GEFM&E Terminal Evaluation Review Form

1. PROJECT DATA				
			Review date:	October 2005
GEF ID:	PMIS 67		at endorsement (Million US$)	at completion (Million US$)
Project Name:	Coal to Gas Conversion	GEF financing:	$25.33 (database) $23.85 (ICR)	$?
Country:	Poland	Co-financing:	$23.32 (database) $24.47 (ICR)	$23.00 (ICR)
Operational Program:	STRM	Total Project Cost:	$48.65 (database) $48.32 (ICR)	$43.70 (ICR)
IA	WB	Dates		
Partners involved:	Government of Norway	Work Program date		12/01/91
		CEO Endorsement		(not in database)
		Effectiveness/ Prodoc Signature (i.e. date project began)		06/16/1995
		Closing Date	Proposed: 12/31/2000	Actual: 06/30/2004
Prepared by: Anna Viggh	Reviewed by: Siv Tokle	Duration between effectiveness date and original closing: 5 years and 6 months	Duration between effectiveness date and actual closing: 9 years	Difference between original and actual closing: 3 years and 6 months
Author of TE: Justyna Giezynska		TE completion date: 12/30/2004	TE submission date to GEF OME: 03/16/2005	Difference between TE completion and submission date: 3 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	MS
2.2 Project outcomes	S	S	MS	MS
2.3 Project sustainability	**N/A**	L	L	ML
2.4 Monitoring and evaluation	**N/A**	N/A	N/A	S
2.5 Quality of the evaluation report	**N/A**	**N/A**	S	S

Should this terminal evaluation report be considered a good practice? Why? No. The ICR is satisfactory on balance. However, it has some shortcomings:

- The project was supposed to be incorporated into the Environmental Management Project, and to be associated with several other related loans, but the ICR makes no mention of the interaction among these operations during implementation. (There is also some confusion in this respect, since page 3 of the ICR indicates that the GEF project is associated with the Environmental Management Project, but the Region's comment to this ICR Review indicates that it is associated with the Heat Supply Restructuring and Conservation Project.)

- It would appear that the subsidized financing for individual housing units has, for the most part, been provided to upper income recipients. This would appear to be especially true for those who could afford to own individual houses. However, the ICR does not provide information on the level of subsidy for these houses or for the income distribution of individual beneficiaries. Nor does it discuss why subsidies varied from 2-7 percent of total investment costs, An analysis of the variation in efficiency of subprojects (from $10 and $65) and for housing energy conservation (between $23 and $135) might have brought out significant policy lessons.

- Institutional Development Impact is not only, nor necessarily, related to ability to implement similar internationally financed projects in the future. The focus should be on activities that have an impact on future outcomes, especially on improving efficiency of the sector. In this case, the project's impact on pricing policies and incentives and disincentives related to CO2 reductions should have been discussed.

- A discussion of the conflict between "green building" criteria and cost-effectiveness (Annex 8) could also have brought out important lessons for GEF projects.

- Section 10 was not used to highlight issues of concern to GEF, as suggested in their ICR guidelines

3. PROJECT OBJECTIVES, EXPECTED AND ACTUAL OUTCOMES

3.1 Project Objectives

- **What are the Global Environmental Objectives? Any changes during implementation?** No.

This project did not specify a global environmental objective. The overall project objective was to contribute to the reduction of carbon dioxide emissions.

- **What are the Development Objectives? Any changes during implementation?** No.

The overall project objective was to contribute to carbon dioxide emissions reduction by

(a) stimulating self-replicable technological and institutional changes that would promote coal to gas conversion in small and medium boilers;
(b) inducing more energy-efficient practices in the architectural design and operation of new residential buildings;
(c) demonstrating interfuel substitution and technological innovation to improve overall energy efficiency throughout the heat supply chain, as a means of reducing CO_2 emissions; and
(d) building up institutional capacity in making judgments about the ability of a project to capture global externalities, such as CO_2 emission abatement.

