mayor's office's bolier         c         2788         341           Nagyberki         f         Lighting modernisation in two institutes         c         2788         341           Nagyberki         a         Reconstruction of heating and hot water supply in primary school         c         103030         1328           Nyrregyhaza         a         Reconstruction of heating and hot water supply in primary school         c         79758         316           Orbottyán         a         Compo of doors and windows in Kindergarten, Primary School,         c         73030         611           Órbottyán         a         Compo of doors and windows in Kindergarten         c         90         196727         2376           Orceatány         af         Kindergarten heating system reconstruction         c         9812         360           Paks         f	Mesztegnyő	а	Community house change of doors and windows	0	60606	78
MonokaReconstruction of heating and hot water supplyo2089090MorahalomaFascade heat insulation of the culture houseo128660NagyberkifHeat insulation of the mayor's office's boilerp048NagykälöfLighting modernisation in two institutesc2788341NagykörösaReconstruction of heating and hot water supply in pirnary schoolc1030301326NyiregyházaafSinvestments-new indoor lighting, reno.of DH supply, heat/HWc60606191733NyiregyházaafSinvestments-new indoor lighting, reno.of DH supply, heat/HWc60606191733OcsódaWindows.c73030611OrbottyánaCommunity Centreo1967272376OrbottyánaCommunity Centreo19220PaksfIstalation of door-closer in the clinico19220PaksfHeating controller installation in the Napsugár kindergartenc11520PaksfStetlement of new metering systemo97820PaksfLighting modernisation in the Banedek Elek kindergarteno193972RáckeveaLighting modernisation of the cultic fillice and the medical286062265SarisápfLighting modernisation of the central surgery, new windows, indoor28648628457SatoraljadijhelyfReconstruction of indoor l	Miskolc	f	Reconstruction of indoor lighting in vocational secondary school	с	7212	36
MórahalomaFascade heat insulation of the culture houseo1286060NagyberkifHeat insulation of the mayor's officep048NagykálrósaReconstruction of the mayor's office's boilerc140091396NagykórósaReconstruction of heating and hot water supply in primary schoolc1030301326Nyíregyházaafsyst., new dis and wdwsnew doors andp79758316ÓcsódawindowsMindergarten No.2.HW supply reconstruction, new doors andp79758316ÓrbottyánaConarge of doors and windows in Kindergarten, Primary School,c73030611ÓrbottyánaConarge of doors and windows in Kindergarten, Primary School,c73030611ÓrbottyánaElectric modernisation in the Gyoparos spac000OroszlányafKindergarten heating system reconstructionc98182360PaksfInstallation of door-closer in the clinico11820PaksfLightling modernisation in the Napsugár kindergarteno11820PaksfLightling modernisation in the Benedek Elek kindergarteno118211RáckeveaLightling modernisation of the cable-TV roomc118211RáckeveaLightling modernisation in the Benedek Elek kindergarteno1193972SarkadfI. Beating and beating systemc<	Monok	а	Reconstruction of heating and hot water supply	0	208909	0
NagyberkifHeat insulation of the mayor's officep048NagykôrósaReconstruction of the mayor's office's bolierc2788341NagykôrósaReconstruction of heating and hot water supply in primary schoolc1030301326Nyfregyházaaf syst:, new dra and wdwsc60606191733OcsodaKindergarten No.2.HW supply reconstruction, new doors andp79756316ÖrbottyánaChange of doors and windows in Kindergarten, Primary School,c73030611ÖrbottyánaCommunity Centreo1967272376OroszlányafKindergarten heating system reconstructionc98182360PaksfInstallation of door-closer in the Clinico11620PaksfInstallation of new metering system reconstructionc11520PaksfSettlement of new metering systemo977820PaksfLeictric modernisation in the Benedek Elek kindergarteno11520PaksfIstiliting modernisation in the Groper softiceo22880RackeveaLighting modernisation of the cable-TV roomc118211RackeveaLighting modernisation of the cable-TV roomc128280SarisápfIstilition of indoor lighting of municipality institutionsc128662295SarisápfReconstruction of indoor lighting	Mórahalom	а	Fascade heat insulation of the culture house	0	128606	0
