



Global Environment Facility

Leonard Good

Chief Executive Officer
and Chairman

1818 H Street, NW
Washington, DC 20433 USA
Tel: 202.473.3202
Fax: 202.522.3240/3245
Email: lgood@TheGEF.org

September 21, 2004

Dear Council Member,

The World Bank, as the Implementing Agency for the project, ***Poland: Krakow Energy Efficiency Project***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with the World Bank procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by the Council in May 2000, and the proposed project remains consistent with the Instrument and GEF policies and procedures. The attached explanation prepared by the World Bank satisfactorily details how Council's comments and those of the STAP have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at www.gefweb.org. If you do not have access to the Web, you may request the local field office of the World Bank or UNDP to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

cc: Alternate, Implementing Agencies, STAP

OFFICE MEMORANDUM

DATE: September 8, 2004

TO: Mr. Leonard Good, CEO/Chairman, GEF

FROM: Steve Gorman, GEF Executive Coordinator



EXTENSION: 35865

SUBJECT: **Poland: Energy Efficiency Project (P070246)**
Submission for Final CEO Endorsement

1. Please find attached the electronic file of the GEF Project Document for the above-mentioned project for your final review and endorsement. This project was approved for Work Program entry at the May 11, 2000 Council meeting, under streamlined CEO endorsement procedures. The scheduled Board date for this project is October 14, 2004. We would appreciate receiving your response, so that we may finalize the Bank Board submission, by **September 16, 2004**.
2. The GEF Project Document is fully consistent with the objectives, scope, and overall cost of the proposal approved at May, 2000 Council meeting. Minor adjustments have been made during final preparation concerning operational modalities and the choice of institution to operate the Partial Risk Guarantee Facility. GEFSEC, STAP, and Council comments have also been addressed. Modifications to the Project Document and how comments have been addressed are detailed below.
 - (i) The STAP comments and the Team response can be found in the GEF Project Document, Annex 15.
 - (ii) The comments from the Council Members:
 1. *Comments related to Montreal Protocol and Ozone Depleting Substances.* The concern is that equipment procured as part of the project's energy savings investments do not contain or use materials such as CFCs and other ozone depleting substances. While most of the envisaged equipment is not anticipated to contain such substances, environmental safeguards are included in all project agreements and documents, according to World Bank environmental standards. Periodic review of environmental compliance (provided by designated NGOs and other monitoring organizations) should ensure that these substances are not used, and that if they have been, will be removed or replaced.
 2. *Comment regarding project cost as it relates to greenhouse gas emissions abatement.* The project cost, including co-investment, is expected to be

approximately \$65 million, corresponding to \$99 million as envisaged in the early design stages which included proceeds from associated IBRD loan. The \$11 million GEF grant should attract additional financing from banks and equity investors of approximately \$54 million. The estimates of CO₂ reductions are consistent with the comments – approximately 500,000 tons per year. Three points should be noted: (i) CO₂ reductions per invested dollar are relatively low because the project is focused on building energy efficiency using mostly thermal measures with longer payback periods than more lucrative industrial or commercial energy efficiency projects. The project design focused on this sector because it is generally underserved and has more trouble attracting investment; (ii) In Poland, much of the heat supply is produced from combined heat and power plants whose operation tracks electric load, not heat demand. Thus, a reduction in end-use steam consumption would not necessarily lead to reduced fuel consumption. This leads to emissions factors (tCO₂/MWh) that are quite low in comparison to other projects such as electric energy efficiency or renewable energy; (iii) calculations of emissions reductions consider life-cycle investment results. Nevertheless, some effect of the guarantee leverage is necessarily missed, because the project considers investments made over 10 years. In fact, after 10 years there will still likely be remaining guarantees reserves, allowing for continued investment. However, investment made after the 10-year project period are not considered.

3. *Comment regarding new or existing buildings.* The project is intended to serve the existing building market, through retrofits. Investments in new buildings are not allowed.

4. *Comments related to ESCO businesses in Poland generally.* The evolution of this project has resulted in a more national approach to the building sector, as opposed to a Krakow-only approach. Therefore while the ESCO established by MPEC will play a significant role in the project, other ESCOs and energy efficiency companies will also contribute to the project. A significant portion of the technical assistance funds will be used to support ESCOs in their business practices, contract development, and project development. In addition, best practices of ESCOs from around the Central Europe region will be incorporated into the project through information sharing and regional cooperation initiatives, also supported by the technical assistance grant.

5. *Comments related to types of investments made by ESCOs.* The project as originally envisaged had a major focus on ESCOs, and especially the MPEC-supported ESCO (POE ESCO). While POE ESCO and others will continue to play a role, it has also become clear that other private sector entities will also play important roles in the financing of energy efficiency. Regarding investments made by ESCOs, these will be primarily in large buildings, in thermal energy efficiency

improvements, on a performance contract basis. The ESCOs (especially POE ESCO) will provide design-build, financing, and in some cases ongoing maintenance services. With regard to risk sharing, POE ESCO will be encouraged to cost-share the project costs with end-users, and over time should increase the share of investment coming from owner's equity. In addition, co-financing by banks is a key objective of the project, supported by the guarantee component.

(iii) Comments from GEFSEC

Incremental costs: the current estimate of incremental costs is \$11 million, i.e. the total GEF grant amount. Details on the incremental cost calculation including the relative merits of different incremental cost components can be found in the Project Document, Annex 9.

Budgetary details: are provided in the Project Document, Annex 4.

Leveraging subsequent to GEF finance: This is covered in detail in the Project Document, Annex 9.

Coordination with relevant related activities in the Region: The project is closely coordinated with the IBRD loan for the Krakow Energy Efficiency Project, with the ESMAP and US Department of Energy project entitled "Design and Establishment of Financial Intermediary for Energy Efficiency" and contact has been established to the ongoing energy efficiency activities by the EBRD centered on the city of Lodz..

Dissemination and information campaigns: Details are provided in Annexes 4 and 10.

3. The following minor changes have been made to the project design since Work Program entry:
- (i) The project is no longer to be blended with a loan project but it is narrowly linked to the IBRD loan for the Krakow Energy Efficiency Project that was approved by the Board on June 7, 2001. Even though this loan has been effective for over two years it is only its district heating component that has disbursed. The ESCO component is not likely to disburse before the GEF grant project is available to POE ESCO allowing them to address large projects with pay-back periods over 10 years.
 - (ii) The guarantee facility has been made available nation-wide instead of being confined to the Malopolskie Voivodship. These is due to the fact that analyses have

confirmed that there is a great need for an energy efficiency guarantee facility in Poland and is following a direct request from the Ministry of Economy and Labour.

4. Negotiations of the GEF Grant Agreement with the Government of Poland and the state owned Bank Gospodarstwa Krajowego (BGK) have been completed and they have confirmed their approval of the negotiated documents, i.e. the Project Appraisal Document, including the financing plan, and the legal documents (including performance indicators). The Agreed Minutes of negotiations are attached in order to verify the co-financing consisting of a minimum of 50% up-front leveraging by BGK of the amounts paid out for the Partial Risk Guarantee Facility which is US\$5.7 million. In addition, co-financing during implementation will be for multiple transactions and will come from local project developers and banks.
5. Please let me know if you require any additional information to complete your review of the project document. We look forward to receiving your endorsement of the project for Bank Board approval.

Many thanks.

Attachments

cc: Messrs./Mmes. King, GEF PROGRAM COORDINATION (GEFSEC); Busz, Johansen (ECSIE; Battaglini (RC) ; Govindarajalu, Khanna, Wedderburn, Aryal (ENV); ENVGC ISC, Regional Files

August 5, 2003

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Document of
The World Bank

Report No: 27006- PL

PROJECT DOCUMENT
ON A
PROPOSED GRANT FROM THE GLOBAL ENVIRONMENT FACILITY
IN THE AMOUNT OF US\$11 MILLION
TO THE
REPUBLIC OF POLAND
FOR A
POLAND - GEF ENERGY EFFICIENCY PROJECT

September 22, 2004

CURRENCY EQUIVALENTS

(Exchange Rate Effective August 30, 2004)

Currency Unit = New Polish Zloty (PLN)
PLN1.0 = US\$0.270
US\$1.0 = PLN3.705

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

BGK	-	Bank Gospodarstwa Krajowego
CHP	-	Combined Heat and Power Plant
DH	-	District Heating
DHW	-	Domestic Hot Water
DHE	-	District Heating Enterprise
EPSC	-	Energy Performance Service Contract
ESCO	-	Energy Service Company
ESMAP	-	Energy Sector Management Assistance Program
FFL	-	Facility Liability Limit
GEF	-	Global Environment Facility
GFA	-	Guarantee Framework Agreement
HCM	-	High Cost Measures
HEECP	-	Hungary Energy Efficiency Co-Financing Program
HOB	-	Heat-Only Boiler
IFC	-	International Finance Corporation
KEEP	-	Krakow Energy Efficiency Project
KFPK	-	Krajowy Fundusz Poreczen Kredytowych
MoEL	-	Ministry of Economy and Labour
MoF	-	Ministry of Finance
MPEC	-	Municipal District Heating Enterprise in Krakow
POE ESCO	-	ESCO Subsidiary of MPEC
TM	-	Thermomodernization Program
UNFCCC	-	UN Framework Convention on Climate Change

Vice President:	Shigeo Katsu
Country Manager/Director:	Roger W. Grawe
Sector Manager:	Henk Busz
Task Team Leader:	Peter Johansen

POLAND
POLAND - GEF Energy Efficiency Project

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A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

An enormous potential for cost-effective improvements in energy efficiency in the building sector with associated environmental benefits remains relatively untapped in the Krakow region and throughout the greater Poland area. The building sector has been an underserved market for efficiency investments for a variety of reasons, and successful efforts to increase penetration rates of EE technologies and practices would yield significant long-term economic and environmental benefits for building owners and the economy at large. Measures such as high-efficiency windows and insulation can last 15-20 years, yielding environmental benefits well beyond the end date of the project.

The need to improve energy efficiency and to safeguard the environment has been a cornerstone of Poland's energy and environmental policy since 1990. Although substantial success in supply-side energy efficiency programs has already been achieved nationwide, it is widely recognized that substantial additional improvements in end-use energy efficiency and in air quality can still be achieved.

The Government of Poland's Energy Policy and Strategy calls for energy security through cost-effective supply of energy, at socially acceptable prices and in an environmentally sustainable manner in line with the EU strategy for the energy sector. The Government has supported the development of several additional market-based energy efficiency initiatives accelerated by: (i) major reforms in energy pricing pursued since 1991 which resulted in the gradual phase-out of consumer subsidies and adoption of appropriate pricing rules to ensure that energy prices gradually reach an economic level, and (ii) tighter enforcement of environmental standards to improve air quality and related higher environmental user charges and penalties.

2. Rationale for Bank involvement

The proposed GEF project will promote economic efficiency, facilitate the development of an environmentally sound energy sector in the Krakow region and Poland, and help implement mechanisms to enhance participation of commercial banks and other private investors on a sustainable basis. It strongly supports the implementation of the energy-environment agenda that helps cities to develop and implement action programs for compliance with the air pollution/urban air quality directives of the EU. It will build upon the extensive IBRD support which established an energy service company (POE ESCO) subsidiary of MPEC in Krakow to provide energy efficiency services on a commercial basis. The Project will also build capacity in the financial and energy service sectors, leading a more sustainable, commercially viable energy efficiency industry in Poland..

B. PROJECT DESCRIPTION

1. Funding mechanism

A GEF Grant will be used to fund (i) a *Partial Guarantee Facility* of US\$5.7 million, (ii) a *Capital Grant Facility* of US\$2 million and (iii) a *Technical Assistance Grant* of US\$3.3 million.

The *Partial Guarantee Facility* was chosen as an appropriate mechanism to overcome the fundamental barriers present in the financial sector in Poland, namely, reluctance of commercial banks to provide long-term financing, lack of adequate collateral among borrowers, in particular ESCOs and housing cooperatives, and perception of high risk by lenders. The guarantee will bring more commercial financing into the market, and with it, greater discipline in terms of project structuring and accountability. The partial guarantee will provide local banks adequate security to make loans while avoiding the moral hazard of a full guarantee, which can lead to investments in much riskier projects. As banks gain experience with the actual portfolio performance of efficiency investments (real risk of defaults), the level of partial guarantee coverage required to overcome their perceived risk may decrease. Ultimately this financing may extend to pure project funding where project cash flow is the only security needed by the bank

The choice of the *Capital Grant Facility* was made to demonstrate the commercial viability and increase acceptance of bundling high cost measures with lower cost measures by partially financing the greater up-front costs of measures such as windows and insulation. The Capital Grant will also help POE ESCO demonstrate the performance contracting model for buildings in the Krakow region, thus increasing acceptance of this type of financing model which has generally not been offered to the buildings sector in Poland.

The *Technical Assistance Grant* will be utilized to overcome the information barriers present in the market by building capacity within the financial sector regarding EE lending and utilization of the tools made available by the project to reduce the Finance Barriers, to increase awareness and demand by building owners, including municipalities, for new investments in EE, to aid in the development and dissemination of the ESCO performance concept, and to collect and disseminate project monitoring and performance data throughout the country.

2. Project development objective and key indicators

The objective of the proposed project is to increase public and private sector investments in energy efficiency in buildings. The project will achieve this by:

- 1) Overcoming the risk barriers in the financial markets inhibiting commercial bank participation in energy efficiency project financing;
- 2) Demonstrating the feasibility of packaged investments in higher-cost energy efficiency measures in buildings and increasing acceptance of energy performance contracting mechanisms in Poland; and
- 3) Stimulating the demand for energy efficiency services in the buildings sector and increasing awareness and capacity of commercial banks to originate and implement loan transactions for EE investments.

Key performance indicators: (see Annex 3)

Key outcome-level performance indicators for the Development Objectives (DO) ratings related to the project include:

- Number of transactions relating to EE projects/ESCOs in the Polish market
- Volume of debt financing relating to EE projects/ESCOs in the Polish market
- Number of EE/ESCO projects larger than \$250,000

Key output-level performance indicators for the Implementation Progress (IP) ratings related to the GEF project include:

- Energy savings resulting from guaranteed loans
- Emissions reductions resulting from guaranteed loans
- Number of guarantee transactions
- Guarantee claims paid
- Net outstanding exposure
- Loan volume supported by guarantee
- Total annual investment in EE projects supported by guarantee
- Energy savings resulting from grant financing
- Total co-financing contributed by building owners in POE ESCO projects supported by grant
- Number and volume of projects for which performance contracting model was used

3. Project components (see Annex 3, 4 and 5 for additional details)

The proposed project consists of three components, as described below: (i) the partial guarantee facility; (ii) the capital grant facility; and (iii) technical assistance.

Partial Guarantee Facility for energy efficiency project financing (a GEF grant of US\$5.7 million): A partial guarantee facility with US\$5.7 million in reserves will be established with GEF funds as a risk-sharing mechanism that will provide commercial banks partial coverage of risk exposure against loans made for energy efficiency projects for buildings throughout Poland. The guarantees will cover 50 to 70 percent of loan principal, and will be arranged through a number of banks who will each have entered into a Guarantee Framework Agreement (GFA) with Bank Gospodarstwa Krajowego (BGK). The program will target the building sector generally, and will focus on multi-family (including cooperative) housing, schools and hospitals. The program will also encourage lending to ESCOs using performance contracting as a financing structure. From the beginning BGK will target a reserves to liabilities ratio of 1:1.5 meaning that BGK will guarantee

The Guarantee facility will leverage about US\$39.0 million in total investment by commercial banks participating in the program, for approximately 390 projects ranging in size from US\$25,000 to \$500,000.

Capital Grant Facility (a GEF grant of US\$2.0 million): The Grant Facility will support investments of US\$6.67 million in bundled EE projects in the Krakow region. In order to be eligible for support a project must consist of between 30% and 75 % high cost measures (HCM, i.e. those measures with paybacks in excess of 10 years). The capital grant facility will provide

partial grants equivalent to 30 percent of total project cost to POE ESCO payable upon completion. The flat cost-sharing structure will require that higher-payback projects (over 10 years) include some portion of end-user co-financing in order to make the project economically attractive for ESCO and lenders. Local Banks and POE ESCO are expected to contribute US\$4 million of this investment, and client co-financing is expected to equal US\$.67 million of total project cost of the packaged investment.

For Technical Assistance (a GEF grant of US\$3.3 million): Technical assistance will be provided for several barrier removal activities, including: support for the deployment of the guarantee mechanism and building the capacity of BGK, which is a state-owned development bank that falls directly under the Ministry of Finance, to administer the guarantee; support to POE ESCO in the development of the performance contracting model in the Krakow region and to build its pipeline of potential investments; provision of training to local banks; activities to increase awareness and demand for efficiency investments among building owners including municipalities; and collection of project monitoring data and broad dissemination of results. Additional information on all components is presented in Annex 4.

Table 1: Indicative Costs and Financing Plan

Component	Category/Sector	Indicative Costs		Financing Plan		
		Amount	% of Total	GEF	% of GEF Financing	Private Sector
1. GEF Partial Risk Guarantee-Commercial Financing	Barrier Removal	\$54.5	84%	\$5.7	52%	\$48.8
2. GEF Capital Cost Grant	Barrier Removal	\$6.7	10%	\$2.0	18%	\$4.7
3. GEF Technical Assistance	Barrier Removal and Capacity Building	\$3.3	5%	\$3.3	30%	\$0.0
Total Project Costs		\$64.5	100%	\$11.00	100%	\$53.5
Total Financing Required		\$64.5	100%	\$11.00	100%	\$53.5

4. Lessons learned and reflected in the project design

The Small and Medium Scale Enterprise (SME) program and the Hungary Energy Efficiency Co-Financing Program (HEECP) of the International Finance Corporation (IFC) have demonstrated an innovative approach to overcoming incremental risk and the leveraging of GEF funds, and key elements of these programs have been incorporated into the project design. The key lessons to be learned from the experiences of the IFC programs include:

- Strong capabilities in financial flows management and administration should be the main characteristic of primary and secondary executing agencies;

- Risk sharing arrangements among project stakeholders (ESCOs, end-users, and commercial banks) are critical to sustainability and replicability of the project model;
- Use of a guarantee framework agreement (GFA) establishes strong linkages between guarantor and banks, and allows banks to develop an EE “product” in anticipation of a projected volume of transactions. This provides more confidence to bank management that the effort expended in developing new loan business will be rewarded with a large number of transactions;
- Negotiation of risk coverage by GEF guarantee facilities should be adopted whenever possible, and a fee should be assessed for service provided to ensure market incentives guide decision making;
- Partial guarantees avoid some of the moral hazard often associated with full guarantees.

Another lesson learned from the HEECP as well as other market-based non-grant mechanisms is the need for a strong technical assistance program. Provision of financial support mechanisms or new products is usually not enough, as market participants are entering into a new field in most cases. Lack of understanding of deal structure is an especially critical barrier in energy efficiency financing, as well as the high transaction costs associated with small projects.

In the HEECP program, the IFC acts as the guarantor. The Poland-GEF Energy Efficiency Project is different in that the guarantor’s responsibilities are assumed by BGK, a local institution. Thus, local capacity is being created, along with the potential for knowledge transfer for future programs and replication.

The performance of the Thermomodernization loan program -- a subsidized government loan program designed to increase energy efficiency investments for heating systems and building envelopes -- managed by BGK has yielded several lessons that can be readily applied to the GEF guarantee program. The proposed guarantee program improves on the Thermomodernization program generally by placing fewer constraints on borrowers and participating banks, while at the same time appropriately sharing the transactional risk. A more market-oriented approach is taken in the current design. For example, equity requirements are not fixed by the program (though individual banks may have such requirements); all types of commercial entities, including ESCOs and vendors, are eligible. In addition, the technical assistance component provides up-front cost support for banks. The guarantee program also helps to lower transaction costs and improve flexibility by providing for a portfolio guarantee structure. This structure will allow banks to introduce smaller loans to BGK with minimal approval procedures, in order to bring transaction time and costs down. Various linkages between the GEF partial guarantee and the TM program have been developed to leverage the potential synergies and BGK’s experience, including: common eligibility criteria; common approach to audits and review; working with banks active in the TM program; cross-marketing of the programs; and building on the capacities of program stakeholders.

The capital grant facility design reflects lessons learned from many demand-side management programs in North America and Europe, many of which have focused on market transformation effects. Experience with financial incentives has shown that they are often helpful in speeding market penetration of high-cost measures in the building sector, and will increase consumer acceptance of both the energy performance contracting model and in the viability of bundling high cost measures with lower-cost measures as a packaged investment.

5. Alternatives considered and reasons for rejection

The following alternatives were considered for the key project components and eventually rejected:

For the Guarantee component:

- *Development of a line-of-credit operation to support energy efficiency investments through financial intermediaries to support energy efficiency investments.* Experience with World Bank projects in the ECA region involving credit lines, including for energy conservation, indicates that such projects have not been an effective mechanism to overcome financial market barriers, and that such programs have suffered from slow disbursements or cancellation of funds. This was due to reluctance of banks to extend long-term financing, and lack of marketing and development capacity.
- *Exclusive use of guarantee by POE ESCO in the Malopolskie Voivodship during first three years.* Originally, it was considered to limit the guarantee support to POE ESCO project activities in the Malopolskie Voivodship. However, based upon the POE ESCO business plan the demand for commercial bank financing for their projects alone would comprise only a small fraction of the intended guarantee volume. In addition, both BGK and commercial banks expressed a strong desire to roll out the guarantee on a national basis from the beginning.

For the Capital Grant Facility:

- *Subsidy to end users for installation of specific measures.* This approach tends to be more expensive to implement, and does little to create a market for energy service contracting. This alternative was also rejected because it does not allow flexibility in developing optimal project design which packages multiple measures and attractive financing options.
- *Subsidy to end users to secure financing for ECMs.* There are already several programs in Poland that provide subsidized financing for energy efficiency projects such as the Thermomodernization loan program. Additional subsidies of the type provided in this program are not needed.

6. Higher level objectives to which the project contributes

The project supports the CAS objectives of enhancing private sector-led growth and job creation and achieving environmental sustainability. The project would achieve this by: (i) establishing the financing mechanisms and incentives that will improve the availability of local private sector bank funding for energy efficiency projects as well as increase end-user demand for energy efficiency and (ii) improving energy efficiency throughout the heat supply chain by reducing the energy intensity of end-user (building sector) systems. The project also supports the overarching economic themes of market determination of capital allocation, market and institutional efficiency, and the shift of the role of the state/municipality from direct participant in the economy to that of a facilitator. The project would result in improved air quality by reducing the energy intensity of the building sector and thus reducing fuel consumption at the source, as well as promoting cogeneration and use of natural gas. The environmental benefits achieved by the project are closely linked to the EU accession standards, which are also set as an important development benchmark in the CAS. The Government also has a challenge to absorb EU

structural funds over a three-year period following accession in May 2004. The proposed project could play a role in developing investment projects, especially in critical areas of the economy such as the cooperative housing sector, that could be co-financed with structural funds.

The project is consistent with the objectives of GEF Operational Program 5: Removal of Barriers to Energy Efficiency and Energy Conservation. Section 5.7 of OP5 includes support for activities that lead to sustainable “win-win” results that demonstrate local, national and global benefits through removal of barriers.

C. IMPLEMENTATION

1. Partnership arrangements

BGK is prepared to manage the guarantee program, and to execute a Guarantee Framework Agreement with at least one commercial bank based on activities completed during project preparation. The first draft GFA is currently under negotiation between BGK and a commercial bank. BGK will receive additional training in the early stages of project implementation, especially regarding procurement and reporting issues. BGK will hire a procurement consultant, retroactively financed, to prepare the implementation of the TA component.

2. Institutional and implementation arrangements

BGK, a state owned bank established in 1924¹, will be the executing agency and will be responsible for coordinating the implementation of the overall project and will directly implement the guarantee facility component. BGK will act as an agent of the Government of Poland/Ministry of Economy and Labour (MoEL), who will be the grant recipient.

Overall Project Management. The Special Funds Department at BGK will be responsible for all activities related to the GEF Grant, including procurement, disbursement and accounting. BGK will hire a financial officer responsible for financial accounting and reporting related to the project. For the project purposes the implementing team will design and implement a special IT system to maintain the project cost and monitor guarantees issued. The new system for monitoring of guarantees shall be ready prior to disbursement for the Partial Guaranty Facility Component. BGK will also prepare a Project Implementation Plan including an operational manual for the project with a section on accounting and financial matters. BGK will enter into cooperation with three to four participating banks on the basis of separate Guarantee Framework Agreements. These participating banks will actually originate the loans to the borrowers for eligible energy efficiency projects.

Flow of funds. Project funds will flow from: (i) the Bank, either via a single Special Account which will be replenished on the basis of SOEs or by direct payment on the basis of direct payment withdrawal applications; or (ii) the commercial Bank loans as contributions, or (iii) own contribution of final beneficiaries (beneficiaries of energy efficiency projects). The GEF funds for the Guarantee Facility will be transferred directly to the Guarantee Facility Account held in BGK and earning bank deposit interest on behalf of the MOEL. BGK will receive authorization to manage the Account including inter alia payments for called guarantees and recovery of amounts paid under called guarantees.

¹ The present activities of BGK include the ones stipulated in the Banking Law as well as special purpose tasks assigned by the Ministry of Finance or through legal acts including inter alia managing of special funds (e.g. the National Housing Fund, the National Credit Guarantee Fund, the Thermomodernization Fund, and the Student Loans and Credits Fund).

Strengths and weaknesses. The concept has significant strengths due to: (i) the experience of BGK staff in implementation of Bank financed projects and government projects including the successful National Loan Guarantee Fund, (ii) the unqualified audit reports issued by BGK auditors, and (iii) overall strong organizational and financial capacity of BGK as reputable bank to manage this type of project. A minor weakness is BGK's inexperience in implementing a TA program and achieving compatibility with World Bank procedures as exemplified in a slow preparation of an IT system for Partial Credit Guarantee Facility Component.