The GEF funds were to be used to:
1. Encourage coal-to-gas conversions in small and medium-size boilers, whose owners could not achieve acceptable financial rates of return without concessional financing, but who could demonstrate substantial energy efficiency improvements from this conversion.
2. Quickly and strongly influence future investments to the benefit of global environmental objectives through pilot investments in residential buildings that integrate improvements in energy supply, distribution, transport, and end-user efficiency.

3.2 Outcomes and Impacts

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

Impact

Coal to Gas Conversion: The global achieved reduction of CO2 is 128 Mg/a (tons per year). The average reduction achieved is 62%. 122 tons of CO2 were not emitted from the time of operation inception until the calculation in August 2004. Annex 1a illustrates the reduction as related to technology used.

Sulphur dioxide has been reduced by almost 100% on average in all converted plants (1 278 Mg/a in total). Particulates have been reduced by almost 100% on average as well (921 Mg/a in total). Nitrogen oxide emissions have been reduced by 69% (195 Mg/a in total).

Energy Efficiency: It was calculated that at the time of monitoring (for each object the monitoring was to take place for a year after completion), the total of 917 164 kg/a CO2 was reduced. This means that the expected result has been achieved in 79%.

The ICR states that the project demonstrated that Poland is capable of entering into carbon trading schemes, and is a suitable country for a carbon credit. However, there was no evidence provided to support this contention.

Outcomes

The project was to:

(a) Stimulate self-replicable technological and institutional changes that would promote coal to gas conversion in small and medium boilers; [Partially Achieved]
By providing 20-25 percent financial rates of return to small boiler owners, the project encouraged a limited number of coal-to-gas conversions in small and medium-size boilers, but benefits were limited primarily to those who were subsidized with GEF funding.

(b) Induce more energy-efficient practices in the architectural design and operation of new residential buildings [Substantially Achieved]
The ICR also states, but does not substantiate, that the project changed the thinking about saving energy and replicating the energy efficiency concept by promoting ecologically friendly housing investments. As a result housing developers and individual owners have a more positive attitude to installing energy saving technologies. It also states that the project "assisted" in the process of technological switching, although it was not a cause of this switching.

(c) Demonstrate interfuel substitution and technological innovation to improve overall energy efficiency throughout the heat supply chain, as a means of reducing CO_2 emissions; [Partially Achieved] Project investments did demonstrate that modern technology could improve overall energy efficiency throughout the heat supply chain, which would reduce CO_2 emissions. This correlation has been proven many times before in other countries, so it is not clear what benefit this was to the Polish or the global environment.

(d) Build up institutional capacity in making judgments about the ability of a project to capture global externalities, such as CO_2 emission abatement; [Not Achieved]

4. GEF OFFICE OF M&E ASSESSMENT

4.1 Outcomes and impacts **Rating: MS**

A Relevance

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

The project took too long to be consistent with STRM strategies.
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)?**
While planned investments were carried out, the project did not quickly nor strongly influence future investments to the benefit of global environmental objectives. It took too long to implement and thereby lost momentum for carrying out the GEF mandate. While the investment components were implemented, the project did not demonstrate interfuel substitution and technological innovation. Institutional capacity was not developed, and institutional framework for energy efficiency was not improved.
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 "incremental" cost effectiveness of the subprojects was better than expected at appraisal. The project reduced CO_2 emissions by an average of 28 percent in the operations it financed. The project closing was extended three times, by a total of 42 months. There were multiple reasons. The Government failed to provide counterpart funds for public institutions to make the investments that were the original focus of the program, making it necessary to shift the project's focus to institutions with more secure funding. Functional responsibility for the project was shifted among several departments within the Ministry of Energy, greatly diminishing Government ownership. Individual subprojects experienced delays due to technical and procedural difficulties, sometimes necessitating a second round of contractor bids. These delays were at times compounded by excessively long Bank response times. In addition, considerable time was required to resolve unanticipated issues that arose between investors and contractors.