NagykållófLighting modernisation in two institutesc2788341NagykörösaReconstruction of the tangy and hot water supply in primary schoolc149091396NagykörösaReconstruction of heating and hot water supply in primary schoolc1030301326NyiregyházaafSinvestments-new indoor lighting, reno.of DH supply, heat/HWc60006191733ÓcsödaKindergarten No.2.HW supply reconstruction, new doors andp79758316ÓrbottyánaCommunity Centreo1967272376ÓrosházafElectric modernisation in the Gyoparos spac00OrostányafKindergarten heating system reconstructionc98182360PaksfInstallation of door-closer in the clinico11820PaksfSettlement of new metering systemo97820PaksfLighting modernisation in the Napsugár kindergarteno193322PannonhalmafElectric modernisation in the Benedek Elek kindergarteno193972RáckeveaWindows' change of the mayor's officeo288062295SarkadHeating construction of the central surgery, new windows, indoorp280062295SarkadaHeating construction of the central surgery, new windows, indoorg3386SátrisápfReconstruction of indoor lighting of municipality institutionsc1486445<	Nagyberki	f	Heat insulation of the mayor's office	р	0	48
NagykörösaReconstruction of the mayor's office's boilerc1490913996NagykörösaReconstruction of heating and hot water supply in primary schoolc1030301326Nyfregyhåzaafsyst.: new indoor lighting, reno.d DH supply, heat/HWc60006191733ÖcsödaWindows.p79758316ÖrsödvaaChange of doors and windows in Kindergarten, Primary School,p73030611ÖrbötlyånaCommunity Centreo1967272376OroshåzafElectric modernisation in the Gyoparos spac000PaksfInstallation of door-closer in the clinico18820PaksfInstallation of door-closer in the clinico18820PaksfLighting modernisation in the Napsugár kindergartenc11520PaksfLighting modernisation in the Benedek Elek kindergarteno9193372RáckeveaLighting modernisation in the office buildingo2816228PannonhalmafElectric modernisation of the cable-TV roomc148280SárisápfInstitutec28666295SarkadaLighting modernisation of the cable-TV roomc148211RáckeveaLighting modernisation of the cable-TV roomc148211RáckeveaLighting modernisation of the cable-TV roomc1482 </td <td>Nagykálló</td> <td>f</td> <td>Lighting modernisation in two institutes</td> <td>с</td> <td>2788</td> <td>341</td>	Nagykálló	f	Lighting modernisation in two institutes	с	2788	341
NagykörösaReconstruction of heating and hot water supply in primary schoolc1030301326Nyfregyházaafsyst. new dis and wdwsc60606191733Ocsódawindows.windows.p79765OrbottyánaChange of doors and windows in Kindergarten, Primary School,c73030OrbottyánaCommunity Centreo1967272376OrosházafElectric modernisation in the Gyoparos spac00OrosházafHating system reconstructionc981823600PaksfInstallation of door-closer in the clinico11620PaksfSettlement of new metering systemo977620PaksfSettlement of new metering systemo978220PaksfLighting modernisation in the Banedek Elek kindergarteno193972RáckeveaLighting modernisation of the cable-TV roomc18221RáckeveaLighting modernisation of the central surgery, new windows, indoorp228563398SátráahaBarling of municipality office and the medicalc28406249457SátradajúhelyfReconstruction of indoor lighting of municipality institutionsp23353SátradajúhelyfReconstruction of hador lighting of municipality institutionsc1486645SátradajúhelyfReconstruction of hador lighting of municipality institutions<	Nagykőrös	а	Reconstruction of the mayor's office's boiler	с	149091	396
Sinvestments-new indoor lighting, reno. of DH supply, heat/HWc60000191733OcsödaKindergarten No.2. HW supply reconstruction, new doors and windows.p79758316OcsödaWindows.c730306111ÖrbottyånaCommulty Centreo1967272376OrosházafElectric modernisation in the Gyoparos spac000OrosházafElectric modernisation in the Gyoparos spac0186220PaksfInstallation of door-closer in the clinico18220PaksfHeating controller installation in the Napsugár kindergartenc11520PaksfSettlement of new metering systemo97820PaksfLighting modernisation in the Benedek Elek kindergarteno4503222PanonhalmafElectric modernisation of the cable-TV roomc18221RáckeveaLighting modernisation of the cable-TV roomc286062295Sárisápfinstitutec286062295SárisápfReconstruction of the central surgery, new windows, indoor2864651122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc286451322SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc126763613956Somogy CountyfReconstruction of indoor lig	Nagykőrös	а	Reconstruction of heating and hot water supply in primary school	с	103030	1326