3. Monitoring and evaluation of outcomes/results

Proposed Activities. A strong participatory program is being prepared to inform the public and to engage key stakeholders. The public participation program will include: (i) information sharing activities; and (ii) consultative participation activities at two levels: at the program level or a class of potential customers, and at the individual project level. The intention is to reach out to the various stakeholder groups to provide them with adequate information about the project and how it will affect them. The public participation program will listen to stakeholder concerns, and incorporate them as appropriate into the design and implementation of the overall program. Key stakeholder groups are:

Direct beneficiaries: these include the owners and occupants of buildings of different types (e.g. housing cooperatives, businesses, and public service facilities such as schools, hospitals, and governments).

Other affected groups: these include building industry associations, building design professionals, manufacturers of building equipment and materials, building retrofit contractors, financial organizations serving the building industry (banks, mortgage companies, etc), and building code officials and inspectors.

Other stakeholders: these include local advocacy groups (buildings, housing, energy, and environmental issues), officials and key staff of the city and voivod (regional) governments, and members of the architectural and engineering community.

4. Sustainability

The project aims to engage local financing sources, especially commercial banks, through lending to the building sector, especially the housing cooperatives sector which is currently underserved. The project will also build awareness of energy efficiency financing and capability to implement energy efficiency investments in Poland, leaving behind a self-sustaining energy efficiency industry.

Several fundamental conditions for a strong energy efficiency market exist in Poland, including: (i) energy tariffs, both for heat and electricity, that have been rationalized to attain cost recovery; (ii) a relatively healthy financial sector; (iii) improved interest rates in most areas of lending. A downward movement of energy tariffs is not likely, given Poland's probable accession to the European Union; higher tariffs will of course improve the financial performance of all energy efficiency projects. Currently the banking sector is relatively healthy financially and there is adequate liquidity in the markets. Interest rates have dropped steadily over the past several years and inflation, as well as the currency, are stable. Other macroeconomic conditions, such as GDP

growth, are not as favorable but have less impact directly on the demand for energy efficiency improvements.

The project will build on these fundamental conditions and introduce concepts and financial mechanisms that will provide for greater awareness of and access to traditional energy efficiency financing. The guarantee facility will help develop a sustainable market for energy efficiency finance through development of capacity within local financial institutions and through addressing the perceived risk in lending to the sector that is currently impeding increased investment. Like the Hungary HEECP program, it is expected that the requirement for risk sharing will decrease as transaction volume increases and default levels remain stable and low. Lower guarantee percentages and eventually lending without guarantees will signify a high degree of sustainability.

The existence of a relatively successful guarantee program for Small and Medium Enterprises -- Krajowy Fundusz Preczen Kredytowych (KFPK) -- operated by BGK will improve the chances of a sustainable market for energy efficiency in Poland. KFPK is a guarantee program designed for loans made to SMEs. Building on the procedures and lessons learned from KFPK will help BGK launch a successful EE guarantee program earlier, with early-stage focus on the particulars of EE lending and marketing.

The Capital Grant Facility will demonstrate the efficacy of bundling high-cost and low-cost measures into larger projects with reduced payback periods, in the Krakow region through the activities of POE ESCO. The approaches of POE ESCO, employing a performance contracting model, are replicable for other entities in Poland.

The project will create significant expertise and capacity in Poland through the following activities: (i) development of procurement capacity and energy efficiency demand analysis (mainly in Malopolska Region) through TA; (ii) development of energy efficiency finance and contract structuring capacity at commercial banks and BGK, through TA; (iii) transactional experience at commercial banks and BGK through loan origination and execution of guarantee agreements; (iv) EE project audit experience through TA associated with both POE ESCO and the guarantee program; (v) development of increased project experience at POE ESCO, through increased deal flow associated with the Capital Grant facility as well as TA training. All of this experience and increased capacity will remain in country, creating sustainability within the energy efficiency sector.

Exit strategy

The final exit strategy for GEF funds will depend on the success of the project. The Government, the World Bank, in consultation with GEF, will finalize the exit strategy in Year 4 of project implementation. If monitoring and evaluation reports indicate that program objectives are being met and there is continued demand for the partial guarantee from commercial banks, then available reserves in the guarantee fund shall remain in the account controlled by BGK and the program shall continue based upon terms specified in a final agreement between the World Bank and the GOP in the last year of GEF project implementation.

If performance has not met project goals, the uncommitted funds (defined as those funds not committed or encumbered to any outstanding loans or committed via existing framework agreements with participating banks) in the reserve account may be transferred from BGK to the Ministry of Economy for use in other climate change related projects in Poland. However, in

doing so, funds for administration and management of the remaining commitments must also be allocated to BGK.

The implications for each GEF grant modality are discussed below.

GEF Capital Grant Facility. The US\$2.0 million capital grant modality will be most likely fully disbursed by Year 4 of the project. If funds are not used by POE ESCO during the three-year exclusivity period, remaining balances will be transferred to the Partial Guarantee Reserve Account managed by BGK.

GEF Partial Guarantee. The US\$5.7 million guarantee reserve account granted to the MoEL and managed by BGK, net of actual losses and recovered funds, would be permanently granted to the Government of Poland to continue the guarantee program. BGK and the Government will set future targets for budgets, guarantee percentages, new GFAs and other program operating determinants in Year 4 for the post-project period. Any future closure of the program would require transfer of all uncommitted funds in the reserve account to other eligible energy efficiency activities. Sufficient reserves will be required to remain in the account to cover (i) outstanding contingent liabilities (based on outstanding principal for loans which are guaranteed and not closed by participating banks); and (ii) operating costs of BGK for the remainder of the “guarantee period” (defined as that period ending when outstanding guarantee equal zero). It is assumed that no funds will be disbursed by the Bank for management fees after closure of the project. As liabilities are reduced, reserve funds can be released to other activities. BGK would be required to continue reporting performance of the program to the Government.

5. Critical risks and possible controversial aspects

Risk	Risk Rating	Risk Mitigation Measure
From Outputs to Objective		
Higher energy prices do not motivate service providers and consumers to implement energy saving investments	M	<ol style="list-style-type: none"> 1. Implement energy efficiency measures consistent with the project's economic circumstances. 2. Continue Bank involvement in Energy Sector Dialogue, including pricing reforms
Increased lending from commercial banks to EE project sponsors and building owners does not occur despite presence of guarantee.	M	<ol style="list-style-type: none"> 1. Aggressively market program through use of TA; provide training to FIs, BGK and EE businesses to develop pipeline 2. Demonstration and dissemination of early project experience of POE ESCO 3. Sign multiple GFAs to increase number of banks offering loans using guarantee product and number of potential customers applying for loans 4. Allocate additional TA to increase capacity and familiarity of local banks if required
Sufficient numbers of creditworthy building owners are not submitting loan applications	S	<ol style="list-style-type: none"> 1. Increase guarantee percentage of total principal 2. Increase marketing to public sector/wider coverage of marketing to increase demand
Capital grant does not buy down payback enough to make projects financially attractive	N	<ol style="list-style-type: none"> 1. World Bank will review component after one year to determine if grant amounts or procedures need to be adjusted 2. Focus energy audits and proposals on larger projects with multiple measures 3. Encourage POE ESCO to include electrical energy savings in projects to bring down paybacks to more attractive levels
Demand creation and capacity building efforts do not convince building owners to enter into EE performance contracts with ESCOs	M	<ol style="list-style-type: none"> 1. Begin TA assistance in this area early on and review after one year 2. Disseminate results early from representative projects 3. Provision of TA to other market actors?
From Components to Outputs		
BGK unable to negotiate multiple GFAs	N	<ol style="list-style-type: none"> 1. Assist BGK through TA to identify and train additional local banks in guarantee program 2. Aggressively market program in first two years
Local banks unwilling to pass through benefits of guarantees to customers and unable to originate deals	S	<ol style="list-style-type: none"> 1. Train several local banks in early phase of program in EE finance, guarantee structure 2. Aggressively market guarantee program to potential borrowers
POE ESCO unable to generate sufficient deal flow for grant applications	M	<ol style="list-style-type: none"> 1. Use TA funding to build capacity among building owners and assist municipalities in developing RFPs 2. Assist POE ESCO in developing larger projects through aggregation 3. Use TA funds for audits and weatherization studies to ramp up deal flow quickly

Risk	Risk Rating	Risk Mitigation Measure
Investments supported through project do not yield projected levels of energy savings	N	1. Eligibility criteria limit investments to proven technologies
Materials suppliers abuse market by increasing prices	M	1. World bank procurement procedures are followed for Grant funded projects 2. Grant Administrator monitors unit pricing for windows and insulation and rejects grant applications that exceed these by large margin
Overall Risk Rating	M	

6. Grant conditions and covenants

Financial Covenants

- (i) BGK shall maintain a loss rate on non-performing loans of the participating banks supported by the Partial Credit Guarantee Facility, not exceeding [15%] of the cumulative guarantee liability commitment of BGK by the end of 2004 and thereafter until completion of the Project. “Loss rate on non-performing loans” will be calculated on cumulative basis as percentage of actual amounts paid out for called guarantees adjusted by amounts recovered divided by cumulative guarantee liability i.e. actually disbursed loan amounts covered with guarantees.
- (ii) BGK shall agree to a maximum liability-to-reserves ratio of 1.5:1 during the first two years of the guarantee program. A project review will be made in the 1st quarter of Year 3 (between 25 and 27 months of effectiveness). Thereafter, following an evaluation of the performance during the first two calendar years, the Recipient shall cause BGK to adjust such target in a manner satisfactory to the Bank with the objective of achieving a liability to reserve ration of 3:1. “Liability-to-reserves ratio” will be calculated as actual guarantee liability outstanding divided by the balance on the Guarantee Fund Account.

Other FM covenants

BGK will maintain a financial management system both for itself and the project acceptable to the Bank. Additionally BGK will be responsible to cause POE ESCO and Participating Commercial Banks to maintain the sound accounting and financial management system for project transactions and entity. The BGK and Participating Commercial Banks as entities and project financial statements, SOEs and Special Account, Guarantee Facility Fund will be audited by independent auditors acceptable to the Bank and on terms of reference acceptable to the Bank. The annual audited statements and audit reports together with the Management Letter will be provided to the Bank within six months of the end of each fiscal year.

BGK shall not draw down reserves for use as operating funds at any time during project implementation without the prior written approval of the Bank.

Effectiveness Conditions.

The following events are specified as additional conditions to the effectiveness of the Grant Agreement:

- (a) The Grant Implementation Agreement between MoEL and BGK has been executed.
- (b) The Project Implementation Plan (PIP), satisfactory to the Bank, has been adopted by BGK.
- (c) BGK has received Letters of Intent from at least two commercial banks stating that they expect to be able to sign a Guarantee Framework Agreement with BGK within a period of 3 months from the expected date of effectiveness

Disbursement Conditions.

- (a) Disbursements on the Guarantee Facility Component shall be conditioned upon the readiness of the IT system to monitor the guarantees issued together with the underlying loan portfolio.
- (b) Disbursements on the Grant Facility Component shall be conditioned upon the execution of the POE ESCO GEF Grant Implementation Agreement between BGK and POE ESCO.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

Economic (see Annex 4):

- Cost benefit
- Cost effectiveness
- Incremental cost
- Other (specify)

The project is expected to produce incremental benefits of 1.4 million tonnes of CO₂ emissions reductions through US\$61.5 million in investments in energy efficiency in buildings at an incremental cost to GEF of US\$8.0/tonne CO₂, or US\$29.35/tonne C. Detailed analysis of the incremental costs and the global environmental benefits of the project are provided in Annex 9.

Financial (see Annex 4 and Annex 5):

Financial Aspect of the Guarantee Program

The partial guarantee program will be backed by a reserve fund of US\$5.7 million that will be disbursed to BGK in several tranches over the first three years. Disbursements will be based on the facility liability limits in the initial GFAs and it is anticipated that the first disbursement will be for US\$3.0 million. It is anticipated that a second GFA will be signed in Year 1, allowing for a second disbursement of US\$2.0 million to reserves. A third and final disbursement of US\$0.7 million will be made in Year 3 pending positive review by World Bank and BGK.

Reserves will back partial guarantees of between 50 percent and 70 percent of loan principal. It is anticipated that approximately US\$2.5 million in loan transactions will be concluded in Year 1, increasing to US\$6.0 million in Year 3 and US\$9.0 million in Year 6. Total loan volume over the six-year period is expected to be US\$39.0 million, with an additional 20 percent of equity financing, for a total project financing volume of US\$48.75 million. Average loan size is expected to be US\$100,000, for a total of 390 transactions. The default rate assumed for this

program is 7 percent, and will be reviewed after Year 2 to determine actual risk levels in the market and program. Total losses over the six-year period are expected to be US\$1.6 million. An assumed recovery rate of 10% of loss payments is used. With approximately US\$1.6 million of interest income reinvested in reserves, the net balance of reserves at the end of the project period will be US\$5.8 million, representing a net gain of two percent total. The balance in the reserve account will be sufficient to sustain continued guarantees in the post-project period.

BGK Operating Costs

The costs of managing the GEF Project will be incremental to BGK's existing operations. Program operating costs are budgeted at an average of about US\$280,000 per year through the project period, for a total of US\$1.7 million. Some annual increases will occur in staffing and overhead in years 2 or 3, depending on deal volume. Decreases will likely occur later in the program. Guarantee fees will start at about US\$25,000 in Year 1 and ramp up as deal volume increases, to average about US\$70,000 per year. World Bank has agreed to pay a flat fee of US\$1.3 million to BGK from GEF funds to cover most of the operating costs, with the balance of operating costs paid from guarantee fees. The management fee as a percent of operating costs will be approximately 80 percent over the project period, therefore there is some risk to BGK if (i) it does not generate sufficient guarantee fees; or (ii) administration costs are higher than expected.

Fiscal Impact

BGK is a state-owned development bank that falls directly under the Ministry of Finance. Any guarantee liabilities undertaken by BGK in excess of a 1:1 ratio will result in a contingent liability for BGK, and thus some risk. The anticipated risk to BGK is low during the first two years, when the program is beginning to ramp up and transaction volume will likely not allow for a liability to reserve ratio exceeding 1:1. Figure 3 in Annex 9 shows how the deal flow increases and the risk exposure increases along with it. At a 3:1 ratio, actual losses (in terms of default rate) would have to exceed 33 percent before BGK would have impact to its balance sheet. Such a rate is highly improbable. At a ratio of 1.5:1, the actual default rate would have to exceed 67% in order to create an impact on BGK's balance sheet.

Risk management for BGK will be primarily in the form of managing the Facility Liability Limits (FLLs) negotiated with each commercial bank.

2. Technical

Use of Technologies. This project will support investments in proven energy technologies. Technologies eligible for both the guarantee and grant components are familiar to the engineering and construction trades in Poland and are widely available in Poland. POE ESCO and other entities will be encouraged to focus on proven methods for maximizing savings to be generated for each client, without trying leading edge technologies.

Energy Savings Versus Building Retrofit Measures. An important issue is whether a specific technology is being used because of its energy savings or as part of general building renewal, or both. This issue occurs especially regarding installation of new windows in buildings. The capital grant facility, which is specifically geared toward demonstrating bundled investments including high-cost measures, is applicable only for comprehensive projects where high-cost

measures comprise a maximum of 75 percent of total project cost. Building owners, through technical assistance activities, will also be educated about the value of comprehensive retrofit projects which cut deeply into energy consumption.

3. Fiduciary

The financial management arrangements of the project are acceptable to the Bank with exception of the IT system for management of the guarantees issued with underlying loan portfolio. The readiness of the IT system for management of the guarantees issued together with underlying loan portfolio relating to Partial Risk Guarantee Facility is a disbursement condition for this component.

Legal and Implementation Arrangements

The Government of Poland Ministry of Economy and Labour (MoEL) will be the recipient of the US\$11 million dollar grant. A Grant Agreement will be signed between the World Bank and MoEL. MoEL will deposit funds from the GEF Grant with BGK, who will act as Guarantee Manager and Executing Agency. A GEF Grant Implementation Agreement will be signed between MoEL and BGK. BGK will serve in the following roles as Executing Agency: manager of the Guarantee Facility; administrator of the Capital Grant Facility; administrator of the technical assistance activities; coordinator of the entire project. A Project Agreement between the World Bank and BGK will specify the various tasks and responsibilities of BGK. BGK will assume all fiduciary responsibilities for the use of the GEF grant funds.

BGK will enter into *Guarantee Framework Agreements (GFA)* with several qualified banks to govern the relationships and set the responsibilities of each party in entering into individual loan guarantee agreements. The World Bank designated staff in cooperation with BGK will need to assess each prospective participating bank in conformity with the World Bank's Operational Policy 8.30 and Europe and Central Asia Region Financial Intermediary Lending guidelines; and confirm their eligibility to participate in the project. BGK is required to obtain the World Bank's no objection to any selected participating bank. All participating banks will have to fully meet the qualification criteria within the time period provided for project implementation in order to take part in the project. One of the prospective participating bank has been positively assessed by the World Bank staff. In addition, BGK and POE ESCO will enter into a Grant Implementation Agreement and individual Capital Grant Agreements for each grant made to POE ESCO under the Capital Grant component. The Grant Implementation Agreement between BGK and POE ESCO will govern: (i) the Capital Grant; (ii) guarantees made for POE ESCO project loans; and (iii) technical assistance grants made to POE ESCO.

A diagram of the legal and implementation arrangements is enclosed in Annex 6.

Prior Review.

World Bank is responsible for review of the following:

For the Guarantee Program: review and approval of (i) all Guarantee Framework Agreements; (ii) the first two loan guarantee agreements under each GFA.

For the Capital Grant Facility: review and approval of (i) the first three grant applications; (ii) any grant application requesting a grant of US\$400,000 or more.

For the Project Management Unit of BGK: (i) review of BGK's PMU annual operating budget and business plan for the following fiscal year at least one quarter prior to end of current fiscal year; budget should be agreed upon and approved by World Bank at least one month prior to beginning of next fiscal year; (ii) review and approval of any request for extraordinary use of funds from the reserve account, for example, if program earnings are insufficient to cover operating costs at any time.

4. Social

There are no critical social issues related to the project. The project will make electricity and heating services more affordable in the areas targeted by the project, and therefore no social hardships are anticipated as a result of the project.

Improved thermal insulation of dwellings could substantially lower heating requirements, and in conjunction with regulation devices and metering and consumption-based billing procedures household expenditures for heat and hot water could thus be reduced considerably.

During mid-term review, the World Bank, BGK and POE ESCO will review the achievements so far. Stakeholder consultations will provide important inputs into decision making about the course of action during the last part of project implementation.

As part of its marketing and consumer-relations activity, POE ESCO will conduct a consumer satisfaction survey each year. During project implementation, the World Bank will review the terms of reference of such a survey and agree with POE ESCO on any additional survey activity that will be required to assess the project impacts, as well as the mechanisms that will be used to follow up on the survey results in project implementation.

5. Environment

In accordance with World Bank policy on Environmental Assessment (OP/BP/GP 4.01), the project has been rated Category B. There are no adverse major environmental issues associated with this project. The project is specifically targeted to improve energy efficiency. Project components will reduce fuel consumption and/or encourage less polluting fuel use which in turn will improve local air quality (dust, sulfur dioxide and nitrogen oxides) and reduce greenhouse gas emissions (carbon dioxide).

Replacement of materials and equipment may lead to dust and noise. Replacement of old insulation may involve asbestos, and assurances were provided that any new insulation materials are acceptable under Poland's commitments to the Montreal Protocol.

The Guarantee Framework Agreements used in the guarantee facility specifically address requirements for originating banks to comply with World Bank and Polish Government environmental regulations.

An EMP has been prepared, providing environmental guidelines for the implementation of the Capital Grant by POE ESCO. It focuses on institutional arrangements and institutional capacity

for environmental screening, environmental analysis, and the environmental regulatory framework which is in place or would be necessary to assure POE ESCO subprojects receive a level of scrutiny that is: (a) in compliance with Polish environmental policies, procedures, and regulations, and (b) consistent with World Bank environmental policies and procedures.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	X	[]
Natural Habitats (OP/BP 4.04)	[]	X
Pest Management (OP 4.09)	[]	X
Cultural Property (OPN 11.03 , being revised as OP 4.11)	[]	X
Involuntary Resettlement (OP/BP 4.12)	[]	X
Indigenous Peoples (OD 4.20 , being revised as OP 4.10)	[]	X
Forests (OP/BP 4.36)	[]	X
Safety of Dams (OP/BP 4.37)	[]	X
Projects in Disputed Areas (OP/BP/GP 7.60)*	[]	X
Projects on International Waterways (OP/BP/GP 7.50)	[]	X

7. Readiness for Implementation

- 1.a) The engineering design documents for the first year's activities are complete and ready for the start of project implementation.
- 1.b) Not applicable.
- 2. The procurement documents for the first year's activities are complete and ready for the start of project implementation.
- 3. The Project Implementation Plan has been appraised and found to be realistic and of satisfactory quality.
- 4. The following items are lacking and are discussed under loan conditions (Section G):

8. Compliance with Bank Policies

- 1. This project complies with all applicable Bank policies.
- 2. The following exceptions to Bank policies are recommended for approval. The project complies with all other applicable Bank policies.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

Peter Johansen
Team Leader

Henk Busz
Sector Manager

Roger W. Grawe
Country Director

Annex 1: Country and Sector or Program Background

POLAND: POLAND - GEF Energy Efficiency Project

Sector-related Country Assistance Strategy (CAS) goal supported by the project:

- Enhancing private sector-led growth and employment creation

Document number: No. 24783-POL

Date of latest CAS discussion: **

Date of CAS Progress Report: August 25, 1999

The project supports the CAS objectives of enhancing private sector-led growth and job creation and achieving environmental sustainability. The project would achieve this by: (i) establishing the financing mechanisms and incentives that will improve the availability of local private sector bank funding for energy efficiency projects as well as increase end-user demand for energy efficiency and (ii) improving energy efficiency throughout the heat supply chain by reducing the energy intensity of end-user (building sector) systems. The project also supports the overarching economic themes of market determination of capital allocation, market and institutional efficiency, and the shift of the role of the state/municipality from direct participant in the economy to that of a facilitator. The project would result in improved air quality by reducing the energy intensity of the building sector and thus reducing fuel consumption at the source, as well as promoting cogeneration and use of natural gas. The environmental benefits achieved by the project are closely linked to the EU accession standards, which are also set as an important development benchmark in the CAS.

Global Operational Strategy/Program Objective addressed by the project:

The project is consistent with the objectives of GEF Operational Program 5: Removal of Barriers to Energy Efficiency and Energy Conservation. Section 5.7 of OP5 includes support for activities that lead to sustainable “win-win” results that demonstrate local, national and global benefits through removal of barriers.

Main sector issues and Government strategy:

An enormous potential for cost-effective improvements in energy efficiency in the building sector with associated environmental benefits remains relatively untapped in the Krakow region and throughout the greater Poland area. The building sector has been an underserved market for efficiency investments for a variety of reasons, and successful efforts to increase penetration rates of EE technologies and practices would yield significant long-term economic and environmental benefits for building owners and the economy at large. Materials such as high-efficiency windows and insulation can last 15-20 years, yielding environmental benefits well beyond the end date of the project.

The strategic importance of implementing further energy efficiency measures both on the supply as well as the demand side is well documented in sector work completed by the Bank and other studies. As an example, annual losses of heat in housing due to insufficient insulation alone amount to over US\$1.75 billion in Poland. Assuming average simple payback of 7 years, the total market for building insulation amount is about US\$12 billion. Based on average heating

costs, this would translate into approximately 223 petajoules of heat savings and about 13 million tons of CO₂ emissions reductions annually.

While market-based incentives for energy efficiency are increasing, many serious financial and institutional barriers and market failures are preventing the realization of the savings potential in this market. These barriers and market failures in Poland include:

- Local banks are not familiar with end-use energy efficiency projects for buildings and are reluctant to provide financing. They have also had little or no experience in lending to ESCOs and thus are not familiar with the energy performance contracting model.
- Some banks are interested in the performance contracting model offered by ESCOs, but in most cases ESCOs do not sufficient assets to provide comfort to the bank.
- Consumers and banks are less aware of financial options and benefits of energy savings, and have the perception that committed funds for EE projects carry very high risks.
- Projects are relatively small and transaction costs are high.
- Generally, building owners lack capital for any required investments and are not sufficiently creditworthy to attract commercial financing at acceptable terms.
- Scarce financial resources among building owners force a focus on a minimum first cost and hence only rudimentary levels of energy efficiency are currently considered by building owners.
- Various subsidy mechanisms have, to a certain extent, spoiled the market for commercial financing of energy efficiency projects in Poland, particularly amongst municipalities. Local governments have had the expectation that if they simply wait long enough some form of subsidy will be eventually obtained.
- The track record of many loans to the cooperative housing sector has been poor, reinforcing the perception of high risk by banks for loans for improvements in buildings.

New approaches and financing mechanisms are thus needed to help bridge the knowledge and financing gap between local banks and building owners. Any new approach must harness the incentive of building owners to undertake end-use cost-effective energy efficiency measures in a sustainable manner and must align with the institutional incentives of local banks to finance these commercially viable measures.

Local banks were surveyed during preparation via a formal solicitation requesting information on EE lending experience and a description of how they would market the program and generate deal flow. The survey showed that most banks are currently not lending to the sector, with a few exceptions. While liquidity exists in the financial sector, most banks are not lending to energy efficiency projects, and especially to buildings, for reasons stated above (lack of understanding of EE financing and ESCOs, perception of high risk, etc.). Generally speaking, the housing sector is considered by most banks as high risk, and it is often avoided. The multi-family housing sector is especially problematic due to changes in the law which have created uncertainty with regard to building ownership. Therefore most banks perceive greater credit risk in this sector. Indeed, there are some structural problems in several sectors, including the health care sector, which may limit lending to projects even with the existence of a guarantee. Only two of the banks surveyed have any experience with lending to ESCOs, and therefore exposure to the sector is still very limited.

