GEFM&E Terminal Evaluation Review Form

1. PROJECT DATA				
				Review date: October 2005
GEF ID:	PMIS 292		at endorsement (Million US$)	at completion (Million US$)
Project Name:	Capacity Building to Reduce Key Barriers to Energy Efficiency in Russian Residential Building and Heat Supply	GEF financing:	$2.98 (database)	$2.98 (TE)
Country:	Russian Federation	Co-financing:	$0.841 (database)	4.9 million Rubles in-kind (TE)
Operational Program:	OP5	Total Project Cost:	$4.68 (database)	$?
IA	UNDP	Dates		
Partners involved:		Work Program date		10/01/1996
		CEO Endorsement		12/09/1997
		Effectiveness/ Prodoc Signature (i.e. date project began)		27/02/1998 (PIR) 1997 (TE)
		Closing Date	Proposed: 02/01/2002	Actual: 12/2004 (PIR)
Prepared by: Anna Viggh	Reviewed by: Siv Tokle	Duration between effectiveness date and original closing: 3 years 11 months	Duration between effectiveness date and actual closing: 6 years 10 months	Difference between original and actual closing: 2 year and 11 months
Author of TE: NICE and Eco Ltd Mr. Eugene A. Zenutich (Team Leader) Ms. Ludmila V. Dudnikova (Senior expert) Ms. Olga N. Myrileva (Expert) Mr. Alexandr A. Zsevostyanov (Expert)		TE completion date: January 2005	TE submission date to GEF OME: 07/07/2005	Difference between TE completion and submission date: 6 months

2. SUMMARY OF PROJECT RATINGS

GEFME Ratings for project impacts (if applicable), outcomes, project monitoring and evaluation, and quality of the terminal evaluation: Highly Satisfactory (HS), Satisfactory (S), Moderately Satisfactory (MS), Moderately Unsatisfactory (MU), Unsatisfactory (U), Highly Unsatisfactory (HU), not applicable (N/A) and unable to assess (U/A). GEFME Ratings for the project sustainability: Highly likely (HL), likely (L), moderately likely (ML), moderately unlikely (MU), unlikely (U), highly unlikely (HU), not applicable (N/A), and unable to assess (U/A).
Please refer to document “Ratings for the achievement of objectives, sustainability of outcomes and impacts, quality of terminal evaluation reports and project M&E systems” for further definitions of the ratings.

	Last PIR	IA Terminal Evaluation	Other IA evaluations if applicable (e.g. OED)	GEFME
2.1 Project impacts	**N/A**	S	N/A	S
2.2 Project outcomes	S	S	N/A	S
2.3 Project sustainability	**N/A**	L	N/A	ML
2.4 Monitoring and evaluation	**N/A**	S	N/A	MS
2.5 Quality of the evaluation report	**N/A**	**N/A**	N/A	S

Should this terminal evaluation report be considered a good practice? Why? No. While this TE is overall satisfactory, it has some shortcomings. The development context section has a lot of interesting information, but is too long (nearly 7 pages) and present too much detail. The TE does not include the actual project costs and co-financing used. Lessons learned are not well articulated as lessons.

3. PROJECT OBJECTIVES, EXPECTED AND ACTUAL OUTCOMES

3.1 Project Objectives

- **What are the Global Environmental Objectives? Any changes during implementation?** No. The development objective was to provide sustainable and replicable models and to build the required capacities for overcoming barriers to implementation and realization of energy-efficiency improvements and energy conservation in residential buildings and heat delivery systems in Russia.

- **What are the Development Objectives? Any changes during implementation?** Yes.

1. Creation of a prototype of the legislative and institutional model of the heat and hot water consumption-based metering and billing system – a more fair system of payment – in the city of Vladimir

2. Study and demonstration of the technical, economic and environmental expediency and consequences of the autonomous heat sources installation in three residential buildings

3. Human resources training and creation of the base for the analysis and replication of energy efficient projects

4. Creation and functioning of the Project Implementing Units in Vladimir and Moscow

During project implementation Objective 4 was removed because it was in reality mostly completed before the project started. Two important objectives were added:

4. Develop and implement the Project Dissemination Programme in the Russian Federation and the CIS countries

5. Assess and measure environmental impact (climate change mitigation potential) of the project

3.2 Outcomes and Impacts

- **What were the major project outcomes and impacts as described in the TE?**

Impact

The project will result in direct CO_2 emission reductions of 49,607 tons over the 20 year lifetime of the project.