Invince Notes CosodaSyst., new dis and wows and windows.c00000191733Ocsod Cosod A OrbottyánaSindergarten No.2:HW supply reconstruction, new doors and windows.p79758316Örbottyán OrosházaaCommunity Centreo1967272376Orosháza PaksfElectric modernisation in the Gyoparos spac000Oroszlány PaksfElectric modernisation in the Gyoparos spac000PaksfInstallation of door-closer in the clinico188200PaksfHeating controller installation in the Napsugár kindergartenc11520PaksfSettlement of new metering systemo97620PaksfLighting modernisation in the Benedek Elek kindergarteno450322PannonhalmafElectric modernisation of the cable-TV roomc1821RáckeveaLighting modernisation of the cable-TV roomc286062295SarkadalightingfReconstruction of the central surgery, new windows, indoora3036474SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc145654511122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp28061583Somogy CountyfReconstruction of indoor lighting of municipality institutionsc	Nyírogyháza	of	5 investments-new indoor lighting, reno.of DH supply, heat/HW		606061	01722
Cocsodawindows.windows.p79758316OrbottyánaChange of doors and windows in Kindergarten, Primary School, Cc73030611ÓrbottyánaCommunity Centreo1967272376OrosházafElectric modernisation in the Gyoparos spac00OroszlányafKindergarten heating system reconstructionc98182360PaksfInstallation of door-closer in the clinico11520PaksfSettlement of new metering systemo97820PaksfSettlement of new metering systemo97820PaksfLighting modernisation in the Benedek Elek kindergarteno450322PannonhalmafElectric modernisation of the cable-TV roomc18821RáckeveaLighting modernisation of the cable-TV roomc286062295Sárisápfinstituteo266062295SarkadaLighting modernisation of the municipality office and the medicalo282636SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc30364SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc30364Sónogy CountyfReconstruction of indoor lighting in Health Service Directoratec30364Somogy CountyfReconstruction of indoor lighting in three institutions<	Nyiregynaza	a	Kindergarten No.2.HW supply reconstruction, new doors and	C	000001	91733
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Órbottyánao1967272376OrosházafElectric modernisation in the Gyoparos spac00OroscházaafKindergarten heating system reconstructionc98182360PaksfInstallation of door-closer in the clinico18220PaksfHeating controller installation in the Napsugár kindergartenc11520PaksfSettlement of new metering systemo97820PaksfLighting modernisation in the Benedek Elek kindergarteno450322PannonhalmafElectric modernisation of the cable-TV roomc18221RáckeveaLighting modernisation of the cable-TV roomc2618280RáckeveaLighting modernisation of the municipality office and the medical institutec286662295Sarkadalightingof municipality institutionsc14565451122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc26061583Somogy CountyfReconstruction of indoor lighting of municipality institutionsc126763613956Somogy CountyfReconstruction of indoor lighting in three institutionsc126763613956Somogy CountyfReconstruction of indoor lighting in Health Service Directorate <td>Őrbottyán</td> <td>а</td> <td>Community Centre</td> <td>с</td> <td>73030</td> <td>611</td>	Őrbottyán	а	Community Centre	с	73030	611
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RáckeveaLighting modernisation in the office buildingo193972RáckeveaWindows' change of the mayor's officeo2618280Sárisápfinstitutec286062295SarkadaHeat reconstruction of the central surgery, new windows, indoorp823636398SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc14565451122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Kindergarten, primary school and children's homeo26061583Somogy CountyfReconstruction of heating system in three institutionsc126763613956Somogy CountyfReconstruction of heating system in three institutionsc90917SopronfReconstruction of indoor lighting in Health Service Directoratec400050SulysápaLighting modernisation in the elementary schools andc946676SulysápaReconstruction of indoor lighting offices, culture centre, elementaryp114848905SzarvasaElectric modernisation in the laboratoryp436474SulysápaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratory </td <td>Pannonhalma</td> <td>f</td> <td>Electric modernisation of the cable-TV room</td> <td>с</td> <td>182</td> <td>1</td>	Pannonhalma	f	Electric modernisation of the cable-TV room	с	182	1