The need to improve energy efficiency and to safeguard the environment has been a cornerstone of Poland's energy and environmental policy since 1990. Although substantial success in supply-side energy efficiency programs has already been achieved nationwide, it is widely recognized that substantial additional improvements in end-use energy efficiency and in air quality can still be achieved.

The Government of Poland's Energy Policy and Strategy calls for energy security through cost-effective supply of energy, at socially acceptable prices and in an environmentally sustainable manner in line with the EU strategy for the energy sector. The Government has supported the development of several additional market-based energy efficiency initiatives accelerated by: (i) major reforms in energy pricing pursued since 1991 which resulted in the gradual phase-out of consumer subsidies and adoption of appropriate pricing rules to ensure that energy prices gradually reach an economic level, and (ii) tighter enforcement of environmental standards to improve air quality and related higher environmental user charges and penalties.

Of particular relevance to the GEF project is the Thermomodernization (TM) Loan Program, in place since 1996. This subsidized government loan program is designed to increase energy efficiency investments for heating systems and building envelopes. Managed by BGK, the TM program provides a 25% reimbursement of principle for qualifying loans meeting eligibility requirements. While this program has led to over US\$14.8 million in investments in improved efficiency in Poland, the results achieved have been far below original government goals due to several program design flaws and un-addressed key barriers, including the previously mentioned high perceived risk and consequent high rejection rates of loan applications by lenders and high transaction costs associated with applications for TM projects.

The proposed GEF project will promote economic efficiency, facilitate the development of an environmentally sound energy sector in the Krakow region and Poland, and help implement mechanisms to enhance participation of commercial banks and possibly private investors on a sustainable basis. It strongly supports the implementation of the energy-environment agenda that helps cities to develop and implement action programs for compliance with the air pollution/urban air quality directives of the EU. It will build upon the extensive IBRD support which established an energy service company (POE ESCO) subsidiary of MPEC in Krakow to provide energy efficiency services on a commercial basis, and will overcome several key barriers leading to improved implementation of the TM loan program.

The proposed project will also support the Government in meeting its international obligations. Poland ratified the UN Framework Convention on Climate Change (UNFCCC) on July 28, 1994 and submitted the National Communication in 1996, agreeing to limit greenhouse gases (GHG) emissions to the 1988 level in the year 2000 through measures aimed at encouraging economic efficiency and rational use of energy. As the potential for reducing energy consumption (and in turn CO₂ emissions) in space heating is largely related to the improvement of heating devices and the quality of building insulation, priority has been accorded to the public and residential sectors. This priority is reflected in the project design.

Sector issues to be addressed by the project and strategic choices:

Overcoming Barriers to Energy Efficiency

The technical, economic, and environmental benefits to Poland of improving the energy efficiency of buildings and their energy sources are well substantiated. The technologies for effecting substantial improvements in energy efficiency in buildings are widely available with proven effectiveness. Detailed case studies of energy efficiency retrofits of typical large residential buildings have shown that many energy efficiency projects could yield attractive financial returns if they were not burdened with risk premiums and the absence of longer-term financing in local capital markets. As a result of these “financing gap” barriers, many such projects remain unimplemented throughout Poland. Barriers related to the lack of financing from commercial channels are compounded by market factors such as low awareness and risk perception.

Polish case studies and have identified the following barriers to energy efficiency project development in the building sector. They are identifiable barriers and risks that will be addressed by the project and whose elimination will be monitored during project implementation:

- (a) **Financing Barriers.** Many Polish building owners and other active participants in the market, including ESCOs, have insufficient access to project financing for up-front investment costs for energy efficiency retrofit projects. Some of the reasons for this are:
- Most building EE projects will have a payback of greater than 6 years. While loan maturities are increasing, the typical current commercial loan term is about 3-5 years, which is too short for repaying the loan from the energy savings. Such a short repayment horizon ‘skims the cream’ and puts further deep cuts in energy use out of range.
 - Many building owners, while having reasonably good credit, do not have adequate capital to provide either equity co-financing or adequate security sufficient to receive long term loans from the fairly risk-averse banking sector. Most banks require collateral well in excess of 100% of the loan value.
 - Domestic banks have not yet initiated comprehensive or long-term lending programs for energy efficiency projects. Moreover, the domestic financial institutions are generally not familiar or adept at analyzing the financial aspects of energy efficiency projects, and hence even less willing to extend credit for these projects.
 - **Commitment Risk.** Disbelief in the possibility of savings and fear of disruption to building occupants stall energy management actions that might otherwise be fundable. Commercial banks and building owners often perceive too much risk to enter into financing arrangements based on energy management programs from ESCOs. Building owners and commercial banks have never benefited from this type of mutual commitment before and assuming new risks and endeavors by definition threatens their conventional methods of operation and risk sharing.
- (b) **High Transactions Costs.** Energy efficiency projects are relatively small and can carry high transaction costs for lenders and end-users, especially when using new and

unfamiliar procedures such as energy performance contracting. Especially where the annual benefits are considered small, building owners are reluctant to incur these costs. This barrier is evidenced in the poor performance of the Thermomodernization loan program, where high upfront costs for end-users and complex procedures limited participation. These design flaws are being addressed in the proposed GEF project by reducing upfront costs and simplifying approval procedures in the guarantee program.

- (c) **Inadequate Information.** While the energy conservation community in Poland is well aware of energy efficient technologies and renovation measures, the building owners, the occupants and the local banks lack information about the financing aspects of energy-saving investments, the implementation experiences of others, and the ability to use energy savings to finance some building renewal.

Strategic Choices

To overcome the barriers above and help the market develop both quickly and in a sustainable manner, the following strategic choices have been made to overcome the three major market barriers identified above:

Choice of Markets– Energy Efficiency Projects and Clients in the Building Sector. The Project is focused on the buildings sector because of the significant savings potential, the lost opportunities not currently being financed, the prospect of leveraging and improving upon current efforts to improve EE in buildings, positive alignment with the government priority to improve efficiency in the public and residential sectors, and the total replication potential. The current efforts to improve efficiency in Poland, specifically through the TM program, can be vastly improved with the successful operation of the Poland-GEF Energy Efficiency project and, in the absence of the project will continue to have limited impact in capturing efficiency gains. At least in part, the lack of success of the TM program is due to failure to address the fundamental problem of lack of collateral for loans. The project will address efficiency in energy consumption in buildings all through the supply chain for residential housing, municipal/state clients, as well as for private enterprises; from source (high-efficiency boilers and cogeneration) to distribution (high-efficiency heat exchangers) to end-use (lighting, windows, insulation, HVAC). This flexibility will allow building owners and ESCO to design potential investment projects from a comprehensive perspective and capture short-term as well as longer-term savings.

Choice of ESCO Mechanism to reduce transaction costs. The ESCO model is particularly appropriate in Poland as many building owners are not in a position to structure or finance projects on their own, nor do they have the technical expertise required to deliver necessary energy savings. The ESCO model is proven in many countries as, with adequate support and access to financing, ESCOs can play the role of project aggregators and financiers. The credibility of the ESCO lies in the fact that it pre-finances the investments and guarantees the energy savings. Building owners will receive structural improvement as well as benefits from a more energy efficient and comfortable building in exchange for an agreed-upon series of payments to the ESCO based upon actual energy cost savings realized. There is a growing number of ESCO firms active in Poland (approximately 10), with several attempting to finance

projects and use performance contracting as a business model. However, current investment in the building sector is limited. Several of these firms are targeting the building sector but had little success in developing viable financing structures, due mainly to bank reluctance to enter the sector fully.

Choice of Utility Based ESCO in Krakow. MPEC, the parent company of POE ESCO, has already established a strong image as being a utility that sees its long-term interest in helping consumers to reduce their utility bills, rather than just trying to increase sales. POE ESCO has already signed energy saving contracts worth over US\$1,000,000, and its projected value of efficiency contracts through 2009 is over \$24 million. However, the market has developed at a slow pace, and it is felt that additional demonstration of the ESCO approach may be needed. The effectiveness of the current assistance from the IBRD project in Krakow will be greatly increased through the implementation of the project, which will, in turn contribute to a greater likelihood of replication of energy efficiency building retrofits.

Choice of Funding Instrument—Partial Guarantee. The partial guarantee was chosen as appropriate mechanism to overcome the fundamental barriers present in the financial sector in Poland, namely, reluctance of commercial banks to provide long-term financing, lack of adequate security among borrowers and perception of high risk by lenders. The guarantee will bring more commercial financing into the market, and with it, greater discipline in terms of project structuring and accountability. The partial guarantee will provide local banks adequate security to make loans while avoiding the moral hazard of a full guarantee, which can lead to investments in much riskier projects. As banks gain experience with the actual portfolio performance of efficiency investments (real risk of defaults), the level of partial guarantee coverage required to overcome their perceived risk may decrease. Ultimately this financing may extend to pure project funding where project cash flow is the only security needed by the bank

Commercial bank participation in the guarantee program is key to achieving success and leverage of GEF funds. Many of the local lenders have indicated that credit support from BGK might allow them to serve market segments whose needs are not being fully addressed, and that the partial guarantee may have an impact on rate and tenor as well. Several also indicated that they would likely develop new products around the guarantee program, dedicating staff to this new lending area. The mechanisms proposed under the project are intended to be a credit risk management tool for participating banks and to substitute for other fixed asset collateral typically required by banks, thus allowing banks to offer more finance on more attractive terms for energy efficiency projects.

Choice of Funding Instrument-Capital Grant: The choice of the Capital Grant Facility was made to demonstrate the commercial viability and increase acceptance of bundling high cost measures with lower cost measures by partially financing the greater up-front costs of measures such as windows and insulation. Building owners have had difficulty obtaining financing for these measures due to unfamiliarity with the financial performance of the packaged investments. The Capital Grant will also help POE ESCO demonstrate the performance contracting model for buildings in the Krakow region, thus increasing acceptance of this type of financing model which has generally not been offered to the buildings sector in Poland. The grant will also encourage development of larger projects through bundling of smaller projects, thus driving down unit

equipment and development costs. Due to the high concentration of ownership among building owners in Krakow, acceptance by a few decision-makers for implementation of large projects will have a significant impact on penetration rates and overall savings. As experience is gained with energy performance contracting, it is anticipated that banks would be able to finance creditworthy owners and ESCOs without the added benefit of the capital grant.

Choice of Funding Instrument-Technical Assistance: The technical assistance will be utilized to overcome the information barriers present in the market by building capacity within the financial sector regarding EE lending and utilization of the tools made available by the project to reduce the Finance Barriers, to increase awareness and demand by building owners, including municipalities, for new investments in EE, to aid in the development and dissemination of the ESCO performance concept, and to collect and disseminate project monitoring and performance data throughout the country.

Choice of Executing Agency and Guarantee Manager. Based upon the market analysis performed during project preparation, BGK is the best choice to act as guarantor and manager of the guarantee facility. As the prime state bank of the government, BGK has the credibility and financial strength required to reassure the commercial banks that guarantees will be honored, and has the additional benefit of significant experience with energy efficiency lending through the TM Program and experience in the operation of the KFPK guarantee program since its launch in 1996. Furthermore, BGK has the required expertise, organizational structure and financial management system needed for operation of the project, and has a strong network of local banks that have participated in the KFPK program. BGK has expressed its desire to be a guarantor only, not a project financier, thus eliminating a potential conflict of interest. The proposed GEF guarantee will use and strengthen BGK's existing procedures, information systems, and operational experience with the KFPK guarantee program to improve implementation performance. BGK's linkage to the TM program will provide additional financing and generation of transaction deal flow GEF guarantee program.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

POLAND: POLAND - GEF Energy Efficiency Project

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
1. Improve Energy Efficiency of Malopolskie Voivodship	Krakov Energy Efficiency Project (Ln 70570, ongoing)	S	S
2. Environmental management	1. Environment Management Project (Ln 3190; completed)	HS	HS
3. Improved efficiency of district heating systems, reduction of air pollution emissions from small district heating plants	2.1 Heat Supply Restructuring & Conservation Project (Lns. 3378/79/81/82-POL; completed)	HS	HS
	2.2 Katowice Heat Supply and Conservation Project (Ln. 3809-POL; completed)	S	S
4. Reduction of greenhouse gases (GHG) from small HOBs	3. GEF Coal-to-Gas Conversion Project (TF 028665 & TF023647) (ongoing)	S	S
5. Modernization of power transmission infrastructure	4. Power Transmission Project (Ln. 3959-POL) (ongoing)	S	S
6. Hard Coal Sector Restructuring	SECAL I (completed)	S	S
7. Use of renewable energy resources, reduction of air pollution & GHG emissions from small HOBs	6. Geothermal & Environment Project (Ln 7015 & TF023679) (ongoing)	S	S
Other development agencies			

Annex 3: Results Framework and Monitoring
POLAND: POLAND - GEF Energy Efficiency Project

Results Framework

PDO	Outcome Indicators	Use of Outcome Information
Overcoming the risk barriers in the financial markets inhibiting commercial bank participation in energy efficiency project financing.	1) Number of transactions and volume of debt financing to EE projects /ESCOs in the Polish market 2) Number and volume of transactions using other relevant vehicles accessible to EE projects /ESCOs in the Polish market	Outcome Indicators will provide the facility managers, the World Bank, and GEF with basic information from which can be determined: 1) the level of growth in the energy efficiency market in Poland 2) whether the level of financing for energy efficiency projects is increasing, whether the ESCO model is accepted by the market, and 4) if the demand for high cost energy efficiency projects is increasing.
Demonstrating the feasibility of packaged investments in higher-cost energy efficiency measures in buildings and increasing acceptance of energy performance contracting mechanisms in Poland.	1) Number of EE/ESCO projects larger than \$250,000	
Stimulating the demand for energy efficiency services in the buildings sector and increasing awareness and capacity of commercial banks to originate and implement loan transactions for EE investments.	1) Number of firms involved in energy efficiency investment activities 2) Number and volume of EE/ESCO transactions developed without GEF assistance 3) Number and volume of pipeline EE/ESCO projects	
Intermediate Results (3 yr.) (One per Component)	Results Indicators for Each Component	Use of Results Monitoring
Component One: Partial Guarantee coverage for energy efficiency project financing		
The Guarantee facility will leverage US\$16.3 million in total investment by commercial banks participating in the program, for approximately 130 projects ranging in size from US\$25,000 to \$500,000.	1) Number of GFAs signed 2) Number of transactions 3) Disbursements into GF account 4) Guarantee claims paid 5) Net reserves (comes from above + BGK leverage) 6) Net outstanding exposure 7) Project Liabilities to reserves ratio 8) Loan volume supported by guarantee 9) Total investment in EE supported by guarantee	Determine whether the facility is operating effectively and meeting expectations for deals financed.

	<p>10) Energy savings resulting from guaranteed loans</p> <p>12) Emissions reductions resulting from guaranteed loans</p>	
Component Two: Capital Grant Facility		
<p>Support bundled EE project investments of US\$6.4 million. Local Banks and POE ESCO contribute US\$5.4 million of this investment, and client co-financing is equal to US\$1 million of total project cost.</p>	<p>1) Total investment in EE projects initiated by POE and supported by grant</p> <p>2) Total lending by local banks to POE ESCO</p> <p>3) Total co-financing contributed by building owners</p> <p>4) Energy savings resulting from grant financing</p> <p>5) Emissions reductions resulting from grant financing</p>	<p>Determine whether the facility is operating effectively and meeting expectations for deals financed.</p>
Component Three: Technical Assistance		
<p>Successful deployment of the guarantee mechanism and development of adequate capacity within BGK to manage facility. Development of a performance contracting model by POE ESCO.</p>	<p>1) Number and volume of projects for which performance contracting model was used.</p>	<p>Determine whether the facility is operating effectively and meeting expectations for deals financed.</p>

Results Indicators	Baseline (annual)	YR1	YR2	YR3	YR4	YR5	YR6	Data Collection and Reporting		
								Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Project Level										
Thermal energy savings resulting from guaranteed loans (TJ/yr) ¹	0	59,434	166,415	309,057	499,246	713,209	927,172	Annual	Sponsor/ESCO M&V Reports	Project sponsors/banks
Electrical energy savings resulting from guaranteed loans (MWh/yr)	0	3,205	8,974	16,667	26,923	38,462	50,000	Annual	Sponsor/ESCO M&V Reports	Project sponsors/banks
Emissions reductions resulting from guaranteed loans (tCO2)	0	7,063	19,776	36,728	59,329	84,756	110,183	Annual	Calculations	M&E Consultant
Thermal energy savings resulting from grant financing (GJ/yr)	0	23,044	86,415	126,743	126,743	126,743	126,743	Annual	POE ESCO M&V Reports	POE ESCO
Electrical energy savings resulting from grant financing (MWh/yr)	0	1,243	4,662	6,838	6,838	6,838	6,838	Annual	POE ESCO M&V Reports	POE ESCO
Emissions reductions resulting from grant financing (tCO2)	0	2,116	7,936	11,640	11,640	11,640	11,640	Annual	Calculations	POE ESCO/M&E Consultant

¹Energy savings and emissions reductions are calculated on a cumulative basis; projects completed in Year 1 should continue to generate savings throughout the project period

Results Indicators	Baseline (annual)	YR1	YR2	YR3	YR4	YR5	YR6	Data Collection and Reporting		
								Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Program (Output-level)										
Number of GFAs signed	0	2	1	1	0	0	0	Annual	BGK Records	BGK
Number of guarantee transactions	0	25	45	60	80	90	90	Annual	BGK Records	BGK
Disbursements into GF account	0	\$5m	\$0	\$0.7m	\$0	\$0	\$0	Annual	BGK Records	BGK
Guarantee claims paid	0	\$105,000	\$189,000	\$252,000	\$336,000	\$378,000	\$378,000	Annual	BGK Records	BGK
Net guarantee reserves	0	\$5.08m	\$5.16m	\$5.92m	\$5.91m	\$5.87m	\$5.82m	Annual	BGK Records	BGK
Net outstanding exposure	0	\$1.4m	\$3.8m	\$6.6m	\$9.9m	\$13.0m	\$15.0m	Annual	BGK Records	BGK
Liabilities:reserves ratio	0	0.27	0.73	1.11	1.68	2.22	2.58	Quarterly	BGK Records	BGK
Annual loan volume supported by guarantee	0	\$2.5m	\$4.5m	\$6m	\$8m	\$9m	\$9m	Annual	BGK Records	BGK
Annual investment supported by guarantee	0	\$3.13m	\$5.63m	\$7.50m	\$10m	\$11.25m	\$11.25m	Annual	BGK Records	BGK
Decrease in average lending rate	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant
Decrease in average collateral requirements	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant
Total EE loan volume in Poland	\$6.2m	\$8.7m	\$10.7m	\$12.2m	\$14.2m	\$15.2m	\$15.2m	Baseline/annual	Participating bank records	Consultant, banks and BGK
Total investment in EE in Poland	\$7.75m	\$10.88m	\$13.38m	\$15.25m	\$17.75m	\$19m	\$19m	Baseline/annual	Participating bank records	Consultant, banks and BGK
Total annual investment in EE projects initiated by POE and supported by Grant	0	\$2.24m	\$5.76m	\$5.87m	\$4.95m	\$5.73m	\$6.38m	Annual	BGK & POE Records	BGK; POE
Total co-investment by end-users	\$0	\$121,212	\$500,000	\$424,242	\$0	\$0	\$0	Annual	POE Records	POE
Number of projects for which performance contracting model was used	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant

Results Indicators*	Baseline (annual)	YR1	YR2	YR3	YR4	YR5	YR6	Data Collection and Reporting		
								Frequency and Reports	Data Collection Instruments	Responsibility for Data Collection
Global (Outcome-level)										
Number of EE transactions in the Polish market	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant
	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant
Volume of debt financing to EE projects in the Polish market	tbd	tbd	tbd	tbd	tbd	tbd	tbd			
Number of EE projects larger than \$250,000	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant
Number of in-country commercial businesses that can provide energy efficiency services to target market	tbd	tbd	tbd	tbd	tbd	tbd	tbd			
	tbd	tbd	tbd	tbd	tbd	tbd	tbd			
	tbd	tbd	tbd	tbd	tbd	tbd	tbd	Annual	Market Study	M&E Consultant

*At present no market data is available to complete this table. A market study will be completed in the first stage of this program to quantify these market indicators.

Annex 4: Detailed Project Description

POLAND: POLAND - GEF Energy Efficiency Project

A. Overview. The proposed project consists of three components: (i) the Partial Guarantee; (ii) the Capital Grant facility; (iii) Technical Assistance. Total investment expenditures including physical and price contingencies amount to US\$64.5 million.

By Component:

Project Component 1 - US\$54.5 million

I. Partial guarantee

The partial guarantee is a risk-sharing mechanism that will provide commercial banks with partial coverage of risk exposure against loans made for energy efficiency projects throughout Poland. The guarantee will directly support financing of EE projects by (i) addressing credit risk and transaction structuring barriers to EE finance, and (ii) engage and build capacities of commercial financial institutions to provide financing for EE projects on a commercially sustainable basis. The expected amount of loans that can be supported by the guarantee program is US\$39.0 million over the project period, with additional co-financing from project sponsors bringing the total investment to US\$48.8 million.

The BGK guarantee will be a first loss, subordinated recovery guarantee. The GEF funding of US\$5.7 million will be placed in a guarantee reserve account and will be paid out to participating banks in the event of a loss or default. The amount paid out will be equal to the amount of outstanding principal times the guarantee percentage, and will not cover accrued interest or other fees owed to the bank. The lending banks will also pursue recovery procedures in the event of default, and will pay to BGK any monies recovered after first satisfying its own receivables.

The guarantee will support loans ranging from several thousand dollars in the case of portfolio transactions (no minimum size), to approximately \$715,000 in the case of standard transactions. The range of maximum guarantee liabilities assumed by BGK under different procedures is shown in the table below; the maximum is US\$500,000. The average size of loan assumed for projections is US\$100,000; based on this the program will support 390 transaction during the project period.

BGK will act as guarantor and will enter into agreements with commercial banks who will originate transactions. BGK will not guarantee its own loans. The GEF partial guarantee program design is based in part on documentation, terms, conditions and procedures established by BGK in its successful KFPK guarantee program, in place since 1996. The GEF partial guarantee program will use a set of unique guarantee agreements between BGK and participating banks to reflect the distinct requirements of this program; these agreements have been developed using terms consistent with the existing "Cooperation Agreement" and "Loan Guarantee Agreement" used by BGK with FIs. Under the GEF guarantee program, BGK will enter into Guarantee Framework Agreements (GFA) with three to four participating banks. The GFA will govern the relationship between the parties and specify, *inter alia*: eligibility conditions; liability limits under the GFA; approval procedures and liability limits under the different approval procedures; and loan appraisal and post-closing reporting procedures. It is recommended that some guarantee capacities be maintained uncommitted to allow additional banks to independently initiate a guarantee request to BGK transaction-by-transaction; this will allow new bank relationships to be developed and thus expand program market coverage and impacts.

Leverage and Key Guarantee Terms. The amount of reserves supplied by the GEF to guarantee EE loans will be approximately US\$7.3 million (\$5.7 million plus accumulated interest earnings). BGK has agreed to ultimately adopt an upper limit of 3:1 as the ratio of outstanding guarantee liabilities to existing reserves. (See Annex 5 for further discussion of this topic.) BGK is not obligated to reach this level of exposure but understands the importance of achieving leverage of GEF funds, and will therefore use its best efforts to maximize loan transactions originated through the guarantee program. The level of loan transactions will also be a function of the percentage of guarantee

coverage offered by BGK to the participating banks, which will be between 50 percent and 70 percent depending on the type of loan. This percentage represents the amount of outstanding principal that the guarantor must cover in the event of default.

Key terms of the guarantee program include the following:

- Guarantee percentage: 50% of principal for portfolio and simplified procedures; maximum of 70% for standard procedure;
- Maximum guarantee term: 10 years;
- Maximum single transaction guarantee limit: \$500,000;
- Guarantee fee pricing: one-time up-front fees based on guarantee liability – range of 1.2% to 2.0% (see Annex 10);
- Recovery: BGK subordinate to lending bank;
- Credit and approval procedures: Standard, simplified and portfolio – see below;

Additional details are provided in the PIP.

Credit Approval Processes. The GEF partial guarantee program will also use credit risk analysis underwriting procedures established under the KFPK program but revised to reflect underwriting and credit analysis requirements and criteria specific to EE lending. The GEF partial guarantee program will utilize three different approval procedures reflecting the guarantee sizing: (i) standard procedure, (ii) simplified procedures, for guarantees up to US\$250,000 in liability, and (iii) portfolio procedure, for guarantees up to US\$100,000 in liability.

Each procedure has a different level of review and maximum guarantee that can be assumed by BGK. BGK has similar procedures for KFPK; however, this program has higher limits for guarantees under the simplified and portfolio procedures. It is anticipated that more transactions can qualify under these two procedures, allowing for more aggressive origination of loans. The table below shows the maximum liability limits and general characteristics of the three procedures.

Approval Procedure	KFPK Max. Guarantee Liability	GEF Max. Guarantee Liability	Characteristics
Standard	1,500,000 Euro	US\$500,000	Requires case by case guarantee credit approval by BGK
Simplified	100,000 Euro	US\$250,000	Allows for rapid approval of loans up to set guarantee limit
Portfolio	50,000 Euro	US\$100,000	Allows for automatic inclusion, on authority of the participating bank, of small transactions less limit

The emphasis of this project component is on credit risk management, not risk avoidance, and BGK has acknowledged that the WB/GEF funds are available to be put at risk to cover first losses with the GEF partial guarantee program. BGK will work with participating banks to improve quantity and quality of deal flow, and will get assistance in developing additional credit analysis procedures and capabilities. Finally, BGK will take a proactive role in project development, including finance and credit structuring.

These activities and approaches must be balanced with prudent, proactive risk management. Overly aggressive expansion of guarantee commitments could possibly be counterproductive if it is at the expense of risk control. The program will promote not only aggressive marketing efforts in the early stages but significant focus on training of BGK and bank staffs, in order to improve the quality of deal flow. In addition to training, risk management strategies will be employed.

