

THE WORLD BANK/IFC/M.I.G.A.

OFFICE MEMORANDUM

DATE: April 18, 2002

TO: Mr. Ken King, Assistant CEO, GEF Secretariat
Att: GEF PROGRAM COORDINATION

FROM: Lars Vidaeus, GEF Executive Coordinator



EXTENSION: 3-4188

SUBJECT: **Regional – Europe IFC/GEF
Commercializing Energy Efficiency Finance (CEEF)
Re-Submission for Work Program Inclusion**

Please find enclosed the final electronic attachment of the above mentioned project brief for work program inclusion, which addresses comments received from the GEF Secretariat dated March 21, 2002 on the Project Brief submitted on March 11, 2002.

The proposal is consistent with the *Criteria for Review of GEF Projects* as presented in the following sections of the project brief:

- Country Drivenness: Addressed in depth in “*Stakeholder Participation and Implementation Arrangements*” and in “*Appropriateness of Project in Terms of CAS and National Policies*”.
- Endorsement: *IFC has met with and secured endorsement from the GEF Focal Points in each of the five CEEF countries.*
- Program Designation & Conformity: *CEEF conforms to the GEF Operational Program 5 guidelines.*
- Project Design: *Described in detail in “Project Activities/Components and Budget,” as well as in “Program Component I: The Partial Guarantee Program” and “Program Component II: A Technical Assistance Program Responsive to the Needs of the FI and ESCO Partners”.*
- Sustainability: *Addressed in depth in “Sustainability”. CEEF is fundamentally sustainable in its objectives of mainstreaming EE investment in the private capital markets of the CEEF countries as executed in CEEF’s market-based program design.*
- Replicability: *Addressed in “Replicability”.*
- Stakeholder Involvement: *Addressed in “Stakeholder Participation and Implementation Arrangements*
- Monitoring & Evaluation: *Addressed in both “Monitoring and Evaluation” and in “Program Component II: A Technical Assistance Program...”.*
- Financing Plan: *Described in “Program Implementation: Management and Administration” and in “Program Activities/Components and Budget”. Details of the Project’s two stage operational tranching are provided in the “Project*

Scheduling” section, which describes the use of the initial \$11.25 million resource allocation, as well as the milestone and process for CEO approval of the second and final tranche allocation of \$6.75 million. The World Bank requests that the project proposal be considered according to the procedures approved by Council in November 2000 for projects for which GEF financing is to be approved in tranches. The Council agreed that, after the initial approval of the project proposal and the first tranche by the Council, the CEO may approve subsequent tranches of financing in accordance with the provisions of the project proposal, provided that Council members receive the proposal for additional financing for a three week period prior to CEO approval. The full application of these funds are described in “Use of GEF Funds”.

- *Cost-effectiveness: Functionally described in “Leveraging GEF Funding with IFC Resources in the Guarantee Facility” as well as in the “Leveraging Analysis”. Environmental cost-effectiveness described in “Annex IV: Incremental Cost Analysis”, and summarized in “Global Environmental Objectives and Benefits”.*
- *Core Commitments and Linkages: Co-funding and cooperative linkages to other organizations and programs described in “Use of GEF Funds”, “IFC’s Comparative Advantage”, “Program Implementation”, “Project Alternatives”, “Stakeholder Participation and Implementation Arrangements”, and are further described on a country basis in “Annex I”.*
- *Consultation, Coordination and Collaboration between IAs: Cooperation vehicles identified in “Program Component II” description, as well as in the Annex 1 country opportunity descriptions.*

As reflected in the Concept Agreement Review Sheet, IFC has fully addressed issues raised by GEF Secretariat at time of Pipeline Entry.