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: L**
To achieve the coal to gas conversion on a national basis, additional funding is required to support the process, which began with this project and continues with other projects. Several credit and subsidy lines have been developed for phasing-in of gas technology. EcoFund has committed over US$40 million to over 100 projects aimed at reducing emissions of GHG emissions and CFSs phase-out, which include energy efficient projects and coal-to-gas conversions.	
B Socio political	**Rating: ML**
Project design fostered ownership at the community level through the requirement that a significant percentage of the funds for each individual sub-project would came from the investor's own sources. Such arrangements encouraged long-term thinking about the project purpose and its place in the company development. But according to the OED review, the pilot demonstration projects failed to provide any transfer of knowledge: the pilot CHP project was cancelled before construction began, because the agency responsible for its implementation (the University of Krakow) failed to secure the required counterpart funds, while the HOB demonstration project was delayed to the extent that its implementation did not significantly precede the implementation of the non-pilot projects, and the agency that implemented was not active in any of the subsequent investment subprojects.	
C Institutional framework and governance	**Rating: MU**
According to the OED review the institutional development identified in the ICR did not relate directly to investments carried out during the project. Institutional capacity was not developed, and institutional framework for energy efficiency was not improved. Furthermore, the project failed to include any institutional efforts to modify energy prices in a way that would have been	

conducive to energy saving.
D Ecological (for example, for coffee production projects, reforestation for carbon sequestration under OP12, etc.) **Rating: L**
According to the ICR the sustainability of the project is likely if beneficiaries continue to properly use the equipment installed under the project. Inhabitants of energy efficient housing must continue to implement energy saving techniques, which is likely because they have been exposed to energy-saving measures and have felt the economic benefit of the switch to the new technology.
E Examples of replication and catalytic outcomes suggesting increased likelihood of sustainability **Rating: MU**
The OED review states that the project failed as a demonstration project. Specifically, it failed to neither quickly nor strongly influence future investments to the benefit of global environmental objectives. The demonstration effect for those not directly benefiting from GEF financing appears to have been negligible.

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: S**
M&E of the project environmental progress and achievements was firmly embedded in the project structure because the results of conversions and energy efficiency adjustment were to demonstrate a reduction in CO2 emissions. The key performance indicators were not introduced at the time of project preparation because logframe was not standard at the time of project design. At preparation of each individual project the targeted outcomes were set. Achievements of these outcomes were monitored through pre- and post-conversion measurement. The monitoring of the project results, new in Poland, helped to set standards for monitoring GHG emissions efforts in general.
B. Information used for adaptive management: What is the experience of the project with adaptive management? **Rating: S**
When sub-projects experienced significant delay, and there was the necessity to adjust it to the extended deadline, a revised disbursement schedule became a measure of performance in addition to indicators illustrating outcome and physical output. A revised disbursement schedule helped in keeping project progress more on track yet monitoring of project progress was still difficult.
Can the project M&E system be considered a good practice? Perhaps, but more details on the M&E system than what is provided in the ICR would be needed to judge.

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?
Project design needs to take into account the weak ownership of large public institutions, such as universities or hospitals in formerly centrally planned economies, as well as their minimal ability to generate adequate counterpart financing. The corollary is that private enterprises are more likely to take ownership of profitable environmental friendly investment opportunities. • An isolated project such as this GEF project would have a stronger impact if it were coordinated with other funding operations. While it was "associated" with the Environmental Management Project, there does not appear to have been any coordination between them.

• Counterpart funding should be secured before project approval, not only promised for some time in the future. • Implementation is much more difficult, and requires much more extensive staff training efforts when evaluation of subprojects is decentralized.

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.

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? Yes.	5
E. Does the report include the actual project costs (total and per activity) and actual co-financing used? The TE does include the actual project costs, but it is not possible to tell what was financed by GEF.	4
F. Does the report present an assessment of project M&E systems? The TE provides a brief assessment of the M&E system under the heading Quality at Entry, but not rating is given. .	4

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:** X	**No:**
Explain: OED suggests that an audit be considered in the context of a cluster assessment of all of the related Polish energy savings and energy conversion projects (the Environmental Management Project, the Energy Resource Development Project, the Heat Supply Restructuring Project, and the Krakow Energy Efficiency Project), where policy issues played a more significant role than in this smaller investment project.		
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)

OED ICR Review, ICR, PIR04, Project Document.