Eligibility and Priority Sectors. The guarantee program targets EE in buildings. The primary definition of eligible EE transactions is investments in projects and equipment aimed at improving efficiency of energy use in buildings. Specific eligible investments include:

- Improvement of the building envelope;

- Investments in district heating sources and heat network systems provided that at least 50% of the heat supplied is used for space conditioning and domestic hot water in buildings;
- Improvements to building mechanical heating ventilation and air conditioning (HVAC);
- Improvements to interior and exterior building lighting;
- New projects; that is, projects where investments have not already begun and where a baseline of previous energy consumption can be calculated.

Eligible EE projects include, but are not limited to, EE projects also eligible for thermo-modernization program financial support. Projects must also have an estimated simple payback period of less than or equal to 10 years, and all costs and savings must be confirmed by BGK through a verification audit. Investments must be for new projects, not refinancing existing projects, and for projects using proven technologies which are developed with competent energy audit/feasibility studies and include energy savings monitoring plans.

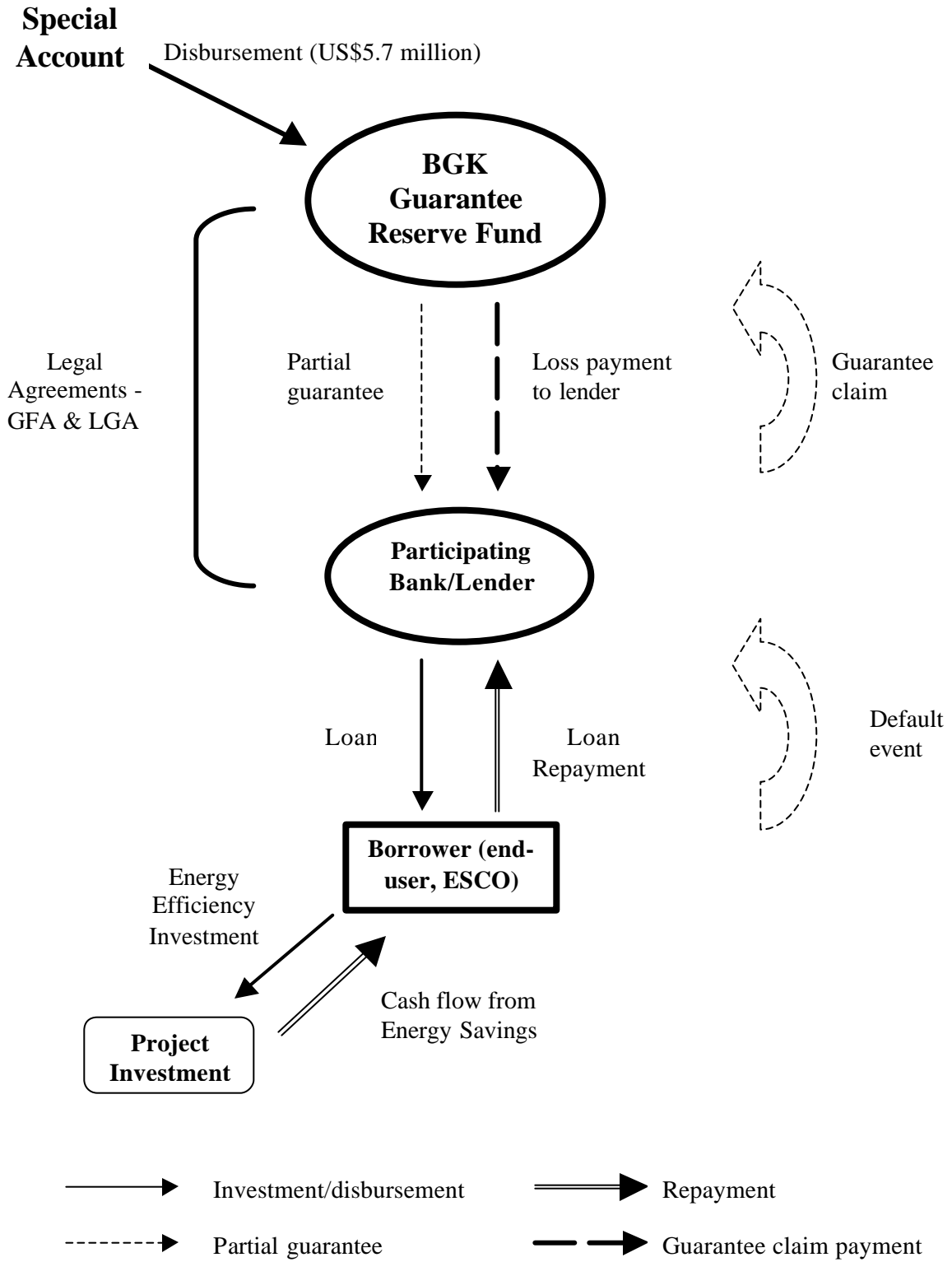
All end-user sectors are eligible but the WB/GEF has designated the housing sector and public buildings as priority areas. BGK is directed to place increased emphasis on supporting loans these types of loans, such as loans for buildings owned and operated by gminas, hospitals and schools. If sufficient lending to these priority sectors is not materializing, the WB may modify the TA expenditure plan to increase penetration of EE investments into these sectors

Use of Existing BGK guarantee capacities for EE Projects. The existing KFPK guarantee program has broad definitions of eligibility, by type of borrower and type of capital investment. EE projects are eligible for additional guarantee coverage under this program in co-financing capacity. Therefore, BGK can supplement the capacities of the GEF partial guarantee program with additional guarantee capacities of its own under the KFPK program. This supplementation could apply to larger single projects, as the maximum single transaction exposure is EUR1.5 million, allowing, with a 50% guarantee, support for loan transactions up to approximately PLN12 million in size. This feature may be important as a significant portion of the EE project market is for thermal and cogeneration plants and district heating system upgrades with total costs in this range.

Set-aside for POE ESCO Lending. The partial guarantee program will be operated nationwide, available to all eligible borrowers through the selected FIs. At the same time, this program has a mandate to support commercial bank financing for POE ESCO's projects. Out of its total guarantee capacity (defined as uncommitted reserves times 1.5, during the first two years), BGK will reserve US\$2.0 million in capacity for POE ESCO. This will be possible given the schedule of disbursements and the leverage capacity. For example, if BGK enters into two GFAs with total facility liability limits of US\$5.0 million, this would result in reserves disbursement of US\$5.0 million and a total guarantee capacity of US\$7.5 million. BGK would then have ability to enter into an additional GFA of US\$2.5 million without additional reserves and without exceeding its prescribed upper guarantee limit. POE ESCO will be required to bring a lending bank, subject to BGK approval, to enter into a GFA with BGK. After one year, BGK will not be obligated to maintain the set-aside; however, POE ESCO may participate in the guarantee program at any time during the project period.

The figure below shows the flow of funds and guarantee arrangements for a typical transaction under the guarantee program.

Figure 1: Guarantee Structure and Flow of Funds



Guarantee Program Management and Responsibilities of BGK. BGK will act as manager of the program as well as guarantor. GEF grant funds will be placed in a special reserve account created by BGK and disbursed amounts will be maintained under the supervision of BGK. The funds remain the property of the Government of Poland, but are managed by BGK according to the regulations specified in the PIP and Implementation Agreement.

BGK will: (i) ensure compliance with the PIP and Implementation agreement; (ii) review and monitor accounts, provide management reports, audits, and annual operating budgets for the PMU; (iii) monitor performance based on established targets and indicators; (iv) negotiate and enter into GFAs; (v) approve individual guarantees; (vi) enforce and assist in recovery with respect to defaulted loans. World Bank supervision or approvals will be required for aspects of (ii), (iii), and (iv) above.

Project Component 2 - US\$6.7 million

II. Capital Grant Facility

The capital grant facility will make partial payments to reduce the up-front costs of high-cost energy efficiency measures (>10-year payback) in the building sector, in order to bring more projects into the payback range where they are financeable, and to convince building owners that the performance contracting model pursued by POE ESCO is viable. The grant facility will also play a critical role in promoting the packaging of low- and high-cost measures in the same projects, thus demonstrating the effectiveness of packaging multiple measures. POE ESCO will be the exclusive applicant to the capital grant facility for the first three years of the program. If funds are not exhausted during that period, the World Bank will reallocate the remaining funds to the Guarantee Reserve Facility.

Some of the key parameters and criteria for cost-sharing by the grant facility are described below. Additional details are provided in the PIP.

Eligible Projects. Eligible projects include those: (i) involving energy efficiency retrofits in the building sector; (ii) with simple payback periods between six and 15 years; and (iii) projects containing qualifying high-cost measures (HCMs). Qualifying HCMs in a given project case may include, but are not limited to: windows; insulation; heating system upgrades (improvements of boilers, heat exchangers); improvements of heat distribution piping. Extensions of the district heating network are eligible provided they result in replacement of low-efficiency heat-only boilers. HCMs must have lifetime of at least fifteen years, and must represent at least 30% and not more than 75% of total project cost for the project to qualify. End-user co-financing may be applied to the cost of HCMs for the purpose of determining this ratio, if necessary. End-user co-financing is required in cases where payback is greater than 15 years, in order to bring the payback below 15 years.

Projects or measures that will not be eligible for the grant will be: measures that are not permanently installed and can be easily removed; extensions of improvements of the district-heating grid unless these are included in a larger package of ECMs, and result in the retirement of HOBs; projects where savings are attributable to usage changes in the facilities that are not the result of installation of automation or sensors that permit greater control over energy consumption; projects where activities primarily involve repairs and/or maintenance of existing equipment, as opposed to replacement of inefficient equipment; projects involving new buildings. In addition, projects with performance contract terms of more than 10 years will not be eligible.

Project costs and grant funding. Qualifying projects must have a pre-grant simple payback between six and 15 years. Payback is calculated as total cost divided by annual savings. Total project cost will include equipment, installation, and a standard markup for ESCO services. The standard markup is 26.5 percent and is included to ensure that POE ESCO recovers costs in its project estimates. The minimum project size for consideration is \$250,000, with no maximum project size. Individual projects may be bundled or aggregated if there is a common financing package for all projects. The maximum grant size is \$500,000. Minimum grant size is \$75,000, or 30% of project cost. The maximum and minimum award levels will be reviewed after the 1st year to determine market response to the grant offering.

The grant amount will be 30 percent of total project cost. The flat cost-sharing structure will require that higher-payback projects, such as those over 10 years, include some portion of end-user co-financing in order to make the project economically attractive for ESCO and lenders. Conversely, projects that include more lower-payback measures (such as lighting) will be rewarded. This structure is intended to ensure that ESCO and end-users incorporate as many lower payback measures as possible in a bundled fashion rather than focusing solely on higher cost building renewal measures.. Similarly, potential projects must first have considered the cost-effectiveness of weatherization measures, especially for window replacement, prior to investment in new measures. The cost of weatherization measures can be included in the overall project cost. Weatherization studies will be reviewed by BGK’s auditors to determine effectiveness.

POE ESCO projects (after inclusion of GEF grant) must be commercially attractive for (i) ESCO and the client -- as measured by NPV and IRR (above ESCO's opportunity cost of capital); and (ii) commercial bank financing. As such, end-user co-financing is required in some form, whether up front or over a few years, to ensure that project economics are commercially attractive to both the POE ESCO and end user (as described above). Some projects may not require end-user financing if payback periods are low enough.

Though the grant amount will be based on total project costs, the grant itself will be used to purchase only goods and works associated with the project. The grant will not pay for overhead or profit of the ESCO. The grant will pay for high-cost measures and their installation, which will be a minimum of 30% of total project costs. For example, in a project of \$250,000, including overhead markup, the goods and works component will be \$197,628. The minimum amount of high-cost measures will be \$75,000. The grant will be the same -- \$75,000 – and will be disbursed against submission of invoices from POE ESCO. In order to allow reasonably steady cash flow during project implementation, disbursement can be made against all invoices at a rate of 37.95% of total net of VAT. (Net goods and works * 37.95% = grant amount: \$197,268 * 0.3795 = \$75,000.) Assuming 7% VAT on all expenditures, this will imply that 35.5% (for convenience: 36%) of the gross invoiced amount can be financed.

Program Review. All of the criteria and other terms are subject to review at one-year intervals as part of overall project monitoring and evaluation. Project participants will be consulted for feedback to determine if changes are necessary.

Project Component 3 - US\$3.3 million

III. Technical Assistance

The GEF technical assistance component will be US\$3.3 million. This will be divided into four main categories of activities (with approximate allocations):

- | | | |
|----|---|-----------------|
| 1. | Support for the guarantee program and PMU | US\$1.2 million |
| 2. | Support for POE ESCO | US\$0.4 million |
| 3. | Monitoring, evaluation & regional cooperation | US\$0.4 million |
| 4. | Management fee, BGK | US\$1.3 million |

The proposed activities under each of the categories listed above are shown in the following table.

Guarantee Program		Task Cost	Sub-component Cost
1	Audits & Engineering Review		\$360,000
2	Guarantee Program Marketing, Training and Support		\$840,000
2a	<i>Guarantee Program Marketing</i>	\$250,000	
2b	<i>FI Training</i>	\$128,000	
2c	<i>EE Business Support</i>	\$250,000	
2d	<i>BGK Training</i>	\$100,000	
2e	<i>General Program Support (Direct Costs)</i>	\$112,000	

Subtotal for Guarantee Program		\$1,200,000
POE ESCO		
3	Audits and Weatherization	\$125,000
4	Create Demand	\$200,000
4a	<i>Municipality demand analysis and procurement plan</i>	\$150,000
4b	<i>Seminars and awareness building</i>	\$50,000
5	Training & Cooperation, Documentation/M&E Support	\$75,000
5a	<i>Study tour organization and training</i>	\$33,000
5b	<i>M&E Support</i>	\$18,000
5c	<i>Study tours - POE ESCO reimbursement</i>	\$24,000
Subtotal POE ESCO TA		\$400,000
Monitoring and Evaluation		
6	Monitoring & Evaluation, Dissemination of Results, Regional Cooperation	\$330,000
6a	<i>Baseline confirmation</i>	\$30,000
6b	<i>Mid-term review and dissemination of results</i>	\$250,000
6c	<i>M&E, Final Review</i>	\$50,000
7	Regional Cooperation	\$70,000
Subtotal M&E		\$400,000
BGK Management Fee		\$1,300,000
Total TA Costs		\$3,300,000

Each of the items in the table is described below.

Guarantee Program and PMU.

1. *Audits and Verification Review:* it is expected that a large number of guarantee transactions will occur during the program period. TA funds will be used to cost-share with lending banks the cost of verifying borrower audit information as a form of loan due diligence. The estimated average cost-share per verification audit is approximately US\$500. Furthermore, some funds may be used to cover audit costs for borrowers – the details of this issue will be clarified in the Project Implementation Plan.

2. *Guarantee Program Marketing, Training and Support:* this component of the TA plan is critical to the success of the project. Early-stage marketing and promotion of the guarantee facility to borrowers and banks will be done through seminars, advertising and promotional literature. Consultations and training for FIs (both prospective and existing program participants) will be conducted in order to develop EE finance capacity among the banks and encourage more lending to the building sector. In some cases, assistance to banks to set up EE finance units within the banks, with training on contracts, EE credit procedures, and assistance on developing EE finance marketing plans will help create additional deal flow. Businesses involved in energy efficiency project development and equipment sales will also receive TA to build capacity to ensure a pipeline of transactions for consideration under the guarantee program. This TA will include assistance in developing creditworthy finance and contractual structures for projects, and assistance in structuring and arranging multi-project finance and vendor finance debt facilities. As part of training, BGK staff at headquarters and branches will receive EE finance training and assistance in building internal capacity. Finally, included in the budget is an allocation for direct costs associated with managing the PMU, such as procurement consultants, procurement training and financial audit of the program.

POE ESCO

3. *Audits and weatherization.* To assist POE ESCO in developing projects, some TA will be used to pay for project audits and weatherization studies. Weatherization costs will be supported at 100% of the total

cost up to a maximum of US\$1,000 per building. As a condition of eligibility for grant funds, POE ESCO must demonstrate examination of the possibility of weatherization as a low-cost alternative to building retrofits, and TA funds will cover these costs. Other audits will be conducted by POE ESCO to prepare applications for grant funding and to prepare more detailed audits later in the project cycle for contract and implementation requirements. TA funding can support the full cost of the audit, as performed by third party auditors, up to a maximum of US\$5,000 per audit. The TA funds used for audits will act as a sort of revolving fund or contingent grant; in cases where audits lead to project implementation, POE ESCO will pay back the grant funds to BGK, which can be used in future projects for the same purpose.

4. *Demand Creation:* The intention of this TA item is to help POE ESCO raise capacity and awareness among regional municipalities in understanding the need for energy efficiency services. Many municipalities do not have capacity to prepare detailed energy demand estimates for public buildings, nor the associated procurement. This TA will pay for experts in energy demand analysis and public procurement to assist city officials develop procurement plans and tendering documents that will result for potential business for POE ESCO and others.

5. *Training and Cooperation:* POE ESCO can benefit by learning best practices and developing cooperative arrangements with other ESCOs in Central and Western Europe. In addition, some support will be provided to POE ESCO to help it in preparation of documentation and analysis for GEF monitoring purposes.

M&E, Regional Cooperation

6. *Monitoring and Evaluation and Information Dissemination.* Program evaluation will occur in three phases – baseline confirmation, mid-term review, and final review. Because of the time lag, this will likely be broken into two contracts. Part of the initial contract will include dissemination of results of the program after mid-term review. This may also help in continued marketing of the guarantee program.

7. *Regional Cooperation.* During the first two years, a regional cooperation conference may be organized to gather together ESCOs, FIs, guarantors and government officials from various countries such as Hungary, Croatia, Czech Republic and others to share lessons learned from similar activities.

BGK Management Fee. A flat fee will be paid to BGK to cover part of its operating costs. This will supplement the income BGK will have from the guarantee fees.

In budgeting for TA activities, some flexibility is recommended to preserve funding for tasks and assignments as they are identified and evolve during program operations. This flexibility can be accomplished by: (i) not committing all available TA funds in the initial contracts, (ii) in the TA contract for ESCOs and EE businesses, keeping a relatively high ratio of task order funds to monthly retainer funds, and (iii) considering increase of TA funding from reserve interest earnings, if productive additional uses are identified and agreed to by the World Bank.

Annex 5: Project Costs

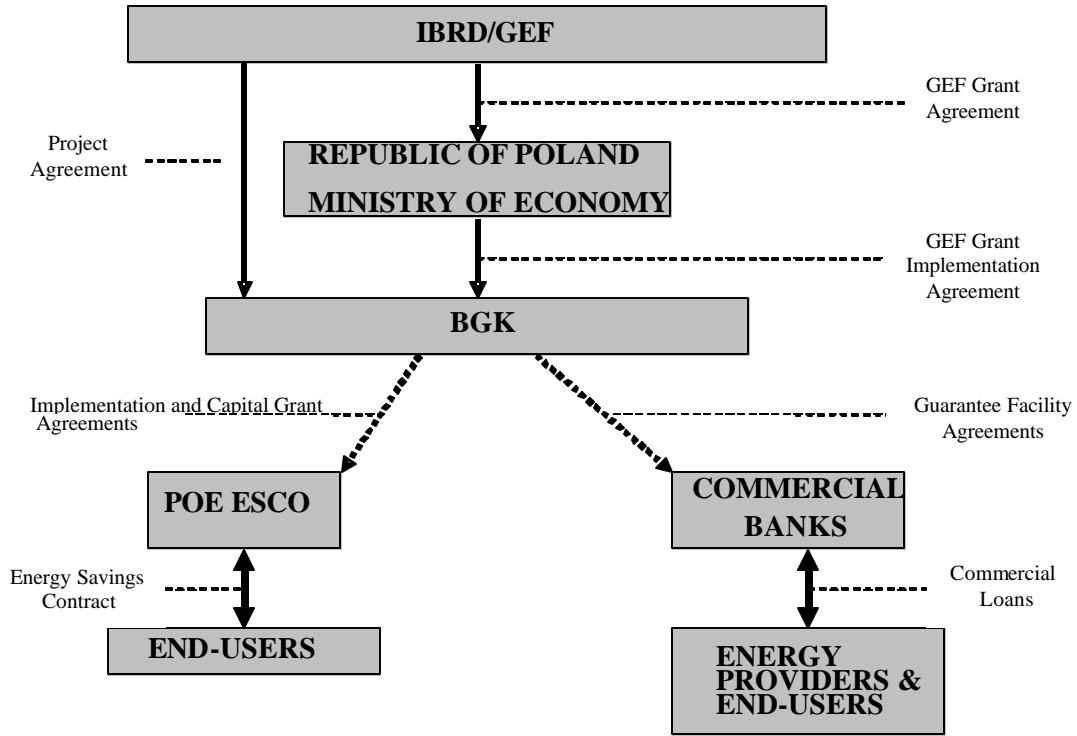
POLAND: POLAND - GEF Energy Efficiency Project

Project Cost by Component	Local	Foreign	Total
	US\$ million		
1. GEF Partial Risk Guarantee- Commercial Financing			
a. Guarantee Reserves	-	5.7	5.7
b. Project Financing	48.8	-	48.8
Subtotal, Partial Risk Guarantee	48.8	5.7	54.5
2. GEF Capital Cost Grant			
a. GEF Grant	-	2.0	2.0
b. Project Financing	4.7	-	4.7
Subtotal, Capital Cost Grant	4.7	2.0	6.7
3. GEF Technical Assistance			
a. Guarantee and program support			
Audits & Engineering Review	0.08	0.36	0.44
Program Marketing, Training & Support	0.18	0.84	1.02
b. POE ESCO			
Audits and Weatherization	0.03	0.13	0.15
Demand Creation	0.03	0.20	0.23
Training & Cooperation	0.01	0.06	0.07
Documentation and M&E	0.01	0.02	0.02
c. NGOs			
Monitoring, Evaluation & Dissemination	0.04	0.33	0.37
Regional Cooperation	0.01	0.07	0.08
d. BGK Management Fee	-	1.30	1.30
Subtotal, Technical Assistance	0.4	3.3	3.7
Total Project Costs	53.8	11.0	64.8
Total Financing Required	53.8	11.0	64.8

Project Cost by Category	Local	Foreign	Total
	US\$ million		
Good and Works	53.5	2.0	55.5
Consulting Services	0.4	1.8	2.2
Training	0.01	0.2	0.2
Miscellaneous	-	-	-
Capital Reserve	-	5.7	5.7
Management Fee	-	1.3	1.3
Total Project Costs	53.8	11.0	64.8
Total Financing Required	53.8	11.0	64.8

Annex 6: Implementation Arrangements
POLAND: POLAND - GEF Energy Efficiency Project

Figure 2: Legal and Implementation Arrangements



Annex 7: Financial Management and Disbursement Arrangements

POLAND: POLAND - GEF Energy Efficiency Project

Financial Management Assessment The initial financial management assessment was performed during the project's pre-appraisal mission in March 2003. It was finalized during the appraisal mission in November 2003 and updated in September 2004 prior to Board presentation. **The financial management arrangements of the project are acceptable to the Bank with exception of the IT system for management of the guarantees issued with underlying loan portfolio. The readiness of the IT system for management of the guarantees issued with underlying loan portfolio relating to Partial Guarantee Facility is a disbursement condition for this component.**

Country Issues. In September 2003 the Bank initiated Country Financial Accountability Assessment (CFAA) for Poland to provide updated information on public sector financial accountability arrangements and help to develop a program for reforms and capacity building to improve transparency and accountability with respect to the use of public funds. The draft report was prepared and sent to Government for consultation in June 2004. However since the Project will be implemented mainly in private sector the identified risks will have low to moderate impact on the project arrangements.

In 2002, the Bank conducted a ROSC Accounting & Auditing review. The ROSC report on Accounting & Auditing provides a description and overview of standards and practices in Poland. While there is no regulatory obligation in Poland to apply International Accounting Standards, the amended Polish Accounting Regulations (PAR) in force commencing 2002 have moved to be more in line with International Financial Reporting Standards (IFRS). However there are still some differences. The application and enforcement of accounting standards in some public entities should be improved and so that the entities can present reliable financial results for investors and other users. The implementation of amended Accounting Act effective January 1, 2002 should be carefully monitored. Past experience shows that the proper application of the accounting regulations has not always been fully achieved. The quality of the audits is unequal and in some cases unsatisfactory. These risks will be taken into account while designing the auditing arrangements in respect of the grant funds, Guarantee Facility Account and Participating Banks. However specific risk related to the banking sector is lower than for other sector of the Polish economy due to effective banking supervision and additional reporting requirements for banks.

Strengths and Weaknesses . The significant strengths that provide a basis for reliance on the project financial management system include: (i) the experience of BGK staff in implementation of Bank-financed projects (Rural Development Project), and government projects including successful National Loan Guarantee Fund, (ii) the unqualified audit reports issued by BGK auditors, and (iii) overall strong organizational and financial capacity of BGK as a reputable bank to manage this type of project. The weakness is identified in slow preparation of the IT system for the Partial Guarantee Facility Component.

Implementing Entity. BGK is a state-owned bank established in 1924 on the basis of the decree issued by the President of Poland. The operation of BGK is based on the Banking Law. Activities of BGK include the ones included in the Banking Law, and additionally special purpose tasks assigned by the Ministry of Finance or the legal act including inter alia managing of the Special Funds (e.g. National Housing Fund, National Credit Guarantee Fund, Thermo modernization Fund, Student Loans and Credits Fund).

BGK will enter into cooperation with three to four participating banks on the basis of the Guarantee Framework Agreement. These participating banks will actually originate the loans to the borrowers for eligible energy efficiency projects.