Response to Comments of GEF Secretariat regarding expectations at Work Program inclusion:

- *Explanation of IFC’s decision to remove three countries from the CEEF project which had been contemplated at the time of the project pipeline entry. Reason for removal of three countries from original scope, and focus of CEEF from a global/multi-regional project to a regional project, is described in Paragraph 17.*
- *With regard to the Secretariat’s comments on the Financing Plan:*
 - *The Secretariat’s notation that “the tranching of the Project in two groups of countries has been abandoned” has been clarified with the Project having been focused on the Central and Eastern European region. Specifically, IFC will implement CEEF concurrently in all five remaining CEEF countries. IFC is presenting the full program (\$18 million) for Council review and seeking approval of the first tranche of \$11.25 million in this work program. As noted in the “Project Scheduling” section, in response to uncertainties about the length of time necessary to develop substantial demand for the guarantees, IFC will seek GEF resource commitments through operational tranching in two tranches, with the second tranche commitment of the final \$6.75 million GEF contribution to the guarantee facility and program administration*

subject to expedited and delegated approval by the CEO. This endorsement will be based on IFC notification to the GEF Secretariat that adequate commitments by local partner FIs in the CEEF countries have been secured such as to require GEF resources in excess of the initial \$9 million GEF resource allocation for the guarantee facility.

- The Secretariat's comment that eligibility of administrative cost is problematic: *As described in Table VII, Note 4 of the Project Brief, IFC's use of the administrative implementation budget for CEEF relates directly to the incremental costs of IFC's implementation of the Project beyond IFC's normal investment operations and, as such, represent the full incremental cost of implementing the guarantee facility and the TA activities required to mainstream energy efficiency partial guarantee products within IFC. The resulting leverage resulting from of the GEF support of this incremental cost is IFC's parallel investment of up to \$75 million, in addition to which the IFC investment department has committed \$1.5 million from IFC's budget to help administer, manage, and implement the special purpose facility created through the Project. This level of IFC administrative support already exceeds the standard amount for a typical capital market operation. The use of these GEF funds for administrative purposes is consistent with established IFC practices in GEF projects which have a substantial IFC mainstreaming component.*
- With regard to the Secretariat's comments on the use of the IA fee by IFC:
 - IFC's use of the supervision fee is entirely for the use of the IFC Environment Department in fulfilling its arms' length role of supervising the investment department's implementation of the project and its administration of the GEF funds consistent with GEF guidelines and objectives, including providing a quality control function for the CEEF monitoring and evaluation program (See section on Project Implementation, paras 68-72).

All comments made by IAs have been responded to. With regard to the suggestion by UNDP that an accounting of local environmental benefits of the Project would be helpful in reflecting the direct environmental benefits to the host countries of the project, IFC agrees. However, the cost of such activities are not justified by the objectives and purpose of the GEF, as discussed with the Secretariat.

We thank the Secretariat for its support in the refinement and preparation of this important and innovative project.

cc: Messrs./Mmes. Boorstin , Lu, Sturm, Sullivan, Younger (CETEM), Aryal, Battaglini, Khanna, Mathur, Sharma, Vidaeus, Wedderburn, (ENV); ENVGC ISC, Relevant Regional Files

Mr. Kenneth King

-4-

April 18, 2002

Francine Stephens

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PROJECT BRIEF

PROJECT NUMBER: 506396
PROJECT NAME: REGIONAL (Czech Republic, Slovak Republic, Estonia, Latvia, Lithuania):
COMMERCIALIZING ENERGY EFFICIENCY FINANCE (CEEF)
DURATION: 11 years (4 year TA program concurrent with 4 years guarantee facility obligation period + 7 years loan guarantee exposure)
IMPLEMENTING AGENCY: World Bank
EXECUTING AGENCY: International Finance Corporation (IFC)
REQUESTING COUNTRY OR COUNTRIES: Czech Republic, Slovak Republic, Estonia, Latvia, Lithuania
ELIGIBILITY:
Czech Republic: FCCC Ratification: Oct. 7, 1993
Estonia: FCCC Ratification: July 27, 1994
Latvia: FCCC Ratification: Mar. 23, 1995
Lithuania: FCCC Ratification: Mar. 24, 1995
Slovak Republic: FCCC Ratification: Aug 25, 1994
GEF FOCAL AREA: Climate Change
GEF PROGRAMMING FRAMEWORK: Operational Program #5