Outcome

The project implementation team achieved the following concrete achievements:

- A prototype of a billing system for heat and hot water for 92 residential buildings in the city Vladimir was created (objective 1). The Project Service Unit forms bills for each apartment basing on the results of monitoring of actual consumption of heat energy for heating and hot water supply for the residential buildings. It transfers these bills to the Department of Housing and Communal Services (DHCS) of the city Administration for conduction of comparative analysis and further submission to the city legislative body in order to influence deputies to adjust the city norms for the heat consumption which are currently based on per 1 square meter and per person charges.
- Autonomous boiler houses were installed and are operating in 3 residential buildings in the city Vladimir (objective 2). The Municipality, the owner of buildings, receives bills for the generated heat energy. Bills for tenants are issued by exploitation service of the residential building basing on the legally approved norm. Boiler houses are controlled and managed in automotive mode.
- Trainings were conducted in the city Vladimir and Moscow in 1998 (objective 3).
- Experience was disseminated by the nongovernmental organization RUSDEM and Vladimir services in accordance with the specifically developed Program (on business-planning and financial engineering), and is being replicated in Russian regions to an extent allowed by actual Russian legislation and normative policy.
- Experts of the federal environmental organization developed a methodology and sequence of assessment and inventory of the greenhouse gases emissions for the Project. In accordance with the methodology the calculation of the Project greenhouse gases emissions reduction was carried out. The documentation on procedures of legalizations, verification and certification of the potential Project climatic result has been prepared.

4. GEF OFFICE OF M&E ASSESSMENT

4.1 Outcomes and impacts **Rating: S**

A Relevance

- **In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies? Explain**

The project's outcomes were consistent with OP5 strategies. Outcomes contributed to the reduction of GHG emissions, creation of normative legislation, and demonstration of autonomous heat sources. According to the TE, all objectives and directions that were included were urgent and highly relevant for the Russian Federation as defined during the period of formulation of the project document and definition of tasks. The project was timely and topical throughout the implementation period and remains urgent up to the present time.

B Effectiveness

- **Are the project outcomes as described in the TE commensurable with the expected outcomes (as described in the project document) and the problems the project was intended to address (i.e. original or modified project objectives)?**

The prototype billing system created by the project was not fully implemented since the required legislation and normative policy has not been approved by the city administration. The fact that the billing system could not be implemented in reality was certainly most unfortunate. It is clear however that the project team made commendable efforts to get the system approved despite lack of sufficient political support in the city administration. They have managed to get good value out of the simulation activities which were carried out.

C Efficiency (cost-effectiveness)

- **Include an assessment of outcomes and impacts in relation to inputs, costs, and implementation times based on the following questions: Was the project cost –**

effective? How does the cost-time Vs. outcomes compare to other similar projects? Was the project implementation delayed due to any bureaucratic, administrative or political problems?
The TE rated the project as somewhat cost-effective. For a GEF contribution of US$2.98 million the project resulted in direct CO_2equ emission reductions of 49,607 tons over the 20 year lifetime of the project. This means a direct cost of approximately US$60 per ton of CO_2. From an international standpoint this is a very high cost. It is however important to stress that in this project the majority of project costs were in research, training, and capacity building, not in the investments which brought about direct CO_2 emission reductions – metering / control and autonomous boilers. For metering and control where 20 year lifetime savings were an estimated 34,600 tons $CO_2$and costs relatively small (data was not available to the evaluators on details of these costs – they were part of the WB loan), reductions per ton will be highly competitive. Taking the installation of the three boilers under objective 2, for which cost data is readily available, costs (excluding operation and maintenance) were about US$340,000. The cost per ton of CO_2 reduced in this case is US$22 over 20 years. Project implementation was delayed and the project was extended far longer than originally envisioned (almost 3 years). While it would have been preferable that some of the avoidable delays had been avoided – particularly during the first years of the project – the evaluators believe that the flexibility in timing, and extended implementation, was the right decision and was justified. Project budgets were not extended (the costs and activities were spread over the longer period).