The World Bank Staff, in cooperation with BGK, will need to assess each prospective participating bank in conformity with the World Bank's Operational Policy 8.30 and Europe and Central Asia Region Financial Intermediary Lending guidelines; and confirm their eligibility to participate in the project. BGK is required to obtain the Bank's no objection to any selected participating bank. All participating banks will have to fully meet the qualification criteria within the time period provided for project implementation in order to

take part in the project. One of the prospective participating bank has been positively assessed by the World Bank staff.

Funds Flow. Project funds will flow from: (i) the Bank, either via a single Special Account which will be replenished on the basis of SOEs or by direct payment on the basis of direct payment withdrawal applications; or (ii) the commercial Bank loans as contribution, or (iii) own contribution of final beneficiaries (borrowers of energy efficiency loans). The GEF funds for the Guarantee Facility will be transferred directly to the Guarantee Facility Account earning bank deposit interest, held by BGK on behalf of the MOELSP. BGK will receive delegation for managing the Account including inter alia payments for called guarantees, and recovery of amounts paid under called guarantees. The rules for management of the Fund are to be defined in the Project Implementation Agreement to be signed by MOEL and BGK.

Staffing. The project will utilize the existing staff in the finance and accounting department, which will account for each transaction to be paid from the Special Account or via Direct Payment. Additionally, BGK will recruit (preferably internally) the Financial Analyst and Administrative staff responsible for accounting for counterpart funding, reporting and monitoring of the guarantees issued. The BGK staff has adequate educational background and experience. The TOR for staff is included in the draft Project Implementation Plan.

Accounting Policies and Procedures. BGK accounting books and records are maintained on an accrual basis. However, for the purpose of the project, the cash method will be utilized for the Guarantee Facility Account and the rest of the project. Project financial statements will be presented in USD (sources and uses of funds Special account) and PLN (financial statement of the Fund). BGK has in place a set of accounting procedures and internal controls including authorization and segregation of duties.

Additionally, BGK will prepare the project financial-accounting section in the Project Implementation Plan, including: the procedures, roles and the responsibilities of the staff, accounts used for the project accounting, typical accounting treatment, the agreed formats of the FMR, and the TOR for project audit.

Internal Audit. There is an Internal Audit Department in BGK which reports to the BGK management. The annual work plan is prepared by the Internal Audit Department and approved by the Management Board and the President Council. The work plan includes the following areas: (i) compulsory money laundering, (ii) testing of the internal control, (iii) review of procedures for new products, (iv) loan portfolio verifications. The Department is also responsible for control of the Special Funds managed by BGK. The Internal Audit Department follows up on recommendations given by the Department and by NIK and GINB. However, the Internal Audit Department does not follow up on external audit issues, which are assigned to the Finance and Accounting Department.

External Audit. BGK is audited by an external auditor from international network. The auditors issued an unqualified opinion on the 2003 BGK financial statement. The audit was carried out in accordance with the Polish Auditing Standards and the financial statements were prepared in accordance with Polish Accounting Regulations.

The project financial statements of the GEF Energy Efficiency Project including also the reports on Guarantee Facility Account shall be audited on annual basis. The GEF Grant will finance the cost of project audit. The project's audit shall be performed in accordance with auditing standards, on terms of reference, and by an independent auditor, all of which are to be acceptable to the Bank. It was agreed that for the audit of the project's financial statements, acceptable auditing standards are International Standards on Auditing (ISA) as issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC). The terms of reference for the project audit should also include the preparation of a management letter including the issues and recommendation relating to the accounting procedures, accounting system, internal control and other matters which auditor considers significant. The agreed terms of reference are attached to the Minutes of Negotiations. The World Bank has recently been conducting formal assessments of audit firms operating in Poland with a view to determining those acceptable to the World Bank. In addition the project's auditors would be required to have banking experience. The Recipient and BGK will consult first with the World Bank prior to the selection of the project's auditors.

In respect of the audit and annual financial statements of BGK, consistent with previous World Bank-financed operations, the BGK will provide the Bank with a copy of BGK's: (i) annual report containing a summary balance sheet, summary off-balance sheet statement, summary profit and loss account, and auditor's opinion on the abbreviated financial report to shareholders; and (ii) detailed H1 balance sheet, H3 profit and loss account, and audit opinion thereon. POE ESCO and the Participating Banks would provide the Bank with a copy of the audit report including audited financial statements.

The audit reports will be provided to the Bank within six months of the end of each fiscal year and also at the closing of the project. In case the Project starts in the second half of the year, there is possibility to combine this first period with the next year upon agreement with the Bank.

The following table identifies the audit reports that will be required to be submitted by the project implementation agency together with the due date for submission.

<i>Audit Report</i>	<i>Due Date</i>
Entity – Audit report of BGK, POE ESCO, and each participating commercial bank	Within six months of the end of each fiscal year and also at the closing of the project
Project Financial Statement including reports on Guarantee Facility Account	Within six months of the end of each fiscal year and also at the closing of the project

Reporting and Monitoring. *Financial Monitoring Reports (FMRs)* will be used for project monitoring and supervision and the formats of these are included in the draft operational manual. BGK will produce a full set of FMRs every three months throughout the life of the project within 45 days after the end of the quarter. Formats of FMRs were agreed and will be included in the negotiation package. BGK will report on project components including counterpart funds provided by commercial banks or borrowers, and Guarantee Facility Account. BGK will be responsible for monitoring of the loan portfolio and the consolidation of the reports received from Participating Commercial Banks and POE ESCO into the one consolidated FMR. In addition the World Bank will monitor the financial results of the BGK and Participating Banks on annual basis.

Annual Project Financial Statement for the annual audit purposes will be prepared for each fiscal year during the Project life and at the closing date of the Project. Annual Project Financial Statement will include:

- Project Sources and Uses of Funds
- Uses of Funds by Project Activity
- Special Account Statement
- Reports related to Guarantee Facility Account
- Summary of Statements of Expenditures

Information Systems. BGK uses the software program designed for banking sector which is supported by additional modules. For the project purposes the implementing team will use existing accounting system to record the use of GEF funds (coming through the Special Account, direct payments etc) supported with IT module for preparation of FMRs. In addition BGK will develop IT module which will keep track of guarantees issued, underlying portfolio of loans issued by commercial banks. This IT module will enable to have value of generated loans for energy efficiency projects, current valuation of guarantee liability exposure to BGK and the Guarantee Facility Account. The IT system will be developed in-house by BGK.

Impact of Procurement Arrangements. A procurement assessment was performed by a World Bank Procurement Specialist and contained high risk assessment of BGK capacity. In order to mitigate the risk the following actions are required including inter alia employment of procurement consultant, participation in the procurement training, performance of the periodic ex-post review by the Bank of 1 in 5 contracts during the supervision missions every 6 months, preparation of Project Implementation Plan by the Grant effectiveness. The detailed description and conclusions with regard to the procurement arrangements and the procurement capacity assessment are included in Annex 8.

Disbursement Arrangements. Bank funds will be disbursed under the Bank’s traditional procedures including SOEs and direct payments. Supporting documentation for SOEs, including completion reports and certificates, will be retained by the BGK and made available to the Bank during project supervision. Disbursements for expenditures above the SOE thresholds will be made against presentation of full documentation relating to those expenditures. There is no plan to move to periodic disbursements. Grant disbursements for Higher Cost Measures under Energy Efficiency Contracts will finance the underlying goods, materials and installation services. Grant disbursements shall also be made to finance Technical Assistance. With regard to Guarantee Facility Component the disbursements will be made in a form of direct payments to the Guarantee Facility Account on the basis of approved Guarantee Framework Agreements and on the basis of the agreed ratio of guarantee liability to reserve ratio.

The GEF Grant will be processed in accordance with the Policy Amendment to the Application of the Disbursement and Trust Fund Policies to GEF-supported Energy Efficiency and Renewable Energy Guarantee Funds. The project is therefore subject to the following conditions that have been embodied in the legal agreements: (a) the Bank would have a right to request audits of the guarantee fund throughout the duration of the Bank’s supervision of the GEF-financed project; (b) the guarantee fund would not be subject to the Bank’s procurement guidelines (except for broad considerations of economy and efficiency) but would be subject to the Bank’s financial management guidelines throughout the duration of the Bank’s supervision of the GEF-financed project; (c) the management of the fund would be composed of professionals with qualifications and experience satisfactory to the Bank; (d) the fund would be managed in accordance with operational and financial policies, and on the basis of a constitutive and/or statutory instrument, acceptable to the Bank; (e) the management of the fund would exercise satisfactory control over the use of the fund; and (f) the Bank would have the right to require the recipient to repay the grant to the Bank, if the recipient breaches any of the foregoing conditions, except for such amount of the grant as is needed to meet the recipient’s obligations under guarantees issued and existing prior to the recipient receiving the Bank’s repayment notice.

Disbursement on the basis of SOEs will be used for expenditures incurred on all contracts which do not require the Bank’s prior review. For all other contracts, disbursements will be made based on full documentation. The table A presents the maximum thresholds for using SOE procedures.

Table A: SOE Thresholds

Expenditure Category	SOE threshold in USD
1. Supply & Installation of Equipment	200,000
2. Goods	200,000
3. Works	200,000
4. Consultants' Services	100,000 for firms 50,000 for individuals
5. Training	-
6. Project Management	-
7. Partial Credit Guarantee Facility	Not applicable

- **Management Fee.** The GEF grant will finance Management Fee to BGK. The term Management Fee means the fee to be paid to BGK on a monthly basis pursuant to the annual Project Management Budget as agreed upon by the World Bank. The Management fee will be paid to BGK on a monthly basis pursuant to the agreed Project Management budget. Before October 31 in each of its fiscal years, BGK shall furnish to the Bank the proposal of annual Management Fee for the next year, on the basis of forecasts prepared by BGK and satisfactory to the Bank. The Bank will review and if acceptable approve the presented proposal or will call for adjustments. The disbursement of the Management Fee will be done on monthly basis from Special Account to BGK in agreed monthly amounts. The

replenishment of the Special Account for such fee payments withdrawals would be made on the basis of SOEs, which in this case would consist of a statement by BGK explaining that this payment was part of the agreed upon budget allocation as set forth in the project management budget for a certain period.

- ***Retroactive financing.*** The GEF Grant will also finance payments made for expenditures prior to the date of the signing of the Grant Agreement but after April 1, 2004, in an aggregate amount not exceeding \$100,000, made in respect of preparation costs included in the Consultant Services and Project Management categories. The expenditures must be agreed with the World Bank before incurred.
- ***Special Account (SA).*** MOELSP will open a Special Account and the Guarantee Facility Account specifically for this project, at BGK, which shall include appropriate protection against set-off, seizure and attachment. Withdrawal applications for the replenishments of the Special Account will be sent to the Bank monthly or at least every three months regardless of the activity during the period or the size of the Special Account. Replenishment applications must include reconciled, detailed bank statements as well as other appropriate documents (e.g. SOE or source documentation). The bank statement must indicate both the opening and closing balances of the Special Account for the period covered by the expenditures claimed, and likewise, indicate all transactions and activity on the account during the period. The reconciliation statement must also explain any discrepancies (surplus or shortage of funds) and the status of any previously deducted expenditures. In case there is no need for replenishment of the Special Account the application should be also sent on at least a quarterly basis, with the indication that no replenishment is needed and the application is sent for recovery of the Special Account. Such recovered amount can be later requested for replenishment with a new application without any additional SOE. The Authorized Allocation will be set at US\$1.1 million option assuming direct transfer of grant funds into the Guarantee Facility Account. The interest earned on the Special Account will be at the disposal of MoELSP; however, they should be used for the project and added to the guarantee reserves.

The disbursement allocation of the GEF Grant showing categories of disbursement, amounts and percentages to be financed under each category, is presented in the Table B below.

Table B: Allocation of Grant Proceeds

Expenditure Category	Amount in US\$ million	Financing Percentage
1. Supply & Installation of Equipment	0.80	36%
2. Goods	0.60	36%
3. Works	0.60	36%
4. Consultants' Services	1.93	100% for foreign consulting firms and foreign individual consultants and 83.5% for local consulting firms and local individual consultants, including 100% of eligible social charges
5. Training	0.035	100%
6. Project Management:		
(a) Management Fee	1.30	100%
(b) Goods	0.035	82%
7. Partial Credit Guarantee Facility	5.7	100%
Total Project Costs	11.00	

For the purposes of the above tables:

(a) the term "foreign expenditures" means expenditures in the currency of any country other than that of the Grant Recipient for goods supplied under the S&I contract from the territory of any country other than that of the Grant Recipient;

(b) the term "local expenditures" means expenditures in the currency of the Grant Recipient; or for goods supplied under the S&I contract from the territory of the Grant Recipient.

Action Plan (Agreed with Borrower). As noted earlier, the financial management arrangements of the project should be strengthened prior to disbursement for Partial Credit Guarantee Facility component.

The following is an agreed Action Plan for BGK to strengthen its financial management system.

	Action	Responsibility	Deadline
1	Preparation of the IT system to monitor the guarantees issued together with underlying loan portfolio. The readiness of the system is condition of disbursement for the Guarantee component.	BGK	Disbursement condition

Supervision Plan. During project implementation, the World Bank will supervise the project's financial management arrangements in two main ways: (i) review the BGK's Request for no objections to selected participating banks, (ii) review of the project's quarterly financial management reports as well as the entity's and project's annual audited financial statements and auditor's management letter; (iii) during the Bank's supervision missions, review the project's financial management and disbursement arrangements (including a review of a sample of SOEs and movements on the Special Account) to ensure compliance with the Bank's minimum requirements, and (iv) review underlying books and records of the POE ESCO and Participating Banks to check eligibility of expenditures and initiated loans loan, to application of internal control procedures. As required, a Bank-accredited Financial Management Specialist will assist in the supervision process.

Annex 8: Procurement

POLAND: POLAND - GEF Energy Efficiency Project

A. General

Procurement for the proposed project would be carried out in accordance with the World Bank's "Guidelines: Procurement Under IBRD Loans and IDA Credits" dated May 2004; and "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, and the provisions stipulated in the Legal Agreement. The general description of various items under different expenditure category are described below. For each contract to be financed by the Loan/Credit, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank project team in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Procurement of Goods and Works: Goods and Works procured under this project, would include goods and civil works for energy efficiency measures. The procurement will follow the below described methods and will be done using (i) the Bank's Standard Bidding Documents (SBD) for all ICB and Commercial Practices, estimated to cost equal or more than US\$200,000 equivalent; and (ii) Invitation to Quote used for ECA Region, modified to needs of procurement of works, for contracts following Commercial Practices, estimated to cost less than US\$200,000 equivalent,

Procurement methods:

For Goods and Works, including Supply & Installation, estimated to cost equal or more than US\$ 350,000 equivalent: International Competitive Bidding.

For Goods and Works, including Supply & Installation, estimated to cost less than US\$ 350,000 equivalent: Commercial Practices, using the following two methods: (1) a specific contract; and (2) a rate framework contract, as defined below.

Commercial Practices for a specific contract shall consist in obtaining at least three quotations, when possible from suppliers or contractors located in at least two eligible countries.

Commercial Practices for a rate framework contract shall consist in obtaining at least three quotations, when possible from suppliers or contractors located in at least two eligible countries. This method can be based on (i) rate for a single item; or (ii) rates for a list of selected items; or (iii) rates for a list of selected items plus discount on commercial price list. Under this procedure, POE ESCO would annually publish a procurement notice (internationally where possible) inviting bidders for rate bids for standard items of goods and works. The bidders would be asked to indicate unit prices for single items, or for a list of items, or for a list of items with the bidders' commercial price list discount, without any assurance of firm deliveries as the quantities are not known at the time of invitation. The unit prices shall remain valid for, say, one year.

In case contracts based on *item rate*, rate bids would be requested separately for each standard item of goods or works and without specifying firm quantities to be procured. The Borrower would finalize item rate framework contracts with the first three lowest responsive bidders for each invited item of goods or type of works that are within 15% of the lowest responsive bid. In case of the contract based on the *item rate list*, POE ESCO would invite bidders to quote their rate prices for a list of standard items of goods or works, which are common for and can be offered by a number of firms. POE ESCO would provide its estimates of quantities for each item on the list. The Borrower would finalize rate framework contracts with the first three lowest responsive bidders for each invited list of item of goods or type of works that are within 15% of the lowest responsive bid.

In case the contract is based on the *item rate list with commercial price list discount* POE ESCO would invite bidders to quote their rate prices for a list including its best estimated amounts of different standard items, which can be offered by a number of firms. In addition, the bidders would offer a discount rate for the remaining items of their commercial price list. In evaluation, both the total price of item list and a discount would be taken into consideration. The Borrower would finalize rate framework contracts with the first three lowest evaluated responsive bidders for each invited list of item of goods or type of works that are within 15% of the lowest evaluated responsive bid. Procurement volume of discounted items would not exceed more than 20% of the overall procurement volume under the rate framework contracts.

POE ESCO would conclude contracts for specific items of goods or works under the rate framework contracts when demand arises during the contract period and obtain the equipment and works from one of the three firms that has a rate framework contract with POE ESCO, on terms and conditions specified in the rate framework contract.

By use of rate framework contracts, POE ESCO will not have to negotiate contract terms with each supplier. This approach would allow the POE ESCO to limit the frequency of tendering to not more than twice a year and to benefit from the economies of scale.

Selection of Consultants : The consulting services that shall be provided by firms would include with regard to (i) the Guarantee Program: verification audits, financial audit, marketing and training, monitoring and evaluation and dissemination of results of the Program, and review of regional cooperation with regard to the similar programs; and (ii) POE ESCO: TA to create demand for its projects, training, monitoring and evaluation support, energy audits, and weatherization design. The consulting services that shall be provided by individual consultants would include with regard to (i) the Guarantee Program: verification audits and employment of the procurement specialist; and (ii) POE ESCO: energy audits, and weatherization design.

Operational Costs: The project shall finance the Management fee for BGK to cover its incremental operational costs related to management of the Project. The Project shall also finance training cost of transportation, accommodation, per diem and interpretation services and cost of training courses and study tours for BGK staff, Participating Banks' staff, and energy efficiency businesses.

Others: The Partial Guarantee Facility of US\$ 5.7 million shall be used to extend guarantees to commercial banks for partial coverage of risk exposure against loans made for energy efficiency projects for buildings throughout Poland. The guarantees will cover 50 to 70 percent of loan principal, and will be arranged through a number of participating banks who will each have entered into a Guarantee Framework Agreement with BGK.

Retroactive financing is foreseen up to US\$100,000. Advance procurement: yes.

B. Assessment of the agency's capacity to implement procurement

Financing Arrangements: The Ministry of Economy, on behalf of the Government of Poland shall be the Recipient of the GEF Grant. BGK shall be the Executing Agency for the GEF Grant. BGK will administer GEF-financed three Project Components. In addition to implementing the Technical Assistance Component, BGK, as a financial intermediary, shall provide partial guarantees to commercial banks financing energy efficiency projects and shall transfer the GEF funds on a grant basis to POE ESCO, a subsidiary of MPEC Krakow, the Bank's Borrower for the Krakow Energy Efficiency Project. POE ESCO is an autonomous commercial enterprise in the public sector. POE ESCO, as a Beneficiary of the GEF Grant funds, shall use these funds to co-finance higher cost energy efficiency measures.

Implementing Agency and PMU: BGK shall be the Implementing Agency responsible for procurement under the Project. BGK will operate this project from, and establish the Project Management Unit (PMU) within, its Special Funds Department, which will be responsible for ensuring that all procurement related to Capital Grant and Technical Assistance activities is designed and undertaken in conformity with the Bank's Guidelines and Project Implementation Plan. No procurement activities are foreseen under the Partial Guarantee Facility Component. For the Capital Grant Component, POE ESCO shall be responsible for ensuring that procurement is conducted in conformity with the Bank's Guidelines and Project

Implementation Plan, by using MPEC Krakow to conduct procurement on its behalf taking advantage of the existing procurement capacity at MPEC Krakow.

An assessment of the capacity of the Implementing Agency to implement procurement actions for the project has been carried out by Elzbieta Sieminska in April 2003. The assessment reviewed the organizational structure for implementing the project and the interaction between the project's staff responsible for procurement Officer and the Ministry's relevant central unit for administration and finance.

The assessment of the Implementing Agency capacity (BGK) to conduct procurement was found to be low, and the procurement risk is rated as "high." This is despite assessing the procurement capacity of MPEC Krakow, which will conduct procurement for POE ESCO, the Grant Beneficiary, as high. This will allow to mitigate risk subject to undertaking actions as included in the below overall remedial action plan, which is needed to mitigate the procurement risk, and which, comprises the following actions: (i) BGK shall employ an individual consultant, experienced in the Bank's procurement, especially in selection and employment of consultants, to enable efficient start of the Project, by the Board Project presentation. The consultant may be transferred later to a permanent procurement staff of PMU if such need arises. S/he will provide the on-job training to a permanent procurement staff already employed by PMU. The Bank shall consider BGK's request to retroactively finance the cost of this consultant under the TA Component. (ii) In addition to the already employed procurement officer, BGK shall employ his/her administrative support by the time of Grant effectiveness. In case if BGK is able to employ a skilled procurement specialist, the assignment of the procurement consultant may be adjusted down according to the Project needs. (iii) BGK shall establish the Project Management Unit with the management, procurement, financial and disbursement staff by the Grant effectiveness. (iv) In addition to the on-job training received from the procurement consultant, the procurement officer shall attend a course on the Bank's selection and employment of consultants as well as a procurement of goods and works course as available. (v) The Bank's Standard Request for Proposals for QCBS and LCS methods and Bank's Standard Bidding Documents for ICB method shall be used. (vi) Initiating a Project Launch Workshop before the Grant effectiveness, as part of the project implementation/capacity building initiatives, especially in procurement, to train the BGK's and POE ESCO's staff and provide refreshing training to MPEC's Krakow staff. (vii) Periodic ex-post review by the Bank of 1 in 5 contracts during the supervision missions every 6 months. (viii) Project Implementation Plan to be prepared by the Grant effectiveness.

Additional specific actions, related to Capital Grant Component: (i) POE ESCO enters into agreement with MPEC Krakow for MPEC Krakow to conduct procurement procedures for POE ESCO. (ii) Preparation and agreeing with the Bank upon the model Bidding Documents for procurement of goods, works and supply & installation contracts with use of Commercial Practices before the first procurement with use of these methods.

It is proposed to reassess the procurement capacity during the Supervision Missions and revise, as appropriate.

C. Procurement Plan

The Borrower, at appraisal, developed a Procurement Plan for project implementation which provides the basis for the procurement methods. This plan has been agreed between the Borrower and the Project Team on July 6, 2004 and is available at BGK in Warsaw, Poland. It will also be available in the Project's database and in the Bank's external website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

Two Project components, Capital Grant and Technical Assistance involve procurement.

Capital Grant Component, Goods and Works, including Supply and Installation:

The GEF Project will co-finance multiple subprojects of various type and size. These subprojects shall be prepared over the implementation period of the GEF Project and may include different numbers of packages. Depending on the subproject, these packages may include procurement of goods, works or

supply & installation contracts. To the extent possible packages for procurement of goods of similar nature, which are needed for different subprojects, shall be grouped into larger packages to use economy of scale in procurement. However, the minimum procurement package shall be equivalent to US\$250,000. With the largest contracts be procured through ICB procedure, most of packages will likely be appropriate for procurement with use of Commercial Practices (defined below).

Technical Assistance Component, Consulting Services and Training:

Consulting services are required to: support the deployment of the guarantee mechanism and to build the capacity of BGK to administer the Project components and Grant funds; support POE ESCO in the development of the performance contracting model in the Krakow region and to build its pipeline of potential investments; provide training to local banks; increase awareness and demand for efficiency investments among building owners; and to collect project monitoring data and broad dissemination of results.

	Non-procurement items:
Partial Guarantee Facility	US\$5.7 million
SOE based training courses	US\$35,000
BGK Management Fee	US\$1.3 million

D. Frequency of Procurement Supervision

In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended twice a year supervision missions to visit the field to carry out post review of procurement actions.

Attachment 1 - Details of Procurement Arrangement involving international competition.

1. Goods and Works and non consulting services.

(a) List of contract Packages which will be procured following ICB and Direct contracting:

1	2	3	4	5	6	7	8	9
Ref. No.	Contract (Description)	Estimated Cost [th. US\$]	Procurement Method	P-Q	Domestic Preference (yes/no)	Review by Bank (Prior / Post)	Expected Bid-Opening Date	Comments
1.	G,W,S&I for EE measures under the Capital Grant Facility	6 700,00 (total)	ICB=USD 350 000 ²	NO	Applicable only for goods	Prior	as needed for GEF High Cost Measure Grant financed project 2004-2007	
2.	G,W,S&I for EE measures under the Capital Grant Facility	2 000,00 (GEF fin.)	CP<USD 350 000	NO	NO	Prior		

(b) ICB Contracts estimated to cost above US\$350,000 per contract will be subject to prior review by the Bank. Contracts procured through Commercial Practices estimated above eq. US\$200,000 and the two first contracts regardless of their value will be subject to prior review by the Bank.

2. Consulting Services.

(a) List of Consulting Assignments with short-list of international firms.

1	2	3	4	5	6	7
Ref. No.	Description of Assignment	Estimated Cost [th. US\$]	Selection Method	Review by Bank (Prior / Post)	Expected Proposals Submission Date	Comments
1.	Guarantee Program Marketing and Training	888,00 (total) 728,00 (GEF fin.)	QCBS	Prior	kwi-05	
2.	Monitoring & Evaluation, Dissemination of Results, Regional Cooperation	357,70 (total) 323,50 (GEF fin.)	QCBS	Prior	maj-05	
3.	TA to Create Demand	230,00 (total) 200,00 (GEF fin.)	QCBS	Prior	kwi-05	

² applicable depending on estimated cost of contract, contracts will be identified during the process of Project realization

(b) Consultancy services estimated to cost above US\$100,000 per contract (firms) will be subject to prior review by the Bank. In addition, the first contract (firms) under the CQ method regardless of its value and TOR for all contracts will be subject to prior review by the Bank. The first contract with an individual consultant regardless of its value and TOR for all contracts and all contracts above US\$50,000 will be subject to prior review by the Bank.