RáckeveaWindows' change of the mayor's officeo2618280SárisápfHeating modernisation of the municipality office and the medical institutec286062295Sarkadalightingp823636398SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc14565451122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Somogy CountyfReconstruction of heating systemo26061583Somogy CountyfReconstruction of heating system in three institutionsc1267636113956Somogy CountyfReconstruction of indoor lighting in Health Service Directoratec90917SopronfReconstruction of indoor lighting in Health Service Directoratec946676Súlysápakindergartensc946676new Lighting modernisation in the elementary schools andc946676SilysápaElectric modernisation in the laboratoryp436474SúlysápaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp436474	Ráckeve	а	Lighting modernisation in the office building	0	1939	72
SárisápfInstitutec280062295Sarkadalightingp823636398SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc14565451122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Somogy CountyfReconstruction of heating systemo26061583Somogy CountyfReconstruction of indoor lighting in three institutionsc126763613956Somogy CountyfReconstruction of indoor lighting in Health Service Directoratec90917SopronfReconstruction of indoor lighting in Health Service Directoratec946676SülysápaLighting and heating offices, culture centre, elementaryp114848905SzarvasaElectric modernisation in the laboratoryp436474SúlysápaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp436474SzarvasaEnergy efficiency improvement in three institutionsc1183032931SzarvasaEnergy efficiency improvement in 14 municipality buildingo8000006057	Ráckeve	а	Windows' change of the mayor's office	0	26182	80
SourceImage: construction of the central surgery, new windows, indoorDescriptionDes	Sárisán	f	Heating modernisation of the municipality office and the medical	c	28606	2295
Sarkadalightingp823636398SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsc14565451122SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp c88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Somogy Countyfreconstruction of heating systemo26061583Somogy CountyfReconstruction of heating system in three institutionsc126763613956Somogy CountyfReconstruction of heating system in three institutionsc90917SopronyfReconstruction of indoor lighting in Health Service Directoratec400050SopronfReconstruction of indoor lighting in Health Service Directoratec946676Sülysápakindergartensp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp3607272727870SzarvasaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057			Heat reconstruction of the central surgery, new windows, indoor	0	20000	2200
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SátoraljaújhelyfReconstruction of indoor lighting of municipality institutionsp c88448523457SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Somogy CountyfKindergarten, primary school and children's homeo26061583Somogy CountyfReconstruction of heating systemo26061583Somogy Somogy CountyfReconstruction of heating system in three institutionsc126763613956SomogysámsonaLighting modernisation in the elementary schoolc90917SopronfReconstruction of indoor lighting in Health Service Directoratec400050SülysápaLighting modernisation in the elementary schools and kindergartensc946676SülysápaElectric modernisation in the laboratory schools and kindergartensp114848905SzarvasaElectric modernisation in the laboratory hostelsp436474SzarvasaElectric modernisation in the laboratory hostelsp436474SzarvasaElectric modernisation in the laboratory hostelso7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Sátoraljaújhely	f	Reconstruction of indoor lighting of municipality institutions	с	1456545	1122