4.2 Likelihood of sustainability. Using the following sustainability criteria, include an assessment of project sustainability based on the information presented in the TE.

A Financial resources	**Rating: ML**
Under objective 3 the project contributed to the development of skills to conduct the economic and financial project analyses that are required by private and public financing institutions for energy efficiency investment projects. The objective was met early on in the project and this capacity contributes to future financing of energy efficiency projects. However, the project faced the risk of not finding money for co-financing in Russian Housing-Communnal Services sector and this risk still remains and impacts the availability of future financial resources.	
B Socio political	**Rating: ML**
Activities aimed at reduction of barriers during implementation of investment projects in a period of time are the most efficient when the permanent team of coordinators from city and regional authorities is in place and fully involved in the process. However, political changes are fairly inevitable, and activities, which coincide with mayoral or regional governor elections caused difficulties in ensuring continuity. During the implementation of this project replacement of the authorities through elections halted the project pace that was gained with the previous team. Risks such as temporary lack of knowledge and awareness (or even electoral promises) from new officials negatively influences the sustainability of project related activities. The project was unable to implement the proposed billing system in reality. This was caused by opposition to perceptions that the change in billing systems would adversely affect poorer sectors of the population (who have the worst quality housing). These negative impacts to some part of the citizens of the city could not receive approval of the Duma representatives. Clearly there is a need to develop more comprehensive policy which would mean subsidies to poorer households, or (better), some mechanism to implement thermal upgrading in social housing, possibly using some earmarked revenues from the heating tariff to a fund for this purpose.	
C Institutional framework and governance	**Rating: L**
There is no adequate assurance of project sustainability at a country level, which would have included, for example an opportunity for a more comprehensive study of legislative and normative possibilities for the country, and the creation of preconditions for lobbying for the adoption of required laws at the level of federal legislative authorities.	

The project design does not include adequate institutional mechanisms to ensure sustainability at the local level either. Despite this, the evaluators believe that the project implementation team should be commended for the creation of two companies – VladEsco and the Project Service Unit - that have inherent strong incentives for continuation of these activities. Creation of these two companies, however, is potentially of concern since public finance was used to support them in the conditions of quite an uncompetitive market. In addition there is a risk that after the end of the project, the companies may start to hide information to ensure their competitive advantages, which will negatively influence on activities on "dissemination." However, taking into account the good quality of dissemination activities in the framework of the project, as well as the institutional potential of the National Agency (DHCS), the evaluators believe that such risks are minimized.

D Ecological (for example, for coffee production projects, reforestation for carbon sequestration under OP12, etc.) **Rating: L**

The improved energy efficiency of the autonomous boiler houses installed in 3 residential buildings will continue to contribute to the reduction of CO_2 emissions as long as they are in use.

E Examples of replication and catalytic outcomes suggesting increased likelihood of sustainability **Rating: ML**

The TE believes that the additional objectives positively influenced approaches for the replication of the project design and project results. The project has a somewhat passive replication approach based mainly on publications.

From a design-for-replication point of view the virtually 100 percent grant provided by the GEF for project activities is certainly questionable. Equipment purchased was indeed state-of-the-art, but appears to have been the 'most expensive that could be afforded' rather than the 'most appropriate for local needs.' This is evident in the choice of metering and controls installed (the project used electronic meters and thermostatic values, both of which are luxury items and less common than simple evaporative meters and manual valves even in Western Europe), and the three imported building-level boilers. In the case of the boilers, however, there is justification in those selected since the demonstration focused mostly on what could be done. It would however be interesting to know how decisions might have been different had there been a substantial amount of local co-financing in capital expenditures. This may have added to the replication value of the project.