(c) **Short lists composed entirely of national consultants:** Short lists of consultants for services estimated to cost less than US\$200,000 equivalent per contract, may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Annex 9: Economic and Financial Analysis

POLAND: POLAND - GEF Energy Efficiency Project

Incremental Cost Analysis

CONCEPT AND BARRIER REMOVAL STRATEGY

The objective of the proposed project is to increase public and private sector investments in energy efficiency in buildings by removing barriers to market-oriented transactions. The investments in efficiency will improve environmental sustainability in Poland by reducing energy consumption and reducing emissions from fossil fuel consumption and will enhance private sector led growth and job creation. The project will achieve this by:

- 1) Overcoming the risk barriers in the financial markets inhibiting commercial bank participation in energy efficiency project financing by establishing a GEF partial guarantee facility to address project and credit risk and transaction structuring barriers to EE finance;
- 2) Demonstrating the feasibility of packaged investments in higher-cost energy efficiency measures in buildings by providing partial support for the incremental cost of the investments and increasing acceptance of energy performance contracting mechanisms in Poland; and
- 3) Stimulating the demand for energy efficiency services in the buildings sector and increasing the capacity of the financial sector to regarding lending for EE investments.

The technical and economic potential for energy efficiency in the building sector in Poland is enormous. However, this market potential is being tapped at very slow pace, even with the support of government initiatives such as the thermomodernization program.

As described in Section B.3.1, there are several market barriers to achieving increased energy efficiency in the building sector, which can be summarized as follows:

- Financing Barriers and High Perceived Risk of EE loans
- Inadequate Information
- High transaction costs

The project will overcome the barriers outlined above by the following methods (also described in Section B.3.2, C.1 and Annex 2):

Reduce Financing Barriers and Perceived Risk Barriers through operation of the partial guarantee facility.

The partial guarantee will provide a measure of financial security of participating commercial banks, which will increase as they gain experience through actual loan performance and become more comfortable with the energy performance contracting mechanism as demonstrated by the loans to ESCOs. The guarantee will also increase nation-wide capital availability for longer-term loans through leveraging of the GEF guarantee reserves. The banking sector in Poland has adequate liquidity and is relatively healthy financially, and basic terms of financing are good. However, with a few exceptions, banks are unfamiliar with the concept of energy efficiency project financing, especially the performance contract method. Most transactions involve short loan tenors (which most building projects cannot support), and high security requirements (collateral). By offering to share in the credit risk of EE projects, the GEF guarantee facility can help introduce more transactions and more financing volume in the market. Over time, as EE project perform and service debt adequately, more banks should enter the market, understanding the true nature of the risk associated with the projects. By offering to share in the risk, the guarantee facility will also help market participants (both financiers and building owners) overcome the perception that projects must be subsidized in order to be financially viable.

Improving Information availability on EE projects and finance for Building Sector Investments

The marketing of the EE guarantee program; training and capacity building efforts for commercial banks on energy efficiency finance; assistance to ESCOs and other EE service providers in contracts and financing;

assistance to municipalities in characterizing EE projects and preparing tenders for financing; demonstration of the viability of bundled projects, and dissemination of project results will address the imperfect information barriers present in Poland. In addition, the large transaction volume anticipated by the guarantee program will itself help build awareness in the market.

Reducing Transaction Costs through ESCO Approach

Promotion of the ESCO concept, specifically through support to POE ESCO in Krakow will address barriers related to arranging financing and lowering transaction costs. ESCOs, as expert practitioners of energy efficiency project implementation and finance, can provide flexible financial structures for building owners, that allow for pricing and term financing suitable to both parties suitable for the longer paybacks of building efficiency projects. By aggregating projects, such as investments in multiple buildings owned by municipalities, POE ESCO and other ESCOs can achieve economies of scale and reduce transaction costs as a percentage of total project cost. In addition, the support of the GEF Capital Grant facility will allow POE ESCO to demonstrate that the packaging of higher cost EE measures with lower cost measures is a financially feasible investment.

Contingent Finance Modality

About 52 percent of the proposed GEF financing will be used in a contingent finance modality. Of the total US\$11.0 million proposed, US\$5.7 million will be used as a contingent grant for capital reserves for the loan guarantee facility. Contingent grant financing is considered the best use of GEF resources because most of the barriers identified above can be addressed through the risk sharing arrangements of the guarantee, thus bridging the gap between perceived risk and real risk.

The contingent finance modality for this project builds on concepts introduced in several other Bank/GEF projects, including the Croatia Energy Efficiency Project, the Second Energy Conservation Project in China and the Romania Energy Efficiency Project.

GEF Contingent Grant for Guarantee Fund. An initial GEF grant of US\$5.7 million will be used to for reserves for the guarantee fund. The reserves will be used to partially guarantee commercial bank liability for efficiency loans. Payments against guarantee claims for losses will be made to banks according to the provisions of the Guarantee Framework Agreements. Interest earnings from guarantee reserves and guarantee fees in excess of Facility and PMU operating costs will be added to the reserves. Under the reference scenario, the level of reserves in the guarantee facility will be \$5.8 million as of the closing date of the project (year 6).

The final level of reserves in the guarantee fund is contingent upon the actual performance of the project. Changes in actual default rates, number and tenor of transactions and consequent fees, levels of guarantee coverage offered, and the interest rate received will affect the final reserve amount. The value of the final grant for the guarantee fund is the initial grant (\$5.7 million) less the final amount of reserves. It will not be known until project closure.

If it is determined that the market would continue to benefit from the continued presence of the partial guarantee and that BGK has met its operational responsibilities in a satisfactory manner, the funds may remain in the BGK reserve account and the program continued under existing management. The financial projections in Annex 5 provide additional details on the results of the continued operation of the fund for a 10-year time horizon. If not, the remaining funds would be transferred from BGK for use in future projects in Poland, as agreed to by the World Bank and the Ministry of Economy.

Direct Cost of the GEF Project

The total incremental cost of the project is US\$11.0 million, as measured by the initial contribution of the GEF. This includes the initial capitalization of the guarantee facility, the cost of the capital grant facility, and the costs for technical assistance. The balance of GEF funds (US\$5.8 million) will remain in the country for further leveraging and replication of the activity after project completion. The direct cost of the project is detailed below.

Table 2: Incremental Cost of the GEF Activity

Partial risk guarantee	US\$5,700,000
Capital Grant Facility	US\$2,000,000
Technical assistance costs	US\$3,300,000
Total	US\$11,000,000

The *cost of the partial risk guarantee* is based on the initial capitalization of the guarantee facility with GEF reserves.

The *cost of the capital grant facility* is the cost of the grant payments to POE ESCO for eligible projects bundling high cost measures with lower cost measures.

The *cost of the technical assistance* includes consulting services for audits and engineering reviews, cost of the training, capacity building, demand generation activities, and monitoring and verification.

Data Used for Calculation of Emission Reductions From Efficiency Investments

Two sets of data have been used to calculate the energy savings and consequent carbon dioxide reductions from investments in building efficiency measures supported by the project. National data on heat supply and electricity mix has been used to calculate the impacts of the lending supported by the guarantee facility. The calculation of the impacts of the capital grant facility has been undertaken utilizing data from the Krakow region to reflect the location of projected investments by POE ESCO supported by the grant, which differ from the national averages. In Poland, much of the heat supply is produced from combined heat and power plants whose operation tracks electric load, not heat demand. Thus, a reduction in end-use steam consumption would not necessarily lead to reduced fuel consumption. The assumed life-cycle for equipment yielding electric energy savings is 8 years; for thermal savings 15 years. The key data values used in calculation of emissions reductions are presented below:

Average HOB emission factor:	Poland	Krakow Region
HOB emission factor based on plant generation (tCO ₂ /GJ)	0.0751	0.0836
District heating transmission & distribution efficiency	80.4%	80.4%
HOB emission factor based on end-use consumption (tCO ₂ /GJ)	0.093	0.104
Composite emission factor, including HOB and CHP sources		
% thermal savings that will offset HOB heat	62%	26%
% thermal savings that will offset CHP heat	38%	74%
HOB emission factor (tCO ₂ /GJ)	0.093	0.104
CHP emission factor (tCO ₂ /GJ)	0	0
Composite emission factor	0.0579	0.0271
CO ₂ emission factors for electricity savings (tCO ₂ /MWh)	1.13	1.20
Ratio of EE investment in electricity saving: thermal saving	20:80	20:80

Baseline of Energy Efficiency Investments in Building Sector

There is currently a limited level of current investment in energy efficiency in the building sector in Poland. This investment is primarily limited to building owners taking on projects financed through internal resources, and has not progressed to the extent that the government and others have hoped. Several small ESCOs have established themselves in the market, but for the most part are reluctant to enter the buildings market because of difficulties in securing commercial finance for longer payback investments. The exception is POE ESCO, which is establishing itself in the Krakow market and is focusing on the building sector.

The main indicator of relatively low baseline market activity in the building sector is the Thermo-modernization program. This program has had limited success, though this may be more a reflection of design than the market itself. The TM program has supported total investments in energy efficiency in buildings of approximately US\$5 million per year. There is also a low level of commercial bank lending for efficiency, though much of this lending was made in association with preferential funds such as the National Fund for Environmental Protection.

An additional indicator of the baseline activity in energy efficiency financing is the projected investments of POE ESCO supported by the IBRD loan. This loan, along with commercial bank co-financing, is expected to support POE ESCO sales of roughly US\$24.5 million over the project period. While POE ESCO is still in early stages of development, indications are that it will be able to meet its business plan targets.

Based on the above, the baseline investment activity in building energy efficiency is approximately US\$61.5 million over the six-year implementation period of the Poland-GEF Energy Efficiency Project. This assumes that: (i) the thermo-modernization program will continue at the same levels of disbursement; (ii) commercial banks will continue lending at existing rates; (iii) POE ESCO will reach its sales targets; (iv) there is no overlap among these areas. In fact, it is likely that some of the commercial bank lending to POE ESCO will come from banks already active in the sector. However, it is not reasonable to assume that POE ESCO will be the only ESCO active in the market; therefore we assume POE ESCO sales are in addition to existing commercial bank loans.

GEF Alternative: Project Scenario

The implementation of the proposed project will produce substantial reductions in greenhouse gas emissions in Poland by catalyzing US\$53.5 million in investment in energy efficiency products and services for the buildings sector during the project period. These investments will yield carbon dioxide reductions of approximately 1.4 million tonnes of CO₂ over the lifetime of the equipment installed.

Investments supported by the guarantee component will yield 400 million kWh & 13.9 million GJ, representing \$10.5 million in energy cost savings and 1.3 million tonnes CO₂. Investments supported through the grant will yield 54.7 million kWh and 1.9 million GJ, representing \$1.1 million in energy cost savings and 0.12 million tonnes CO₂.

Incremental Cost of the GEF Alternative

The total cost of the GEF project, including initial costs for Technical Assistance, the capital grant and the contingent grant deposit of guarantee reserves is \$11,000,000. The project will produce **incremental** global benefits of 1,374,411 tonnes of avoided CO₂, at a cost to the GEF of \$8.0/tonne CO₂ (or \$29.35/tonne carbon).

From the country point of view, the costs would be substantially lower. The remaining guarantee reserves would stay in the country and be available for additional climate change mitigation activities at project closure. They can therefore be subtracted from the initial GEF costs and only the final grant cost, capital grant cost and TA costs are considered. In this case, the nominal mitigation cost (not counting the time value of money) drops to \$3.62/ton CO₂.

Leveraging and Replication

Leveraging of GEF funds occurs at several levels in the proposed project. The total cost of the project, US\$11.0 million, is leveraging additional project financing of US\$53.5 million.

From the point of view of direct costs, the actual expenditures on the contingent grant, guarantee fund and TA totaling \$5.0 million will leverage commercial financing and client co-financing at a ratio of over \$10.7:\$1.

The total project investment figure does not include the entire expected market impact of the GEF project. If it is determined that the guarantee program will continue after project closure, the recovered contingent grant amount remaining as guarantee reserves will aid in securing an additional \$31.5 million in loans for years 7-10 at an assumed lower percentage of guarantee coverage (40% as opposed to 60%). This lower coverage is the logical outcome of the barrier removal activities as commercial banks gain experience and confidence in the performance of energy efficiency loans. Allowing for the same leveraging effect as the original project the remaining US\$6.0 million in reserves will catalyze an estimated US\$39.4 million in additional energy efficiency investments, not counting the value of the remaining reserves after year 10. This replication effect would result in additional energy savings of more than 11.2 million GJ and reduce emissions by an additional 1.0 million tonnes of carbon dioxide. Thus, the estimated total incremental carbon dioxide reductions resulting from the implementation of the project, including leveraging and replication, is approximately 2.4 million tonnes of carbon dioxide, at a cost to GEF of \$4.6/tonne CO₂ avoided (\$16.88/tonne carbon).

Table 3: Incremental Cost Matrix

	Baseline	Alternative	Increment
Domestic Benefit	Some improvements in energy efficiency by investments from POE ESCO and others, including TM program Limited number of banks financing EE projects	Major increases in investment by POE ESCO; improved viability of POE ESCO Major investment activity by commercial banks	Increased energy savings from increased efficiency, improved comfort levels, lower level of environmental costs from local emissions, additional energy savings of 15.8 million GJ and 455 million kWh
Global Environment Benefit	Base case energy efficiency market investments of \$61.5 million leads to 1.4 million tonnes CO ₂ reductions.	Increased investments in energy efficiency totaling \$115 million, yielding 2.8 million tonnes CO ₂ reductions.	1.4 million tonnes CO ₂ reductions.
GEF Incremental Costs (US\$ million)			
Guarantee costs	-	5.7	5.7
Capital Grant Facility	-	2.0	2.0
Technical Assistance	-	3.3	3.3
TOTAL GEF Costs	-	11.0	11.0

Financial Summary

Introduction

The purpose of the analysis in this Annex is to provide an overview of the key parameters and risks which define and drive the performance of the Guarantee Program and to present the financial results of the operation of the program. Particular attention is paid to the factors driving transaction volume, the risk exposure of the Guarantor (BGK), and the program's operating costs and sources of income.

The guarantee program will seek to: (a) maximize the number and volume of transactions, leveraging reserve capital prudently to facilitate as much commercial lending as possible; (b) preserve the guarantee fund's capital base, through risk management, balanced credit review procedures, and strict control of program operating expenses; and (c) promote, engage and strengthen the involvement of commercial banks so that their familiarity with energy efficiency lending leads to progressively more underwriting of credit risks by the banks themselves.

The guarantee program will be operated by BGK, the state development bank, who will act as manager and guarantor. The project will provide a GEF grant of US\$5.7 million which will be directly allocated to guarantee reserves. The project implementation period is six years, though the continuation of the program through continued origination of guarantee transactions is anticipated, depending on level of remaining reserves and program performance.

Key Parameters

Key parameters defining the investment and financial performance of the Guarantee Program include:

- (a) amount and disbursement schedule of the reserves
- (b) volume of transactions and extent of leverage achieved, and risk management
- (c) characteristics of loans, including interest rates, tenors and default rates
- (d) operating income and expense

The objective of the Program is to maximize guarantee commitments and thus loans made to energy efficiency projects. This must be done by balancing aggressive marketing and underwriting of loans with sound credit analysis, as well as prudent cash flow management. A key success factor will be an ability to maintain an adequate level of reserves in order to make the Program sustainable beyond the six-year project period.

Guarantee Capital Reserves

US\$5.7 million is dedicated for the guarantee reserves which are critical to provide confidence to lenders that claims covered by the guarantee will in fact be paid, and thus to provide incentive to originate transactions. The Guarantee manager, BGK, will be in a first loss position regarding guarantee claims, and therefore the reserves will provide adequate capital to also provide BGK with the ability and confidence to market the program and encourage origination among participating banks.

Disbursement Schedule

Disbursement of the GEF grant for guarantee liabilities will be made against execution of Guarantee Framework Agreements between BGK and participating banks. Each GFA will include a provision defining the maximum total outstanding guarantee facility liability limit ("FLL") which BGK can assume under the GFA. The initial disbursement will be equal to the FLL of the first GFA, expected to be US\$3.0 million. Signing of one GFA is a condition for effectiveness of the grant, and therefore disbursement will occur immediately after execution of the grant and implementation agreements.

Additional GFAs will be executed by BGK and an estimated two to three banks over the course of several years. The second disbursement will be tied to execution of the second GFA, in amount equal to the FLL, subject to a cap of US\$2.0 million in reserves. There is some risk that program performance will be unsatisfactory, based on a combination of possible factors. In order to manage the risk, World Bank will disburse a maximum of US\$5 million

during the first two years. BGK will have guarantee capacity in an amount equal to 1.5 times the reserves, and therefore should have sufficient capacity for entering into additional GFAs (total guarantee capacity will equal US\$7.5 million). BGK will not be able to enter into GFAs where the total FLLs from all executed GFAs exceeds US\$7.5 million.

Subject to a review at the beginning of year 3, the remaining US\$0.7 million in reserves will be disbursed, if GFAs totaling US\$7.0 million in FLLs have been executed. The review will be an early program performance review, and will address the following issues: number of GFAs and amount of FLLs; number and amount of transactions originated under each GFA; performance of loans (default rate); other qualitative measures such as interest in the market and response to TA activities. Based on a positive assessment from the parties, BGK has agreed to make a formal request of its management board to raise its upper limit of liabilities to reserve ratio from 1.5:1 to 3:1. A positive assessment coupled with a formal agreement to raise the potential exposure of BGK to 3:1 will allow for final disbursement. A negative review of performance and/or refusal of BGK to increase its potential exposure may result in no disbursement or cancellation of the program.

The following table outlines the anticipated disbursement schedule for reserves:

Milestone	Anticipated Date	Amount	Use of funds
Signing of GFA with FLL of US\$3.0 million, grant effectiveness	June 2004	US\$3.0 million	Guarantee reserves
Signing of GFA with FLL of US\$2.0 million	March 2005	US\$2.0 million	Guarantee reserves
Signing of GFA with FLL of less than or equal to US\$2.5 million	September 2005	No disbursement	
Signing of GFA with FLL of US\$2.0 million	September 2006	US\$0.7 million	Guarantee reserves

The guarantee reserves will be reinvested by BGK. BGK will convert the dollar denominated GEF disbursements into PLN at the time of receipt and reinvest in PLN in order to earn the higher PLN interest rates. BGK proposes to use the same eligible investment instruments as it uses with the KFPK, namely short-term Government of Poland securities. Reserves must be liquid to cover potential guarantee loss claims. The Project Agreement will address eligible investment instruments and also include definition of approved uses of interest earnings. Interest earnings will be reinvested in the reserve fund. Reporting to the WB on the status of guarantee reserves will be required. The default strategy on use of interest earnings is for them to accrue to the reserve fund making them therefore subject to the decisions concerning GEF exit strategy.

Because the reserves will not be disbursed against invoices through normal procurement procedures, a special waiver by the World Bank will be required.

Transaction Volume Resulting from Guarantees

Projected guarantee volumes are estimated bank by bank. A total volume of transactions (total original transaction loan principal) over six years of US\$39.0 million is estimated. This volume of guarantees is judged to be moderately optimistic. The program may have capacity to provide a greater volume of guarantees; the principal limiting factor is deal flow of qualified transactions. Transaction volume is expected to reach a peak of about US\$9.0 million in Year 5, after the fourth GFA is executed in Year 4.

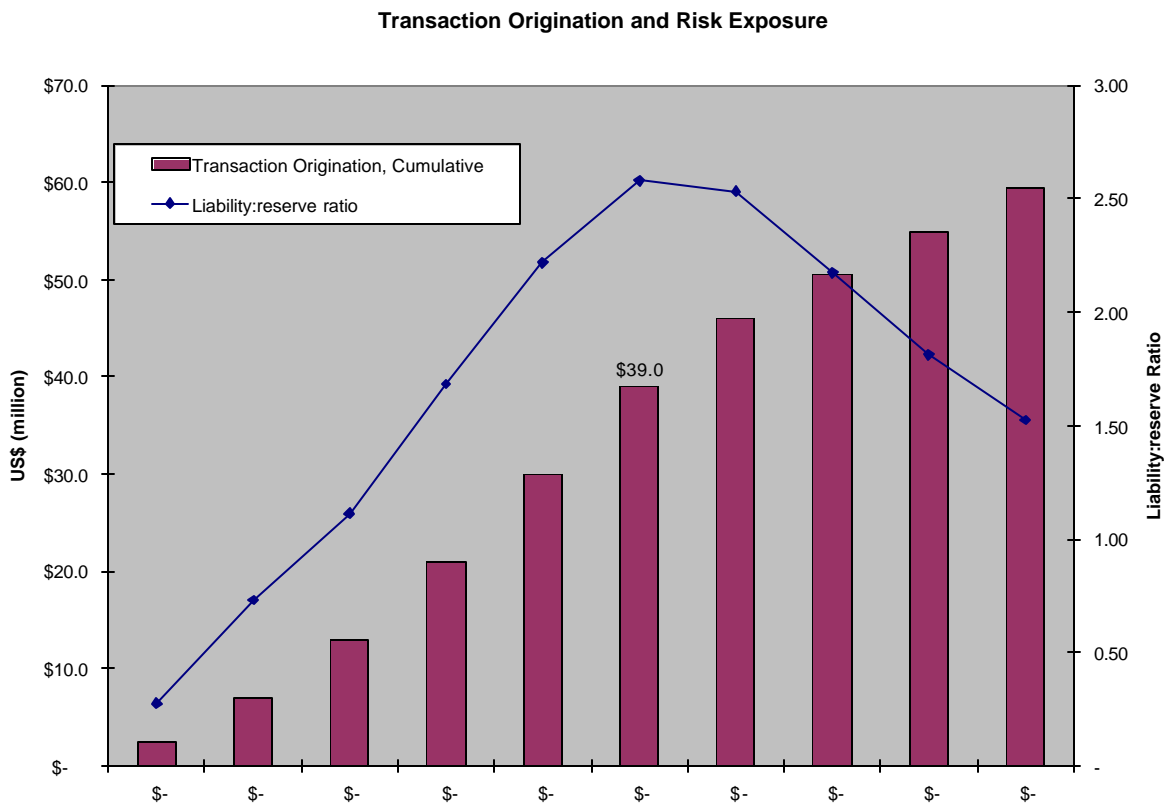
The risk of lower than expected deal flow can be partly mitigated through a strong marketing and promotion campaign, coupled with active intervention through training and capacity building at banks. Transaction volume can also be limited by poor execution or excessive risk aversion on BGK's behalf; performance will be reviewed prior to the mid-term review to determine this. Loan transactions projected from the program over a 10-year period total US\$69 million, based on approximately US\$34 million in new guarantee liabilities issued during that period.

Leveraged Guarantee Capacity

During the first two years of operation, BGK can undertake guarantee liabilities up to a maximum of \$7.5 million. Program buildup during the first two years is expected to be relatively modest, as new GFAs are signed and technical assistance activities are at their peak. Current projections show a liability:reserve ratio of less than 1.0 in the first two years, with greater volume and an increasing ratio during the next four years. As noted above, BGK management will make a policy decision in Year 3 to increase the ratio to 3:1, allowing for increased leverage capacity during the years when deal flow and transaction volume is potentially strongest. ***A covenant of the grant agreement is that BGK will adopt the higher ratio of 3:1 after review with the Bank in the first quarter of Year 3.***

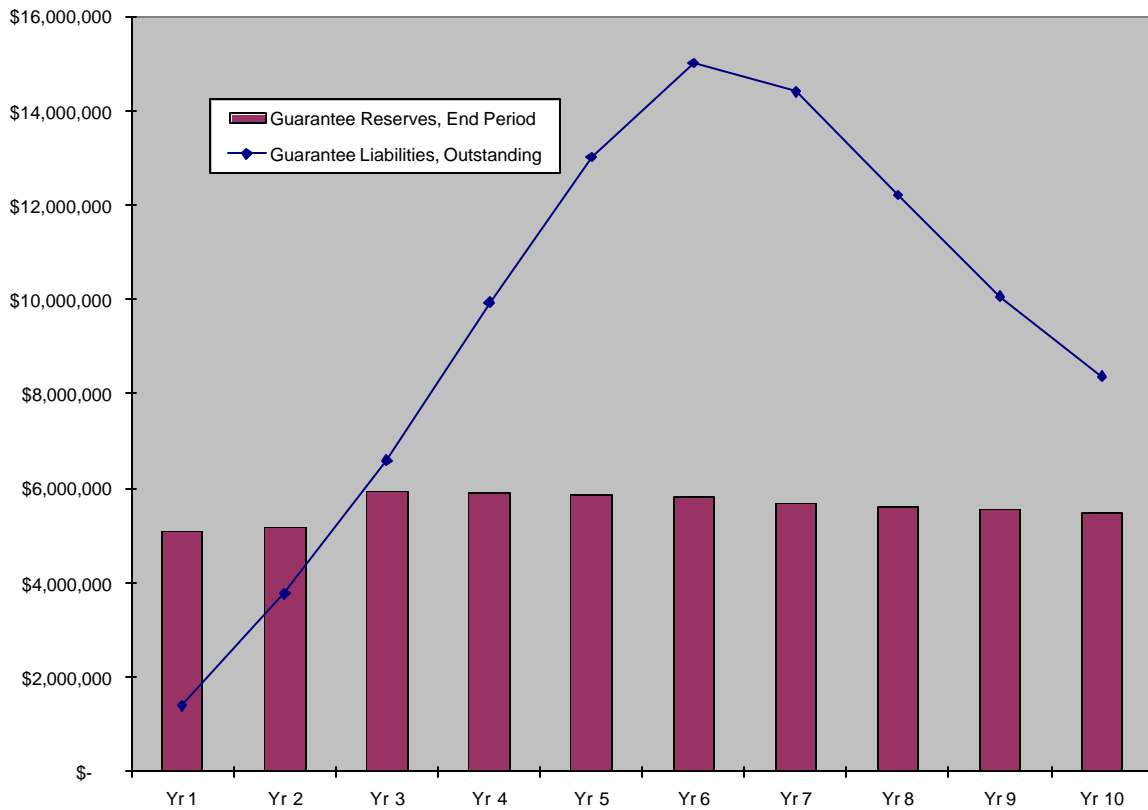
The chart below projected loan transaction volume and BGK liability:reserve ratios over the project period.