SoltvadkertaWindows' change and heat isolation in the Bocskai kindergartenc3036474Somogy CountyfKindergarten, primary school and children's homeo26061583Somogy CountyfReconstruction of heating system in three institutionsc126763613956Somogy SámsonaLighting modernisation in the elementary schoolc90917SopronfReconstruction of indoor lighting in Health Service Directoratec400050Sülysápakindergartensc946676Sülysápakindergartensc946676SulysápaElectric modernisation in the laboratoryp114848905SzarvasaElectric modernisation in the laboratoryp436474SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Sátoraljaújhely	f	Reconstruction of indoor lighting of municipality institutions	рс	884485	23457
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Somogy CountyfReconstruction of heating system in three institutionsc126763613956SomogysámsonaLighting modernisation in the elementary schoolc90917SopronfReconstruction of indoor lighting in Health Service Directoratec400050SülysápaLighting modernisation in the elementary schools and kindergartensc946676Sülysápanew Lighting and heating offices, culture centre, elementary schools and kindergartensp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in three institutionsc1183032931SzázhalombattaaEnergy efficiency improvement in 14 municipality buildingo8000006057	Somogy County	f	reconstr.heating system	0	26061	583
SomogysámsonaLighting modernisation in the elementary schoolc90917SopronfReconstruction of indoor lighting in Health Service Directoratec400050SülysápaLighting modernisation in the elementary schools and kindergartensc946676Sülysápanew Lighting and heating offices, culture centre, elementary schools and kindergartensp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaElectric modernisation in the laboratoryp7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Somogy County	f	Reconstruction of heating system in three institutions	с	1267636	13956
SopronfReconstruction of indoor lighting in Health Service Directoratec400050SülysápaLighting modernisation in the elementary schools and kindergartensc946676Sülysápanew Lighting and heating offices, culture centre, elementary schools and kindergartensp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaLighting and electricity supply modernisation of highschool's hostelso7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931	Somogysámson	а	Lighting modernisation in the elementary school	с	9091	7
SülysápaLighting modernisation in the elementary schools and kindergartensc946676Sülysápanew Lighting and heating offices, culture centre, elementary schools and kindergartensp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaLighting and electricity supply modernisation of highschool's hostelso7272727870SzázhalombattaImage efficiency improvement in three institutionsc1183032931	Sopron	f	Reconstruction of indoor lighting in Health Service Directorate	с	4000	50
Sülysápanew Lighting and heating offices, culture centre, elementary pp114848905SzarvasaElectric modernisation in the laboratoryp436474SzarvasaLighting and electricity supply modernisation of highschool's hostelso7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Sülysáp	а	Lighting modernisation in the elementary schools and kindergartens	с	94667	6
SzarvasaElectric modernisation in the laboratoryp436474Lighting and electricity supply modernisation of highschool's hostelso7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Sülysáp	а	new Lighting and heating offices, culture centre, elementary schools and kindergartens	р	114848	905
SzarvasaLighting and electricity supply modernisation of highschool's hostelso7272727870SzázhalombattaEnergy efficiency improvement in three institutionsc1183032931SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Szarvas	а	Electric modernisation in the laboratory	р	4364	74
SzázhalombattaEnergy efficiency improvement in three institutionso1212121870SzázhalombattaEnergy efficiency improvement in 14 municipality buildingo8000006057	Szanveg	~	Lighting and electricity supply modernisation of highschool's		7070707	070
Százhalombatta     Energy efficiency improvement in 14 municipality building     o     800000     6057	Szárhalomhatta	d	Finance afficiency improvement in three institutions	0	118303	0/U 2021
	Százhalombatta		Energy efficiency improvement in 14 municipality building	0	80000	6057
Szentbalázs a Heating reconstruction in the lawyer's office o 2673 12	Szentbalázs	а	Heating reconstruction in the lawyer's office	0	2673	12