4.3 Assessment of the project's monitoring and evaluation system based on the information in the TE

A. Effective M&E systems in place: What were the accomplishments and shortcomings of the project's M&E system in terms of the tools used such as: indicators, baselines, benchmarks, data collection and analysis systems, special studies and reports, etc.? **Rating: MS**

The TE has a fairly comprehensive assessment of M&E systems including a box on technical monitoring approach. According to the TE, the quality of ongoing monitoring appears to have been satisfactory although monitoring was hampered by the lack of objectively verifiable indicators in the original project design. Sufficient objectively measurable indicators for ensuring successful achievement of activities, outputs, objectives and energy saving were not given in the project document. It is thus difficult to measure objectively the efficiency and effectiveness of project implementation. Also notable is that no indicators were given as to expected CO_2 emission reductions as a direct and indirect result of implementation of the project. It should however be noted that the lack of objectively verifiable indicators for greenhouse gas emission reductions is not uncommon for GEF projects approved in 1997. Furthermore, the project did not include a comprehensive logical framework analysis which could have guided implementation.

B. Information used for adaptive management: What is the experience of the project with adaptive management? **Rating: MS**

Project administration had a fairly complicated structure, with multiple levels of approval and decision-making in Vladimir (Project Management Unit, city Administration), in Moscow (Moscow project leader, UNDP and Ministry), and internationally (UNOPS). In the opinion of the evaluators the administrative structure was generally beneficial, ensuring necessary intervention of project

coordinators and decision-makers. The long decision-making chain however does appear to have delayed decisions and on occasion produced frustrations at various levels. There were also crises at various stages – during project start-up as well as following criticism during the mid-term evaluation – which took a long time to resolve. These disadvantages however were more than compensated for by the benefit of ensuring buy-in at the city and federal levels. A balance however needs to be struck between participatory approaches and efficiency of decision-making. In retrospect this balance appears to have been 'fair to good' in this project.
Can the project M&E system be considered a good practice? Yes, although more details would strengthen the case.

4.4 Quality of lessons
Weaknesses and strengths of the project lessons as described in the TE (i.e. lessons follow from the evidence presented, or lessons are general in nature and of limited applicability, lessons are comprehensive, etc.)

What lessons mentioned in the TE that can be considered a good practice or approaches to avoid and could have application for other GEF projects?

• The models, including the "economic model" of calculating and billing, created by the project can be considered best practice.
 	
• The project served to highlight the fact that federal laws, required to mobilize private investments in heat supply modernization, are not yet sufficiently efficient or effective, however, a spirit of entrepreneurship is growing.
 	
• The introduction of new technologies and equipment, as well as energy consumption metering and billing system is the key factor to enable the creation of the following:
 	
  • Interest from tenants and tenant associations to save energy and invest into energy efficiency
  • Interest from rayon boiler houses, which exploit heat distribution network and that own networks, to reduce heat losses during heat transmission via the network
  • A situation, where financial gains from such capital investments will be returned to investors

4.5 Quality of the evaluation report Provide a number rating 1-6 to each criteria based on: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, and Highly Unsatisfactory = 1. Please refer to the "Criteria for the assessment of the quality of terminal evaluation reports" in the document "Ratings for the achievement of objectives, sustainability of outcomes and impacts, quality of terminal evaluation reports and project M&E systems" for further definitions of the ratings.

4.5.1 Comments on the summary of project ratings and terminal evaluation findings
In some cases the GEF Office of M&E may have independent information collected for example, through a field visit or independent evaluators working for the Office of M&E. If substantial independent information has been collected, then complete this section with any comments about the project.
N/A

4.5.2 Quality of terminal evaluation report	**Ratings**
A. Does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives? Yes.	5
B. Is the report internally consistent, is the evidence complete/convincing and are the IA ratings substantiated? Yes.	5
C. Does the report properly assess project sustainability and /or a project exit strategy? Yes.	5

D. Are the lessons learned supported by the evidence presented and are they comprehensive? No. The section on lessons is hard to follow.	3
E. Does the report include the actual project costs (total and per activity) and actual co-financing used? No, the TE does not include the actual project costs.	2
F. Does the report present an assessment of project M&E systems? Yes.	5

4.6 Is a technical assessment of the project impacts described in the TE recommended? Please place an "X" in the appropriate box and explain below.	**Yes:**	**No: X**
Explain: Replication is only rated moderately likely and the billing system for heat and hot water was not implemented.		
Is there a follow up issue mentioned in the TE such as corruption, reallocation of GEF funds, etc.? No.		

4.7 Sources of information for the preparation of the TE review in addition to the TE (if any)

TE, PIR04, Project Document, GEF database