Figure 3: Guarantee Transaction Origination and Risk Exposure



The ratio of guarantee liabilities to reserves peaks at 2.58 in Year 6 and remains at about that level for several years, with new loans being added and early stage loan principal being paid off (assumed average loan tenor is 7 years). The ratio climbs faster than loan origination because some loans are assumed to go into default, thus lowering the level of reserves, and as transaction volume grows, cumulative liabilities grow rapidly. The chart below shows the relative change in reserves and liabilities.

Figure 4: Guarantee Reserves and Outstanding Liabilities



Guarantee liabilities are based on an estimate of the average guarantee percentage, which will be between 50 percent and 70 percent; projections assume an average of 60 percent. Increasing the guarantee percentage to the limit of 70 percent will reduce the amount of loans made by around 15 percent in the first six years of operation. Maximizing the leverage to 50 percent (which requires more risk sharing from commercial banks) would increase transaction volume commensurately (this assumes that the maximum liability to reserve ratio is kept constant in all three cases). The lending banks will normally request a higher guarantee percentage to reduce risk; BGK must utilize its judgment and decide to use a higher or lower guarantee percentage based largely on its own credit review but also on the programmatic goals and performance of the entire portfolio. It is natural to assume that BGK will be inclined to reduce its own exposure and thus strive for lower guarantee percentages. This will theoretically benefit the program to the extent that demand is strong. However, it may be required at times to use higher guarantees (less leverage) in order to draw more deals in.

Guarantee reserve balances are estimated based on: (a) disbursement of GEF funds to BGK for guarantee reserves, (b) minus annual guarantee claims, plus (c) a portion of annual interest earnings deposited back into the guarantee reserves, as opposed to being spent for program operations.

Risk: Management & Allocation of Guarantee Capacity

Maximum single transaction guarantee. An important risk management parameter is the maximum single transaction guarantee limit. The maximum single guarantee exposure, per transaction and per borrower, is US\$500,000. Importantly, this maximum guarantee exposure per single borrower will be increased in cases where an ESCO is the borrower; the amount of this increase remains to be determined and may be determined case-by-case depending on

ESCO capabilities and financial strength; the US\$500,000 maximum guarantee would apply for single ESCO projects/end-users.

A higher maximum single transaction guarantee limit could be prudently undertaken, especially where credit judgments can be made case-by-case; therefore, BGK may enter into GFAs that allow banks to propose guarantees with higher liability limits than US\$500,000 and BGK policy may be established to review larger deals case-by-case, and be prepared to approve them, subject to credit risk assessments. Another alternative with larger projects is to extend a guarantee through the existing KPFK, which has a maximum single transaction liability limit of EUR1.4 million.

Allocation of guarantee capacity. Guarantee capacity will be allocated initially to no more than three to four participating FIs. In the GFAs between BGK and the FI, the Facility Liability Limit (FLL) will be defined, representing the maximum guarantee liability which BGK will assume under the GFA. The Program will initially target a total of US\$5 million in FLLs for the first two participating FIs. With a total capacity exceeding reserves, it is possible to both (a) expand the FLLs for participating FIs, and (b) add more FIs. To manage the guarantee capacity with each FI, the GFA includes provisions (a) setting target volumes of guarantees, (b) allowing BGK to conduct periodic check-ins with the bank, and (c) allowing BGK to modify, whether to reduce or increase, the FLL depending on the banks performance.

Loan Characteristics: Interest Rates, Tenor and Default Levels

Other limiting factors in the amount of transactions that can be guaranteed are related to the terms of the deals themselves. Average loan tenor (seven years), interest rate (10 percent), and default level (seven percent of original principal) all have an impact on the amount of loans that can be guaranteed.

An average, weighted by total principal, finance and guarantee term for the transactions is estimated at seven years; many of the smaller transactions may have terms of three and four years, but some of the larger transactions may have terms longer than seven years. As payback periods increase, the increase in loan tenor required is proportionally greater. The interest rate assumed also affects both the required loan tenor and the guarantee liability levels also. Current interest rates are about 10 percent on local money.

Guarantee losses and claims payments are estimated as a percentage of the original guarantee liability, per year. Seven percent is used for the entire ten-year period, which assumes that loans will continue to be originated after the six-year program period. This translates into a total guarantee loss claims of US\$2.4 million over 10 years.³ This default rate exceeds the rate of BGK's actual guarantee claims under the KFPK, which is 4.5%, and is therefore deemed reasonably conservative on the high side. ***A covenant of the Grant Agreement will be that BGK will not exceed a maximum loss rate of 15% on non-performing loans at any time during the project. Loss rate is defined as "cumulative net losses divided by cumulative guarantee liabilities." "Cumulative net losses" equal cumulative loss payments made to banks, less funds recovered from defaulted loans and reinvested in reserves.***

Operating Budget

The operating budget for the guarantee program is comprised of (i) management fees and guarantee fees; and (ii) program-related expenses including staff costs and overhead for all project components. Management fees will be disbursed from the Bank based on prior review of annual budgets. Guarantee fees earned by BGK will supplement the management fee and be retained by BGK. Interest earned by the reserves deposit will be reinvested in reserves.

Interest Earnings

The estimated reinvestment rate is roughly 4.9% in PLN, reflecting short-term government securities rates as of September 2003. Interest earnings are assumed to be a full year of interest on the first disbursement and six months of interest on the second disbursement. Estimated reserve interest earnings over the first six years is estimated at US\$1.6 million. Interest earnings are a function of (i) timing of disbursement of GEF funds to BGK for guarantee reserves, (ii) guarantee losses and claim payments, and (iii) reinvestment interest rates. Interest earnings over the project period represent about 123% of management fees disbursed.

³ Note: actual guarantee liabilities on a cumulative basis will be less, as bad loans are deducted from liabilities as they are written off.

Operating Income

Guarantee fees are based on a fee schedule used by BGK in its existing guarantee program, and are a function of guarantee volume and fee pricing. The fees are relatively attractive (to lenders) compared to other programs such as the Hungary Energy Efficiency Guarantee program. Total fees are charged up-front for the total exposure, at 1.2% of the guarantee liability for two-year terms, 1.4% for three years, 1.6% for four years, 1.8% for five years, and 2% for terms greater than five years. For financial projections, based on the expected longer tenor of most loans, an average fee of 1.8% is used for all transactions. Guarantee fees, given the moderately optimistic projections of guarantee volume, are approximately US\$420,000. Overall, guarantee fees represent about 18 percent of total program income, and therefore the budget is not very sensitive to changes in the fee revenues.

There is some risk that earnings will be insufficient to meet operating needs. Management fees are estimated to cover approximately 80% of total administration costs, and therefore BGK is dependent on guarantee fee earnings to some extent. BGK will be required to control costs to maintain a surplus.

Startup costs will include purchase of equipment, hiring of new personnel, etc. In order to meet the up-front cash needs of the program, the Bank can disburse a larger sum early in the program to cover these costs.

Operating Costs. Operating costs consist primarily of staff costs of BGK, both at headquarters and in branches. Costs are broken into three main categories: (i) direct staff at headquarters and branches; (ii) indirect staff at headquarters; and (iii) overhead. The components of the staff are broken out below. Overhead costs consist primarily of office rent, phone and utility; local travel, auto, and insurance; and a contingency. Costs are primarily for managing the guarantee program but also include staff and costs for management of TA and the capital grant component. Average annual costs for the PMU are estimated at US\$280,000, of which direct staff comprises 57.4%, indirect staff 22.4%, and overhead 20.2%. Average staff cost as a percentage of total budget during the project period is 67.4%, while overhead is 14.4%; the latter is considered relatively low and therefore reasonable. Total costs during the project period are estimated at US\$1.7 million.

In addition to program operating costs consisting of overhead and payroll, guarantee claims made by BGK will be considered a program expense, and therefore be deducted from income. Net income will be negative in all years of the program. As a result, no tax liability is expected during either the project period or after.

Staffing. The staffing plan is broken out as follows:

Direct staff in BGK Headquarters

- Program Manager, with full responsibility for program operations including management of outside consultants and contractors
- Assistant Program Manager & Financial Analyst, responsible for processing guarantee transactions, working with banks and BGK branches, and for routine transaction monitoring
- Financial Analyst, for processing transactions, especially regarding credit analysis
- Procurement officer
- Administrative support

Direct staff in branches

- Part-time (or full-time if/as required) staff for marketing and transactions in designated main branches, working with banks

Indirect staff in BGK Headquarters

- Senior management for credit, administration and policy; legal, accounting, and WBGEF and Government of Poland relations.

Salaries are based on existing BGK personnel costs, with payroll taxes factored in. BGK has a policy of paying some performance bonus compensation for staff, up to 15% salary, based on (i) BGK financial performance, and (ii) individual merit as reviewed by Directors; these expenditures are not included in this budget and sources of funds for any such bonuses would come from other BGK sources or excess of program revenues over expenditures.

Performance-based compensation for BGK was considered; however, it was decided not to use this method of compensation as it is relatively complex and difficult to manage. Performance will be monitored and compensation for staff will be included in annual budget reviews.

It is logical to assume growth or phasing in of staff requirements as program transaction volume expands. Most guarantees will be originated at headquarters in the first 12-24 months of program operations and branch staff will be built up slowly, beginning with marketing, and proceeding to full guarantee origination. In years 2 and 3, additional guarantee staff in headquarters and branches will likely be needed. Changes in staff levels are not expected to be directly proportionate to the increase in transactions, as many transactions will be done on a portfolio and simplified basis and are expected to be able to be processed by core staff. In addition, because most GFAs will already be executed, indirect (legal) staff is expected to decline in Year 4. The program staffing plan, and how it is to be phased in and respond to program start-up and transaction growth requirements, is central to budget planning and will need to be revisited annually and determined based on operating experience.

Approval of Budget. BGK will receive funding for its program operations from reserve interest and guarantee fee earnings according to an agreed-upon and approved budget, as may be amended by mutual agreement with WB/GEF during program operations. Program performance will be reviewed and factored into the decisions concerning disposition of GEF funds at the end of the initial program operating period. An annual budget approval process will review and approve the BGK operating budget; timing for this approval process will be specified in the implementation agreement.

Details of the operating budget are included in the PIP.

POLAND - POLAND ENERGY EFFICIENCY PROJECT
Illustrative 10 Year Financial Projections of
The Partial Credit Guarantee Facility (US\$ '000)

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Loan Transactions, number	25	45	60	80	90	90	70	45	45	45
Loan Transaction, cumulative	25	70	130	210	300	390	460	505	550	595
New loan origination (US\$)	2,500	4,500	6,000	8,000	9,000	9,000	7,000	4,500	4,500	4,500
New loan origination, cumulative	2,500	7,000	13,000	21,000	30,000	39,000	46,000	50,500	55,000	59,500
Guarantee Percentage, average	60%	60%	60%	60%	60%	60%	40%	40%	40%	40%
Guarantee Reserves, disbursements	5,000	-	700	-	-	-	-	-	-	-
Guarantee Liabilities, Outstanding	1,395	3,767	6,596	9,945	13,014	15,010	14,407	12,219	10,067	8,370
Guarantee Claims Payments	105	189	252	336	378	378	245	158	158	158
Reinvestment in reserves	185	272	309	329	333	331	310	294	291	288
Guarantee Reserves, End Period	5,080	5,163	5,920	5,913	5,868	5,821	5,885	6,022	6,156	6,286
Liabilities to Reserves, end period	0.27	0.73	1.11	1.68	2.22	2.58	2.53	2.17	1.81	1.53

Summary Results

Transactions Summary

	6 Yrs	10 yrs
Total Loan Transactions, Original Principal	\$39,000,000	\$59,500,000
Total Transactions, Number	390	595
Total End Period Guarantee Liabilities	\$15,387,971	\$ 8,527,686
Maximum Liability:Reserve Ratio	2.58	2.58

Reserves Summary

Disbursements (WB)	\$5,700,000	\$ 5,700,000
Total Losses/Claims Payments	\$(1,638,000)	\$(2,355,500)
Management Fees	\$-	\$800,000
Interest, reinvested	\$1,594,891	\$2,706,422
Recovered monies, net, reinvested	\$163,800	\$ 235,550
Total Guarantee Reserves, End Period	\$5,820,691	\$5,486,472

Net loss (gain)	\$120,691	\$586,472
Net loss (gain) - % disbursements	2.1%	10.3%

Key Loan and Other Assumptions

Loan Interest Rate	10%
Loan Tenor (yrs)	7
Guarantee percentage, average	60%
Default rate	7%
Recovery rate (of loss payments)	10%
Inflation Rate, annual	5%
Zloty/dollar exchange rate	PLN4/US\$1
Average size of transaction	US\$100,000

Income and Expense Summary

Summary Results	6 Yrs	10 yrs
<u>Income/operations Summary</u>		
Total Interest Earnings	\$1,594,891	\$2,706,422
Total Guarantee Fee Generation	\$421,200	\$605,700
Total Program Income	\$2,016,091	\$3,312,122
<u>Operating Cost Summary</u>		
Total PMU Costs	\$1,675,000	\$2,675,000
Total Program Income	\$2,016,091	\$3,312,122
Total Program Operating Costs	\$1,675,000	\$2,675,000
Net Income, Program	\$341,091	\$637,122
Operating Costs, % Interest Earnings	105%	99%
Operating Costs, % Interest & Guarantee Fee Earnings	83%	81%
Margin, operating income	17%	19%
<u>PMU Income Summary</u>		
Management Fee	\$1,300,000	\$2,100,000
Guarantee Fees	\$421,200	\$605,700
Total Income, PMU	\$1,721,200	\$2,705,700
Total PMU Costs (Operating)	\$1,675,000	\$2,675,000
Net Income, PMU	\$46,200	\$30,700
Cumulative PMU Cash Flow	\$46,200	\$30,700
Management Fees, % Interest Earnings	82%	78%
Management Fees, % Administration costs	78%	79%
Interest, % management fee	123%	129%

POLAND - POLAND ENERGY EFFICIENCY PROJECT
Illustrative 10 Year Financial Projections of
The Guarantee Facility (US\$ '000)

Balance Sheet, end of period	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Assets										
Current Assets										
Bank Accounts										
Guarantee Reserve account	5,080	5,163	5,920	5,913	5,868	5,821	5,685	5,622	5,556	5,486
Total Bank Accounts	5,080	5,163	5,920	5,913	5,868	5,821	5,685	5,622	5,556	5,486
Total Current Assets	5,080	5,163	5,920	5,913	5,868	5,821	5,685	5,622	5,556	5,486
Total Assets	5,080	5,163	5,920	5,913	5,868	5,821	5,685	5,622	5,556	5,486
Liabilities & Equity										
Equity										
Additional Paid-In Capital	0	0	700	700	700	700	700	700	700	700
Opening Bal Equity	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Retained Earnings	0	80	163	220	213	168	121	185	322	456
Net Income	80	83	57	(7)	(45)	(47)	65	137	134	130
Total Equity	5,080	5,163	5,920	5,913	5,868	5,821	5,885	6,022	6,156	6,286
Total Liabilities & Equity	5,080	5,163	5,920	5,913	5,868	5,821	5,885	6,022	6,156	6,286
Income Statement										
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Income										
Guarantee Fees	27	49	65	86	97	97	63	41	41	41
Recovered Monies	11	19	25	34	38	38	25	16	16	16
Interest Earnings	174	254	284	295	295	293	285	279	275	272
Total Income	212	321	374	415	430	428	373	335	332	328
Expense										
Guarantee Claims	105	189	252	336	378	378	245	158	158	158
Guarantee Fees	27	49	65	86	97	97	63	41	41	41
Total Expense	132	238	317	422	475	475	308	198	198	198
Net Income	80	83	57	(7)	(45)	(47)	65	137	134	130

Sources and Uses of Capital	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Sources of Cash										
A. Cash Received from operations										
Guarantee fees	27	49	65	86	97	97	63	41	41	41
Recovered monies	11	19	25	34	38	38	25	16	16	16
Interest earnings	174	254	284	295	295	293	285	279	275	272
Total Cash from operations	212	321	374	415	430	428	373	335	332	328
B. Cash received from GEF Grants										
Total cash in	5,000	0	700	0	0	0	0	0	0	0
Total cash in	5,212	321	1,074	415	430	428	373	335	332	328
Application of cash										
A. Guarantee fees to BGK	27	49	65	86	97	97	63	41	41	41
B. Guarantee claims	105	189	252	336	378	378	245	158	158	158
Total cash applications	132	238	317	422	475	475	308	198	198	198
Net cash changes	5,080	83	757	(7)	(45)	(47)	65	137	134	130
Cash balance, year end	5,080	5,163	5,920	5,913	5,868	5,821	5,885	6,022	6,156	6,286

Annex 10: Safeguard Policy Issues
POLAND: GEF Energy Efficiency Project

Environment. In accordance with World Bank policy on Environmental Assessment (OP/BP/GP 4.01), the project has been rated Category B. There are no major adverse environmental issues associated with this project. The project is specifically targeted to improve energy efficiency. Project components will reduce fuel consumption and/or encourage less polluting fuel use which in turn will improve local air quality (dust, sulfur dioxide and nitrogen oxides) and reduce greenhouse gas emissions (carbon dioxide).

During construction activities for any of the project subcomponents, replacement of materials and equipment may lead to dust and noise. But these impacts are minor and short-lived. Removal of old insulation may involve asbestos whose disposal must be properly managed. New insulation must be asbestos free and in accordance with any commitments the Government of Poland has made under the Montreal Protocol. Additional issues may be identified during the environmental screening of individual sub-projects and addressed according to the procedures described in the EMP.

Social Targeting. Early focus on the social targeting of the project will be necessary combined with a marketing effort in order to create awareness of the grant and guarantee facilities. The possibility to include public information campaigns in the project will be considered in the detailed planning of the technical assistance activities including a Social Targeting Study to be conducted during the first 6 months of implementation.

Annex 11: Project Preparation and Supervision

POLAND: GEF Energy Efficiency Project

	Planned	Actual
PCN review	November 11, 1999	November 11, 1999
Initial PID to PIC	June 20, 2000	February 2, 2003
Initial ISDS to PIC	June 20, 2000	February 2, 2003
Appraisal	June 20, 2000	November 17, 2003
Negotiations	August 2000	August 25, 2004
Board/RVP approval	October 4, 2000	October 14, 2004
Planned date of effectiveness	February 1, 2001	February 1, 2005
Planned date of mid-term review	March 2003	March 2007
Planned closing date	June 30, 2007	June 30, 2011

Key institutions responsible for preparation of the project:

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Peter Johansen	Task Leader	ECSIE
Rachid Benmessaoud	Lead Energy Specialist	ECSIE
Iwona Warzecha	Sr. Financial Management Specialist	ECSPS
Arto Nuorkivi	District Heating Eng & Eco. Analysis	ECSIE
Bernard Baratz	Safeguards Specialist	EASEG
Elzbieta Sieminiski	Procurement Specialist	ECSPS
Nicholay Chistyakov	Senior Finance Officer	LOAG1
Carole Gallen	Finance Analyst	LOAG1
Rozena Serrano	Program Assistant	ECSIE
Other Team Members (Consultants):		
Rick Renner	Preparation of Market Survey, Guarantee Business Plan	
John MacLean	Preparation of Market Survey,	
Clifford Aron	Guarantee Business Plan	

Bank funds expended to date on project preparation:

1. Bank resources:
2. Trust funds:
3. Total:

Estimated Approval and Supervision costs:

1. Remaining costs to approval:
2. Estimated annual supervision cost:

Annex 12: Documents in the Project File
POLAND: POLAND - GEF Energy Efficiency Project

A. Bank Staff Assessments

Economic Analysis

Financial Management Assessment

Financial Projections

Procurement Capacity Assessment

B. Other

Environmental Management Framework

ESCO Business Tools

GEF Guarantee Program, Design and Procedures

POE ESCO Business Plan

Market Assessment

Walk-through Audits and Investment Grade Audits from Krakow

Annex 13: Statement of Loans and Credits
POLAND: POLAND - GEF Energy Efficiency Project

Project ID	FY	Purpose	Original Amount in US\$ Millions					Differ. betw. expec. and act. disbursements		
			IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P065059	2001	KRAKOW ENRGY EFF	15.00	0.00	0.00	0.00	0.00	15.17	7.81	0.00
P040795	2001	RAIL RESTRCT (PKP)	101.04	0.00	0.00	0.00	0.00	0.14	-2.81	0.00
P008615	2001	SEAWAY/PORT MOD.	38.50	0.00	0.00	0.00	0.00	28.57	18.51	0.00
P057993	2000	GEOTHERMAL & ENV (PODHALE) (GEF)	0.00	0.00	0.00	5.40	0.00	1.85	5.22	0.00
P058202	2000	RURAL DEVT	120.00	0.00	0.00	0.00	0.00	62.71	50.21	0.00
P050660	2000	RURAL ENV PROT	2.50	0.00	0.00	0.00	0.00	0.06	0.27	0.16
P037339	2000	GEOTHERMAL AND ENVIRONMENT (PODHALE)	38.20	0.00	0.00	0.00	0.00	27.81	20.46	0.00
P053796	1998	FLOOD EMERGENCY PL	200.00	0.00	0.00	0.00	0.00	35.75	35.75	5.75
P008593	1998	ROADS 2	300.00	0.00	0.00	0.00	0.00	85.22	85.95	17.35
P008595	1996	BIELSKO-BIALA WATER	21.50	0.00	0.00	0.00	0.00	5.70	8.07	2.65
P008604	1996	POWER TRANSMISSION	160.00	0.00	0.00	0.00	0.00	52.16	66.08	26.08
P008563	1995	COAL TO GAS CONV (GEF)	0.00	0.00	0.00	25.00	0.00	4.17	7.03	-0.98
Total:			996.74	0.00	0.00	30.40	0.00	319.31	302.55	51.01

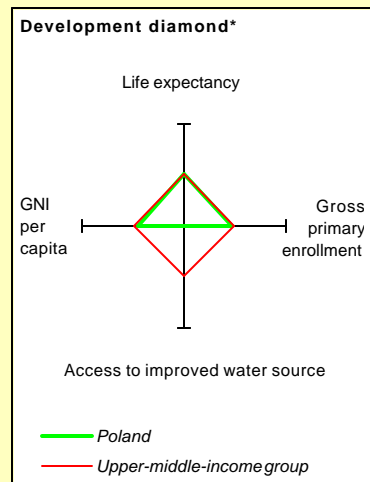
POLAND
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

FY Approval	Company	Committed				Disbursed			
		IFC				IFC			
		Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
1996	Baltic Malt	1.50	0.00	1.95	0.00	1.50	0.00	1.87	0.00
1997	CPF	0.00	1.60	0.00	0.00	0.00	1.49	0.00	0.00
0	ESCO Polska	0.00	0.21	0.00	0.00	0.00	0.21	0.00	0.00
1996/97	Gaspol	0.00	0.98	0.00	0.00	0.00	0.98	0.00	0.00
1998	Global Hotels	3.67	3.20	4.99	0.00	0.00	3.20	3.13	0.00
1993	Huta Warszawa	2.65	0.00	0.00	0.00	2.65	0.00	0.00	0.00
1995/97/98/00	Intercell	0.00	2.06	0.00	0.00	0.00	2.06	0.00	0.00
1997	Norgips	8.58	0.00	0.00	14.36	8.58	0.00	0.00	14.36
1993	PEF-Poland	0.00	1.50	0.00	0.00	0.00	1.50	0.00	0.00
0/94	Peters	0.55	0.00	0.00	0.00	0.55	0.00	0.00	0.00
1993	Pilkington	4.30	0.00	0.00	0.00	4.30	0.00	0.00	0.00
Total portfolio:		21.25	9.55	6.94	14.36	17.58	9.44	5.00	14.36

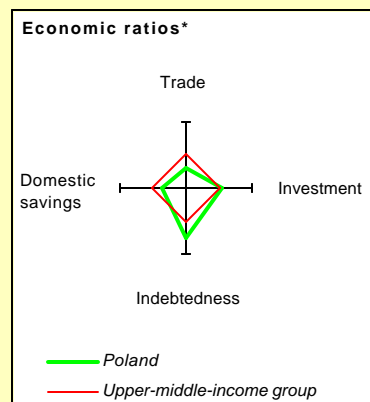
Approvals Pending Commitment					
FY Approval	Company	Loan	Equity	Quasi	Partic.
2003	Intercell-Expan.	0.05	0.00	0.00	0.00
Total pending commitment:		0.05	0.00	0.00	0.00

Annex 14: Country at a Glance
POLAND: POLAND - GEF Energy Efficiency Project

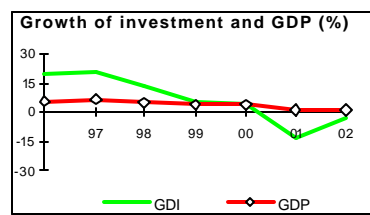
POVERTY and SOCIAL	Europe & Central Asia		Upper-middle-income
	Poland	Asia	
2002			
Population, mid-year (millions)	38.6	476	331
GNI per capita (Atlas method, US\$)	4,570	2,160	5,040
GNI (Atlas method, US\$ billions)	176.5	1,030	1,668
Average annual growth, 1996-02			
Population (%)	0.0	0.1	12
Labor force (%)	0.5	0.4	18
Most recent estimate (latest year available, 1996-02)			
Poverty (% of population below national poverty line)
Urban population (% of total population)	63	63	75
Life expectancy at birth (years)	74	69	73
Infant mortality (per 1,000 live births)	8	25	19
Child malnutrition (% of children under 5)
Access to an improved water source (% of population)	..	91	90
Illiteracy (% of population age 15+)	0	3	7
Gross primary enrollment (% of school-age population)	100	102	105
Male	100	103	106
Female	99	101	105