Szigethalom	а	Change of the leisure-time centre's entrance door	с	2061	18
Szigethalom	а	Change of the entrance door of the mayor's office	с	13576	71
Szigethalom	а	Reconstruction of the Hegedűs Gyula city library	р	2121	91
Szigethalom	а	Reconstruction of the mayor's office's heating system, new windows & lighting	q	290909	582
Szigethalom	a	Energetic reconstruction of the Szt. István elementary school	0	1522364	1448
Taktaharkány	а	External thermal insulation	0	727273	1190
Taktaszada	а	Primary school indoor lighting reconstruction	с	56424	142
Tarany	2	new lighting in the mayor's office, culture house, elementary	<u>_</u>	24667	0
Takai	f	Lighting modernisation of the secondary school and bestels	0	8727	37
Tokaj	f	Lighting modernisation of the secondary school and hostels	n	6061	208
Tolna County MT UNDP-2006	f	Heating modernisation on the family help centre	р О	1327	0
Törökszontmiklós	f	Poilor modernisation of the kitchen	0	50000	0
Törökszentmiklós	f	Window's change in the institutions	n	50909	0
Törökszentmiklós	f	Window's change and beging modernisation in the institutions	p n	53030	0
Törökszentmiklós	f	Window's change of the culture house and the library	р 0	54485	0
Tótkomlós	f	Window modernisation insulation	0	509	0
Tótkomlós	f	Inner lighting modernisation in the secondary school	0	1607	67
TOLKOITIIOS	1	schools, cultural centre, offices:new doors, windows, insulation,	C	1097	07
Tótkomlós	f	lighting, RE heat/HW system	р	362303	3190
Újiráz	а	Heating modernisation of the surgery	0	273	6
Vásárosdombó	а	Change of doors and windows, external thermal insulation	с	121212	804
Vértesszőlős	f	Heating reconstruction of the kindergarten	р	0	31
Vértesszőlős	f	Window change and heat insulation of the old building of the elementary school	с	100242	34
Veszprém	f	Preparation for heating reconstruction in the Gyulaffy elementary school		0	0
		Preparation for windows' change and fascade insulation in the		_	_
Veszprém	t	Industrial secondary school Preparation for the door change in the Deák Ferenc elementary		0	0
Veszprém	f	school	0	6196	0
Veszprém	f	Preparation for the roof insulation in the Secondary schools' hostel	0	14333	0
Veszprém	f	Preparation for modernisation of the water supply system in the Báthory elementary school	с	23636	0
		Preparation for the energetic modernisation of the education			
Veszprém	f	centre	0	118576	0
Veszprém	f	elementary school	o	153030	1013
Maanném	4	Preparation for the heating reconstruction of the Hrisztó & Dózsa		200205	1000
veszprem	T	Preparation for the heating reconstruction in the Cholnoky	0	209285	1223
Veszprém	f	elementary school	0	235382	1334
Veszprém	f	Preparation for the heating reconstruction of the Táncsics secondary school	0	436885	1448
Voorprére	£	Preparation for the heating reconstruction in the Vetési Albert		047007	0505
veszprem	1		0	21/69/	2595
V eszto	a	Reading modernisation of the elementary school	0	582	30
V eszto	a	Complete Institution energy reconstruction	p	/33091	538
∟∠alanala0	i a	i vvaler saving	I C	485	0