1. **SUMMARY:** Building on the model demonstrated in the Hungary Energy Efficiency Co-Financing Program (HEECP), IFC will provide partial guarantees to support the financing of energy efficiency (EE) projects by local commercial financial institutions (FIs), as well as by private project sponsors. GEF funds will be used in a non-grant contingent financing modality to leverage IFC and private capital investment in EE projects by as much as 10-15 times yielding 7.4 million metric tons of avoided CO₂ emissions at a cost of \$.70 per metric ton. IFC resources will be combined with GEF funds as reserves supporting the guarantees. The CEEF program will be implemented in stages, based on the successive development of demand for the guarantees from participating FIs. As such, the \$15 million GEF contribution to the guarantee facility will be staged (or “tranching”), with the final \$6 million GEF contribution triggered by FI commitments adequate to justify the full disbursement of the GEF resources. Similarly, \$2.25 million of program operations and technical assistance (TA) resources would be disbursed at the Project outset with the final \$.75 million to be disbursed upon demonstrated demand for an expanded guarantee facility. IFC’s parallel investment will also be disbursed in several tranches, (building from a two to one match of GEF funds to a five to one leveraging of IFC resources) as demand for the guarantee program expands. The Project includes a complementary TA program to develop a pipeline of finance-ready EE projects and to build the commercial capacities of EE businesses and participating FIs.

This proposed regional Project will mobilize local financial and EE industry resources to commercialize EE finance in each selected country by engaging key parties -- FIs, EE and energy service company (ESCO) businesses and end-users -- to implement EE projects. The TA program will be designed on a country-by-country basis to build on and complement existing efforts underway in each country to support EE investment capacity. Working through existing public and private sector partners, the Project will work directly with ESCOs and FIs, responding to their individual needs to structure investments, develop products, build their capacity to deliver these products, and

market their EE projects and financing products.

The Project will yield sustainable capacity for EE lending and investment in the commercial finance sector by building capacity for EE sector lending within participating FIs, establishing business models and marketing mechanisms for EE finance products, establishing a competitive dynamic among multiple participating FIs in each market, and establishing the profitability of investment in the EE sector.

IFC is uniquely positioned to implement this Project given its experience with HEECP and its successor HEECP2 as well as its other guarantee facilities, commercial finance expertise, network of FI relationships in the CEEF countries (including existing IFC portfolio FI investments), and its ability to leverage GEF funds with IFC's own investment funds. The CEEF approach is an appropriate match to conditions in the GEF-eligible countries selected for this project. They represent countries with well-developed technical capabilities in the EE sector, several active equity investment sources, compelling economic potential for EE investment, improving investment climates for EE (including price rationalization), and competitive capital markets with an excess of liquidity and limited experience (but growing interest) in providing project finance and debt for small and medium sized companies. These are the conditions in which a partial guarantee product of this type can be effective. The present pre-European Union accession period offers a unique window of opportunity to achieve substantial global environment benefits while establishing a sustained capacity to continue to deliver these benefits through market mechanisms. In addition, the country groupings offer substantial implementation efficiencies when addressed as a single project using IFC's regional infrastructure and leveraging IFC's substantial investment portfolio in the financial markets of these countries. IFC's HEECP implementation team in Hungary will provide guidance and support to the implementation of CEEF, thus yielding further leverage from IFC activities in the region.

COSTS AND FINANCING (MILLION US\$):

GEF:	- Guarantee facility	
	o First tranche	\$ 9.00
	o Second tranche	\$ 6.00
	- TA & Admin/Management	
	o First tranche	\$ 2.25
	o Second tranche	\$ 0.75
	- SUBTOTAL First Tranche	\$11.25
	- SUBTOTAL Second Tranche	\$ 6.75
	- TOTAL	\$18.00

Co-FINANCING:	- IA: guarantee investment	\$30 - \$75 (IFC investment)
	- IA: guarantee investment (if only first tranche of GEF)	(\$18)
	- IA: legal, management of facility	\$ 1.50
	- IFC Trust Funds (and other bilaterals) for TA	\$ 1.35

TOTAL PROJECT COST: \$50.10 - \$95.10 (est.)