KEY ECONOMIC RATIOS and LONG-TERM TRENDS	1982 1992 2001 2002			
	GDP (US\$ billions)	..	84.4	183.0
Gross domestic investment/GDP	..	15.2	20.8	21.9
Exports of goods and services/GDP	..	23.7	28.0	19.4
Gross domestic savings/GDP	..	16.7	17.1	15.7
Gross national savings/GDP	..	18.2	19.8	18.3
Current account balance/GDP	..	-3.7	-2.9	..
Interest payments/GDP	..	0.9	1.3	1.2
Total debt/GDP	..	57.5	34.6	37.0
Total debt service/exports	..	9.0	40.4	34.6
Present value of debt/GDP	32.4	..
Present value of debt/exports	155.8	..
	1982-92	1992-02	2001	2002
(average annual growth)				
GDP	..	4.8	1.0	12
GDP per capita	..	4.7	1.0	12

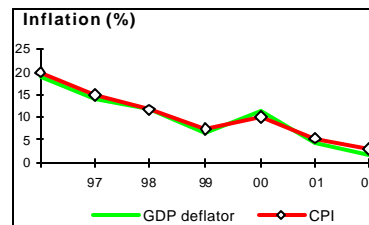


STRUCTURE of the ECONOMY	1982 1992 2001 2002			
	(% of GDP)			
Agriculture	..	6.6	3.6	3.4
Industry	..	41.4	37.3	33.8
Manufacturing	19.7	19.7
Services	..	52.0	59.1	62.8
Private consumption	..	58.1	66.9	80.2
General government consumption	..	25.2	16.0	4.1
Imports of goods and services	..	22.2	31.8	25.6
	1982-92	1992-02	2001	2002
(average annual growth)				
Agriculture	..	0.6	1.5	3.0
Industry	..	5.9	-0.6	1.0
Manufacturing	..	6.2	-0.6	2.5
Services	..	4.6	3.9	..
Private consumption	..	4.9	2.1	1.6
General government consumption	..	2.3	0.5	5.3
Gross domestic investment	..	10.6	-13.6	-3.3
Imports of goods and services	..	15.0	3.2	1.5



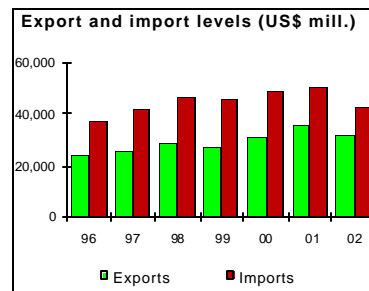
PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
Domestic prices				
<i>(% change)</i>				
Consumer prices	..	43.0	5.5	2.9
Implicit GDP deflator	..	38.5	4.2	1.5
Government finance				
<i>(% of GDP, includes current grants)</i>				
Current revenue	..	26.8	18.7	18.9
Current budget balance	..	-4.7	-3.2	-4.0
Overall surplus/deficit	..	-6.4	-4.1	-5.0



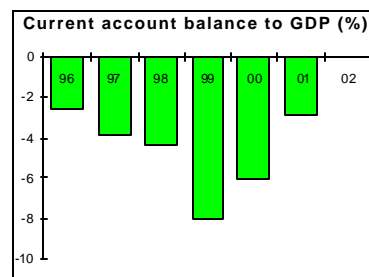
TRADE

	1982	1992	2001	2002
<i>(US\$ millions)</i>				
Total exports (fob)	..	13,187	36,092	32,156
Food and live animals	2,678	..
Machinery and transport equipment	13,089	..
Manufactures	20,324	32,156
Total imports (cif)	..	15,913	50,275	42,833
Food	..	1,531	2,678	3,051
Fuel and energy	..	2,674	5,487	5,067
Capital goods	11,817	16,987
Export price index (1995=100)	..	51	137	140
Import price index (1995=100)	..	57	146	148
Terms of trade (1995=100)	..	90	94	95



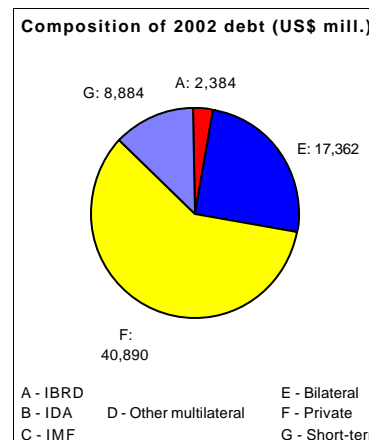
BALANCE of PAYMENTS

	1982	1992	2001	2002
<i>(US\$ millions)</i>				
Exports of goods and services	..	15,609	34,263	36,386
Imports of goods and services	..	14,753	46,914	48,029
Resource balance	..	856	-12,651	-11,642
Net income	..	-4,054	-896	-975
Net current transfers	..	2,929	6,381	5,910
Current account balance	-1,941	-3,104	-5,357	..
Financing items (net)	..	3,577	4,917	..
Changes in net reserves	..	-473	440	-890
Memo:				
Reserves including gold (US\$ millions)	..	4,287	26,564	27,933
Conversion rate (DEC, local/US\$)	..	14	4.1	4.1



EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
<i>(US\$ millions)</i>				
Total debt outstanding and disbursed	20,017	48,495	63,275	69,519
IBRD	0	743	2,211	2,384
IDA	0	0	0	0
Total debt service	812	1,469	15,382	13,489
IBRD	0	33	323	312
IDA	0	0	0	0
Composition of net resource flows				
Official grants	0	1,119	724	0
Official creditors	1,550	234	-4,130	-1,069
Private creditors	367	45	5,129	1,774
Foreign direct investment	11	678	5,713	0
Portfolio equity	0	0	-307	0
World Bank program				
Commitments	0	390	201	0
Disbursements	0	343	299	171
Principal repayments	0	0	205	206



Annex 15: STAP Technical Review and GEF Focal Point Endorsement Letter

POLAND: POLAND - GEF Energy Efficiency Project

Attachments to Annex 15:

1. STAP Technical Review (completed on March 20, 2000)
2. Responses to STAP Comments
3. GEF Focal Point Endorsement Letter (dated February 18, 2000)

UNIVERSITY OF CALIFORNIA, BERKELEY

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SANTA BARBARA • SANTA CRUZ

ENERGY AND RESOURCES GROUP
310 BARROWS HALL
UNIVERSITY OF CALIFORNIA
BERKELEY, CA 94720-3050
WWW: <http://socrates.berkeley.edu/erg>

DANIEL M. KAMMEN
ASSOCIATE PROFESSOR OF ENERGY AND SOCIETY
DIRECTOR,
RENEWABLE AND APPROPRIATE ENERGY LABORATORY
TEL: (510) 642-1139
FAX: (510) 642-1085
EMAIL: dkammen@socrates.berkeley.edu
TEL & FAX: (510) 643-2243 (RAEL)
WWW <http://socrates.berkeley.edu/~dkammen>

March 20, 2000

Review submitted to:

To: Mr. Rachid Benmessaoud
Senior Energy Specialist
Europe and Central Asia Region
The World Bank
Tel: 1 (202) 473 2696
Fax: 1 (202) 477 7977

rbenmessaoud@worldbank.org

Cc: MASHFORD@AOL.COM
DC.COM

MR. MICHAEL ASHFORD

ASHFORD@EIC-

Fax: 202-822-4986

1. WORLD BANK/GLOBAL ENVIRONMENT POLAND KRAKOW ENERGY EFFICIENCY PROJECT (P070246)

Project Summary and Evaluation Overview

This is a promising project that can not only dramatically increase the energy efficiency and quality of service to a major metropolitan district in an economy in transition, but also has the potential to establish a number of important models and benchmarks for public and private energy service providers globally. The details of this project are clearly satisfactory and should result in a successful long-term transition of the energy infrastructure in Malkopolskie Voivodship (the Krakow region). On that basis the project should be supported by the World Bank/Global Environment Facility. My primary concerns with this project are in the degree to which the current project concept document will result in learning and replication *beyond* the target region. The solution to this is relatively straightforward: either increase the support provided to ESCOs beyond the MPEC client; or, utilize IBRD/GEF funds to establish additional ESCOs. Once added attention is provided to this aspect of the MPEC ESCO replication process, the project stands an excellent chance of achieving all of its intended local and regional goals.

General Comments

The overall features of this project are sound, including:

- (a) the plan to combine co-financing of specific aspects of the operation of the new ESCO;
- (b) project operation over a fixed time-scale;
- (c) the provision of grants to facilitate some aspects of training at MPEC;
- (d) the use of a local partner (MPEC) that has already demonstrated an ability to manage and implement GEF/World Bank projects; and
- (e) a reliance of measures to strengthen emerging and new market mechanisms instead of a focus on DSM practices in an economy still partially ill-suited to these measures.

As indicated in the *Project Summary*, above, however, the current PCD fails to make a convincing case for the degree to which the experience in establishing and managing an ESCO that is wholly controlled by MPEC will facilitate the development of other ESCOs. There are several reasons for this. While it is clear that valuable lessons will be learned, it is unclear what organizations or individuals are in a position, or could be in a position, to implement these lessons.

MPEC exists today as a favored partner both with the international community – the World Bank and Finn-aid in particular – and within Poland through its relationship with several of the largest banks. Some of the successes that MPEC has achieved are clearly a result of this backing, both in terms of end-user confidence and this participation because of the view that MPEC will remain accountable for the projects, and because MPEC itself can take on more risky efficiency retrofits. Some of the retrofits have unusually long payback periods, and some of the individual measures are not cost-effective on any reasonable time-scale, and make sense only as a package of efforts. MPEC thus has the luxury of operating with a rare combination of domestic goodwill and international support, and is thus a ‘favored son’ in many respects.

The current PCD indicates at numerous points that the lessons from project selection to implementation to financing will all be made available to facilitate the efforts of other ESCOs. These new upstarts, will not, however, have the extensive backing that MPEC has received. Two clear remedies exist:

- (a) Allocate some of the IBRD/GEF funds to help seed new ESCOs, which also has the advantage of not simply working with a familiar partner; and/or
- (b) Develop a comprehensive training program, including internship opportunities within MPEC or its ESCO that can act as an ‘ESCO incubator’ for groups or individuals who wish to attempt the model elsewhere, *or*, even in direct competition to MPEC⁴. This effort would go beyond the stated plan to, “To an appropriate Polish non-profit or consumer group to promote the concept and benefits of building retrofit activities and studies on the ESCO or other “best practices” in Poland for replication in other regions.”

Some of the projects identified as attractive for MPEC’s new ESCO to encourage and implement have 17 – 20 year lifetime (PCD, Page 15) requirements for full cost-recovery. This is problematic as even if theoretically practical this is simply too long a required recovery period for anything but the largest capital investments. It is not realist for MPEC’s ESCO to expect positive returns on projects requiring that duration, and it is particularly inappropriate for potential spin-off or copy-cat ESCO’s that would be operating without the full weight of the international financial and development community behind them to undertake such measures. This appears to be a case of the comfortable arrangement that exists between the World Bank and MPEC clouding the judgement of risk and financial planning.

The carbon abatement costs computed and analyzed in Annex 4 range from \$20 - \$31/tC. These values are based on the costs of the GEF grants and loans only, but would be impossible without the full operation of the IBRD loan and those from the public and private sector. These costs should therefore be revised upwards to reflect the opportunity presented by the larger loan and the infrastructure that the GEF component utilizes.

⁴ This, of course, raises immediate questions about the willingness of MPEC to genuinely provide this sort of training to potential competitors. Second, the issue identified as a project risk – that of staff retention within the MPEC ESCO – then becomes an explicit issue.

Specific Comments:

PCD, Page 3; Annex 2, page 4; and Annex 4, page 4:

The total carbon savings are listed, via different calculations as either 240,000 mT(C) or 310,000 mT(C). These differing estimates need to be made consistent and the differences between them explained more clearly.

PCD, Page 4ff:

There is extensive experience with urban energy efficiency upgrades and retrofits in the Latvia, Estonia, and Lithuania, among other economies in transition, through the AIJ program. Over the project lifetimes ~ 80 Mt(C) emissions are anticipated to be offset. The current project should refer to these or other non-Polish initiatives as either efforts that the Krakow effort will use as guides, or other ongoing efforts that will be used to guide the efforts in the MPEC ESCO. It makes sense to utilize the MPEC project as either an instructive case for other projects, or for the reverse, or – ideally – a collaborative and information-sharing relationship between all such efforts can be undertaken, potentially with the GEF acting as the information clearinghouse.

Loss of employees from the MPEC ESCO, while listed in the PCD as a risk (PCD, page 23), is, in fact, a strength and a requirement of the project. Measures should be made to *encourage* the defection of MPEC ESCO employees at a point in time where they are sufficiently skilled and connected to resources to implement or to work in other ESCOs. This can be a difficult process to manage, unless the training internships and other efforts to be added to the ESCO training program can be partly geared to generating spin-offs.

PCD, page 28:

A representative set of pilot measures for the new MPEC ESCO to undertake are listed. Added details are need to define the costs and potential market for these initiatives.

PCD, page 29:

The business plan does not appear to include any estimation of the market transformation (Duke and Kammen, 1999) potential from the installation of energy efficient equipment. The scale of the GEF component appears to be sufficiently large that some direct and indirect cost reductions can be expected.

PCD, page 30:

The PCD indicates that they will facilitate, “The introduction of a risk management philosophy to guide all ESCO activities.” This should be clarified: how will this be done? Will specific risk management training materials, such as the EPA financial risk course or sessions from books such as Kammen and Hassenzahl (1999) be offered?

References:

Duke, R. D., and Kammen, D. M. (1999) “The economics of energy market transformation initiatives”, *The Energy Journal*, **20** (4), 15 – 64.

Kammen, D. M. and Hassenzahl, D. M. *Should We Risk It? Exploring Environmental, Health and Technological Problem Solving*, in press, Princeton University Press.

POLAND –ENERGY EFFICIENCY PROJECT
(P070246)

Responses to STAP Comments

Project Summary and Evaluation Overview:

STAP COMMENT:

My primary concerns with this project are in the degree to which the current project concept document will result in learning and replication beyond the target region. The solution to this is relatively straightforward: either increase the support provided to ESCOs beyond the MPEC client; or, utilize IBRD/GEF funds to establish additional ESCOs. Once added attention is provided to this aspect of the MPEC ESCO replication process, the project stands an excellent chance of achieving all of its intended local and regional goals.

RESPONSE:

The project team endorses the STAP suggestion to better ensure learning and replication beyond the target region by making the GEF funds available to establish additional ESCOs. During project preparation, specific measures regarding learning and replication will be developed and agreed upon with project stakeholders for implementation. These measures will be based on the suggestions in the PCD already included as part of an exit strategy.

Making IBRD funds available directly to other ESCOs is more difficult to implement as it will depend on the Ministry of Finance's providing its sovereign guarantee to either each individual borrowing entity (yet to be identified) or a financial intermediary (yet to be identified) through a dedicated ESCO credit line. Because of the complexity of having several borrowers and the Bank's past mediocre experience with credit lines (in Poland in particular), the project team proposes to follow a more simple approach. This involves limiting the IBRD funds to one borrower (MPEC), in order to demonstrate the financing of energy efficiency (EE) building projects following performance contracting and risk sharing arrangements, and to leverage participation of private and commercial financing.

The MPEC ESCO business plan has identified significant additional market potential for EE building projects. In addition, the plan cited seven specific competitors, at the national and local level, although these firms are not active in the building efficiency sector. They will all, however, benefit from the model proven under the GEF project through information sharing on how to structure EE building projects. Rather than providing direct support to other ESCOs at the outset, the project team proposes greater emphasis on development and implementation of information sharing and ESCO training during the initial stages of the GEF project, in light of implementation experience with the MPEC ESCO. Once the model has proven its success, other ESCOs are expected to become more active and, only then, the offer to extend the backing of the GEF guarantee (and therefore of commercial banks) for them puts them on the same footing as the MPEC ESCO.

The sequence of project implementation is therefore an important consideration. If the GEF funds are available to any ESCO activity in the Krakow and other regions at the outset – and without first demonstrating the energy performance contracting and risk sharing model – the project team expects that the result will be fewer projects realized at higher costs. Without early and specific project successes as the initial goal, disbursement of the IBRD loan and use of the GEF guarantee will be slower and less effective due to more transactions requiring more screening before any experience can be recorded with the model. Under the current proposal, the success of the energy performance contracting model will be proven on the basis of the favored MPEC ESCO (favored because of the IBRD and track records of success as a utility with end-user energy saving and environment protection perspectives).

The sequence of transitioning the GEF guarantee facility from one dedicated to the MPEC ESCO to one being available to any ESCO will be flexible and will change in light of implementation experience. For example, if MPEC does not utilize the GEF guarantee facility to include commercial bank leveraging, alternative project sponsors can be considered earlier than currently envisioned in the PCD.

General Comments:

STAP COMMENT:

- 1. Allocate some of the IBRD/GEF funds to help seed new ESCOs, which also has the advantage of not simply working with a familiar partner;*

And:

- 2. Develop a comprehensive training program, including internship opportunities within MPEC or its ESCO that can act as an 'ESCO incubator' for groups or individuals who wish to attempt the model elsewhere, or, even in direct competition to MPEC. This effort would go beyond the stated plan to, "To an appropriate Polish non-profit or consumer group to promote the concept and benefits of building retrofit activities and studies on the ESCO or other "best practices" in Poland for replication in other regions.*

RESPONSE:

While the IBRD/GEF funds will help demonstrate the EPC and risk sharing model for EE building projects through one utility-based ESCO in the Krakow region during the first four years, thereafter it is proposed that the GEF facility will be available to other ESCOs. During the first four years, new start-ups will benefit from information sharing and training supported by the GEF technical assistance. Equally important, commercial banks will learn from the MPEC model and GEF-supported training how to work with other, new ESCOs that are not benefiting from the MPEC IBRD relationship. During project preparation, training programs and information sharing vehicles will be developed and implemented.

As part of the public participation and information activities, MPEC might be required to establish an industry association through which MPEC and others could share market knowledge

and experience as well as establish network of expertise within the industry. The MPEC ESCO Business Plan mentions this as a strategy to help develop MPEC's own market. The existence of an association not only comforts new start-ups, but it also becomes a rallying point for customers and policy makers to figure out how to encourage EE through EPC type methods. It plays an important role in the formative years of an industry. Development of an industry association has not been an IBRD requirement so far but might become one under the GEF. Additional GEF funding under the technical assistance will be required.

STAP COMMENT:

3. *Some of the projects identified as attractive for MPEC's new ESCO to encourage and implement have 17 - 20 year lifetime (PCD, Page 15) requirements for full cost-recovery. This is problematic as even if theoretically practical this is simply too long a required recovery period for anything but the largest capital investments.*

RESPONSE:

The 17 – 20 year payback in this case refers to the long payback periods for windows and insulation which is recognized as prohibitive. At the same time, it is important to note that life cycle costing is the best way to assess the costs and benefits of different options for energy efficiency packages. By looking at all energy saving opportunities, including what might be prohibitively expensive ones, ESCO clients can decide on the attractiveness of the package, the specific measures to implement, and how much to co-invest for building retrofits. By not considering all options with varying payback periods, the project may make itself economically inefficient and fail to realize all economic opportunities that benefit the environment.

The proposed GEF grant will enable the ESCO to offer these materials in the context of a package of services with acceptable levels of technical and financial risk. The goal of the grant is to demonstrate that shorter-paybacks, financial sustainability, and replication while including higher cost materials can be achieved through the ESCO model. To help ensure this outcome, conditions for eligibility and use of the grant are listed in Annex 4, Section 3. For example, the savings of bulk purchase of windows and insulation through volume purchasing must be passed on to end-users. These conditions will help demonstrate several critical characteristics of the ESCO model:

- (1) the potential for market aggregation (and the ESCO as a possible market aggregator) to pull down prices,
- (2) the ability to meet end-user demand for higher-quality, longer-lasting energy efficiency measures,
- (3) the viability of end-user arrangements for EPC-financing, and
- (4) how to avoid “one-off” use of grant funds for high-cost projects.

STAP COMMENT:

4. *The carbon abatement costs computed and analyzed in Annex 4 range from \$20 - \$31/tC. These values are based on the costs of the GEF grants and loans only, but would be*

impossible without the full operation of the IBRD loan and those from the public and private sector. These costs should therefore be revised upwards to reflect the opportunity presented by the larger loan and the infrastructure that the GEF component utilizes.

RESPONSE:

As the IBRD loan and public and private sector financing are considered part of the base case, the associated reduction quantities and costs are not considered incremental and therefore were not included in the GEF case. Only the reductions attributable to the GEF guarantee and grant facility and their cost are included in the incremental cost analysis.

The project team is unsure about which other costs, if any, should be included in the incremental calculation and how they should be estimated. The project team would appreciate GEF guidance in this matter.

Please also note that the incremental cost analysis has been amended for inaccuracies not related to the STAP review and the range of unit costs is now US\$27 – 42 per metric ton of carbon for the project case.

Specific Comments:

STAP COMMENT:

- 5. The total carbon savings are listed, via different calculations as either 240,000 mT(C) or 310,000 mT(C). These differing estimates need to be made consistent and the differences between them explained more clearly.*

RESPONSE:

Please note that the figure of 240,000 mtC reductions originally cited in Annex 2 has been corrected and the total expected reductions is now 244,000 mtC over the life of the project. This figure in the incremental cost analysis refers only to the reductions achieved by the project case over a ten-year period. This is a conservative, reliable figure for the reductions that can be achieved in the project case before replication. In contrast, the figure of 320,000 mtC per year reductions provided in Annex 4 refers to the potential replication of the ESCO/performance contracting model after the project is completed, for a total potential in Poland of 3.2 million mtC over a ten-year period. This not part of the incremental cost analysis, but rather refers to the potential for replication only. It is also based on fairly conservative estimations of what reductions are attributable to replication activities.

STAP COMMENT:

- 6. The current project should refer to these or other non-Polish initiatives as either efforts that the Krakow effort will use as guides, or other ongoing efforts that will be used to guide the efforts in the MPEC ESCO. It makes sense to utilize the MPEC project as either an instructive case for other projects, or for the reverse, or - ideally - a collaborative and information-sharing relationship between all such efforts can be undertaken, potentially with the GEF acting as the information clearinghouse.*

RESPONSE:

The project team welcomes the STAP guidance and suggestions. During the course of preparation and appraisal, the team will seek: (i) to draw from the experiences with similar programs and activities in Latvia, Lithuania and Estonia; (ii) to coordinate ongoing assessments of the GEF facility in Poland with any similar assessments underway or completed for comparable programs; and (iii) guidance from the GEF for what is relevant in terms of AIJ programs and projects in these and other regions.

STAP COMMENT:

7. *Measures should be made to encourage the defection of MPEC ESCO employees at a point in time where they are sufficiently skilled and connected to resources to implement or to work in other ESCOs. This can be a difficult process to manage, unless the training internships and other efforts to be added to the ESCO training program can be partly geared to generating spin-offs.*

RESPONSE:

It is inappropriate for the World Bank, directly or indirectly, to encourage employees of any IBRD client to leave their jobs as part of project implementation. Nevertheless, the GEF guarantee facility should foster enough business activity and competition within three to five years to present alternative employment opportunities in the energy efficiency sector in Krakow and throughout Poland. Individual perceptions of the potential risks and benefits of entrepreneurial activity will be reinforced by training, outreach, and on-the-job experiences.

STAP COMMENT:

8. *A representative set of pilot measures for the new MPEC ESCO to undertake are listed. Added details are need to define the costs and potential market for these initiatives.*

RESPONSE:

During project preparation, the costs of specific measures, including but not limited to those listed in Section E.3 of the PCD, will be reviewed based on an initial pipeline of projects (to be developed with Finish funded assistance). The costs of the measures will vary from project to project and will be included in the reporting.

Assessing the market potential for these pilot and other measures could be also a valuable exercise. The project team proposes expanding the activities listed under the PDF-B funding (Section C.4 of the PCD) to include review of the potential market for windows and insulation, as well as other measures referred to in the STAP review and listed in the PCD.

STAP COMMENT:

9. *The business plan does not appear to include any estimation of the market transformation (Duke and Kammen, 1999) potential from the installation of energy efficient equipment. The scale of the GEF component appears to be sufficiently large that some direct and indirect cost reductions can be expected.*

RESPONSE:

The GEF guarantee facility is expected to have a market transformation effect by lowering the perceptions of risk on the part of end-users and commercial banks regarding energy performance contracting and end-user financing models.

In addition, the GEF grant component for windows and insulation is also expected to have a market transformation effect. These materials are not deployed to their full market potential because individual smaller orders, either alone or in a package of EE measures, are not economical. The grant will be used to include higher cost efficiency measures as a part of a package of services attractive to the client and financially acceptable for the ESCO and the commercial banks.

As a result, demand for packaged services, including higher cost EE measures, is expected to increase and a sustainable supply and demand relationship can evolve. The project team proposes to include in the GEF technical assistance an assessment of the market transformation resulting from the project implementation. The article cited (Duke and Kammen, 1999) has been requested and project monitoring and evaluation will include as appropriate an assessment of market transformation effects.

It is important to note that the constraints on the use of the grant, such as the requirement for an analysis of potential lower cost options (i.e. weatherization), would make it more likely that the grant does in fact achieve a market transformation effect by impeding the ESCO from a “one-off” subsidized purchase (see Section C.1 on components of the technical assistance from the GEF).

STAP COMMENT:

10. The PCD indicates that they will facilitate, "The introduction of a risk management philosophy to guide all ESCO activities." This should be clarified: how will this be done? Will specific risk management training materials, such as the EPA financial risk course or sessions from books such as Kammen and Hassenzahl (1999) be offered?

RESPONSE:

The Japanese PHRD Grant to MPEC includes the provisions of specific risk management models and training to MPEC staff. During implementation, and in light of experience, these models and related training will be refined and shared with other ESCOs through the training component of the technical assistance (see Section C.1 on components of technical assistance from the GEF).