TOTALS

34784366 305034

Based on the provided data, the following charts were prepared by the evaluation team to compare implemented investments,  $CO_2$  savings and efficiency of investments within each of the 90 municipalities





- 60 -

# Chart 2: Lifecycle CO<sub>2</sub> Emission Reductions





Chart 3: Lifecycle CO2 Emission Reduction by Investment Cost



Chart 4: Investment Cost per tCO<sub>2</sub> Emission Reduction

# Annex 8: Co-financing Table

#### Co-financing

Co financing (Type/ Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other Sources* (mill US\$)		Total Financing (mill US\$)		Total Disbursement (mill US\$)	
	Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual	Proposed	Actual
Grant	0,40	0,40	2,80	2,80			3,20	3,20	3,20	3,54
Credits										
Loans										
Equity										
In-kind			0,25	0,25			0,25	0,25	0,25	0,25
Non-grant Instruments *										
Other Types					13,00	13,00	13,00	13,00	13,00	19,30
TOTAL	0,40	0,40	3,05	3,05	13,00	13,00	16,45	16,45	16,45	23,09

• Other Sources refer to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector etc.

#### IA own Financing refers to TRAC. The actual 0,4 MUSD was supplemented with 0,07 MUSD allotted to project preparation.

- "Proposed" co-financing refers to co-financing proposed at CEO endorsement.
- Describe "Non-grant Instruments" (such as guarantees, contingent grants, etc):
  - Source/amount/in-kind or cash/purpose.
- Explain "Other Sources of Co-financing":
  - Source/amount/in-kind or cash
  - Municipal investment project financing/USD 19,3 million at end of project/direct subsidies, grants, loans and cash

# **Annex 9: Terminal Evaluation Review Criteria**

### **Terminal Evaluation Review Criteria**

The six review criteria (A.-F.) are based on the GEF "Terminal Evaluation (TE) Quality Review and Assessment" (2006) and the GEF Evaluation Office: "Guidelines for Implementing and Executing Agencies to Conduct Terminal Evaluations"(2007).

- A. **Results Achievements**: The TE presented an assessment of all relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable.
- B. Consistency & Evidence: The TE was consistent, the evidence presented was complete and convincing and ratings were well substantiated.
- C. Sustainability Assessment: The TE presented a sound assessment of sustainability of outcomes.
- D. Lessons & Recommendations: The lessons and recommendations listed in the TE are supported by the presented evidence and relevant to the portfolio and future projects.
- *E.* Costs and Co-financing Assessment: The TE included the actual project costs (totals, per activity and per source) and actual co-financing used.
- F. Monitoring & Evaluation Assessment: The TE included an assessment of the quality of the M&E plan at entry, the M&E system used during implementation, and whether the information generated by the M&E system was used for project management

#### **Rating System for TER:**

HS - Highly Satisfactory: no shortcomings in the terminal evaluation report.

- S Satisfactory: minor shortcomings in the terminal evaluation report.
- MS Moderately Satisfactory: moderate shortcomings in the terminal evaluation report.
- MU Moderately Unsatisfactory: significant shortcomings in the terminal evaluation report.
- U Unsatisfactory: major shortcomings in the terminal evaluation report.
- HU Highly Unsatisfactory: severe shortcomings in the terminal evaluation report.

**Indicator Occurrence:** A set of indicators is used as a guide under each criterion to assess the report content based on Yes, No, or Partial occurrence of the indicator in the report.

Y - yes N - no P - Part

Criteria and Indicators	Rating	Report Strengths and Weaknesses
OVERALL RATING		
The report provides a thorough assessment of the project	HS/S/	
results and performance based on very explicit criteria,	MS/	
although the lack of information and cooperation, and the	MU/U/	
timing of evaluation long after project completion	HU	
constrained the quality of evaluation.		
A. The TE presented an assessment of all relevant	HS/S/M	
outcomes and achievement of project objectives in the	<b>S</b> /	
context of the focal area program indicators if	MU/U/	
annlicable.	HU	
Project Outputs are briefly reviewed and summarized as a basis		
for evaluating achievement of project outcomes.	Y/N	
Project Outcomes are assessed in accordance with project	Y/N	
monitoring indicators established in the Project Document.		
Project Outcomes are assessed in terms of Relevance,	Y/N	
Effectiveness and Efficiency as defined in the GEF EO		
Guidelines (May 2007).		
Project Objectives are assessed in accordance with project	Y/N	
monitoring indicators established in the Project Document.		
Variances between planned and actual results are assessed and	Y/N	
explained.		
Specific contributions of the project towards GEF Focal Area	Y/N	
program objectives and indicators are described, where		
applicable.	NZ /NT	
Ine potential contribution of the project to National Developmental Cools and Strategies is addressed	¥/IN	
Developmental Goals and Strategies is addressed.	V/N	
written and unambiguous	1/19	
P. The TE was consistent the evidence presented was	HS/S/M	
b. The TE was consistent, the evidence presented was	115/5/WI C/	
complete and convincing and ratings were well		
subsianitatea.		
Project achievements are assessed using reliable, representative	¥ /1N	
The rationale for conclusions about project achievements is	V/N	
clearly understandable and derived from the evaluation data	1/1	
and analyses		
UNDP evaluation ratings are applied and there are clear	Y/N	
reasons provided to substantiate the ratings.	-/- (	
All key stakeholders or stakeholder groups, or a representative	Y/N	
sample thereof, are consulted during the evaluation.		
Processes and Factors that affected the attainment of results are	Y/N	
highlighted, including issues noted in the GEF EO Guidelines:		
- Preparation and readiness; Country ownership/driveness;		
Stakeholder involvement; Financial planning; Implementing		
/Executing Agency's supervision & backstopping; Co-financing		
and project outcomes and sustainability; Delays and project		
outcomes and sustainability		
Assumptions or Risks in the project design that subsequently	Y/N	
affected project implementation are identified and assessed.		
C. The TE presented a sound assessment of sustainability	HS/S/M	
of outcomes.	<b>S</b> /	
	MU/U/	
	HU	
Project design measures or strategy for sustaining project	Y/N	
results are assessed.		

Criteria and Indicators	Rating Ra	port Strengths and Weaknesses
Policy and enabling environment factors that provide support	$\frac{1}{V/N}$	port strengths and weathesses
for sustaining project results are considered.	-/- (	
Institutional capacity for sustaining project results is considered.	Y/N	
Financial and technical resources required for sustaining project results are considered.	Y/N	
D The lessons and recommendations listed in the TE are	HS/S/M	
supported by the presented evidence and relevant to the	S/	
nortfolio and future projects.	MU/U/	
portfolio ana falare professi	HU	
The lessons learned draw upon specific observations or data compiled during the evaluation	Y/N	
The recommendations provide specific advice for the project evit strategy or post-project sustainability	Y/N	
The recommendations provide specific advice for future projects or programming or similar projects	Y/N	
The recommendations are sufficiently practical and in the realm of feasibility for potential implementation.	Y/N	
The lessons learned and recommendations are concise, clearly written and understandable.	Y/N	
E. The TE included the actual project costs (totals, per	HS/S/M	
activity and per source) and actual co-financing used.	S/	
J. J	MU/U/	
	HU	
Project cost and funding data are presented, including actual	Y/N	
co-financing from each source.		
Variances between planned and actual expenditures are	Y/N	
assessed and explained.		
Observations from financial audits completed for the project	Y/N	
Issues related to financing and co-financing commitments and	V/N	
performance are discussed and explained.		
F. The TE included an assessment of the quality of the	HS/S/M	
M&E plan at entry, the M&E system used during	S/	
implementation, and whether the information generated	MU/U/	
by the M&E system was used for project management	HU	
The existence and quality of the M & E Plan are assessed,	Y/N	
including baseline conditions, methodology and roles and responsibilities.		
The extent to which M&E were sufficiently budgeted and	Y/N	
funded during project preparation and implementation is		
assessed.		
The effectiveness of monitoring indicators from the Project	Y/N	
Document for measuring progress and performance is assessed.		
Compliance with the progress and financial reporting	Y/N	
requirements/ schedule is assessed, including quality and		
unerness of reports. The value and effectiveness of the monitoring and evolution	V/N	
renorts and process is discussed with participants and assessed	1/11	
The follow-up action, or adaptive management, taken to	Y/N	
respond to monitoring and evaluation reports is assessed.		