3. ASSOCIATED FINANCING (MN US\$)

- FIs (debt financing for projects)	\$90 - \$180
- Project equity investment by project sponsors	\$22.5 – \$45.0

4. OPERATIONAL FOCAL POINT ENDORSEMENT:

Endorsement letters from all five countries on file with IFC

5. IA CONTACT:

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Definitions / Acronyms

CEEF	Commercializing EE Finance (project)
EE	EE
ESCO	energy services companies [project development companies]
EU	European Union
FIs	financial institutions
FLL	guarantee facility liability limit
GFAs	Guarantee Facility Agreements
GHGs	Greenhouse Gases
HEECP	Hungary EE Co-financing Project
IA	Indicative Amount
IFC	International Finance Corporation
SMEs	small and medium-sized enterprises
TA	technical assistance
TGLL	transaction guarantee liability limit
WB	World Bank
\$	United States Dollar

COMMERCIALIZING ENERGY EFFICIENCY FINANCE (CEEFF)

PROJECT BRIEF

BACKGROUND AND CONTEXT

1. The IFC/GEF project for Commercializing Energy Efficiency Finance (CEEFF) or Project represents a substantial corporate commitment by IFC to a series of regional investments in the business model that was successfully demonstrated in the IFC/GEF Hungary Energy Efficiency Co-Financing Program (HEECP). As such, the Project achieves effective mainstreaming of GEF's climate change mitigation objectives within the private sector investment arm of the World Bank Group. GEF resources will allow IFC to undertake the program (see "Use of GEF Funds" below), and place substantial funds of its own in a risk position in the Project (between \$30-75 million over several tranches of IFC investment, depending upon market demand). IFC will also contribute substantial technical, legal, and managerial resources to the program's execution. Further, because \$15 million of the \$18 million of GEF resources are utilized in a non-grant, contingent financing modality, it is expected that only \$4.5 million of the total GEF funds committed to CEEFF will be exhausted during Project implementation. IFC's comparative advantage in executing a contingent financing vehicle through private sector project developers and private financial institutions is demonstrated both through IFC's GEF portfolio as well as IFC's mainstream investment activities.

2. Besides the energy savings generated in the CEEFF countries, and the capacity built in the financial sector and energy services industries in these countries through the execution of CEEFF, the program will provide a vehicle for refining a business model to execute EE loan guarantees on a commercial basis. This exercise – including the demonstration of streamlined credit approval procedures, deal structuring in a variety of sectors, and the further refinement of streamlined administrative processes -- will be critical in ensuring future investment by IFC and other multilateral banks in financial instruments which stimulate private investment in the Energy Efficiency sector. In contrast to the IFC/GEF Renewable Energy and Energy Efficiency Fund (REEF) which is principally a private equity fund, CEEFF focuses on mobilizing substantial debt financing from local commercial financial institutions to support energy efficiency transactions rather than company investments or non-recourse project finance-type transactions that require equity. As such, CEEFF is complementary to REEF and other private equity funds such as the Dexia-Fondelec Energy Efficiency and Emissions Reduction Fund which is also active in the region.

CEEFF: A LARGE-SCALE REPLICATION OF THE HEECP MODEL

3. The IFC/GEF Hungary Energy Efficiency Co-Financing Program (HEECP) was launched in March 1997 by IFC's Environmental Markets Group with a total of \$5 million in GEF funding. The program was designed to overcome barriers to EE project finance and development by deploying two tools: i) a guarantee program, supporting and sharing in the credit risk of EE investments undertaken by domestic financial institutions (FIs); and (ii) a technical assistance program, to help prepare projects for investment and aid general EE market development. Following a four year pilot stage, including a slow start related to extensive work to develop the program and high interest rates in the Hungarian financial market during the program's initial years, HEECP has now developed a strong pipeline of projects – presently approving approximately ten new transactions per month at an average transaction size of \$250,000. HEECP has been instrumental in establishing active competition between several Hungarian banks to develop and market EE project financing products

in order to capture shares of the newly-discovered market in the financial sector. As indicated to the GEF Council in the original project brief, IFC expanded the program following the original pilot phase, extending the GEF guarantee facility with an additional IFC investment of up to \$12 million. At present, four banks have executed guarantee facility agreements (GFAs) under the IFC/GEF facility worth \$11 million. Once fully subscribed, the facility is expected to leverage debt financing for EE projects totaling up to \$90 million. A total of \$4.25 million of GEF funds is still remaining from the original allocation, now supplemented by a \$750,000 GEF MSP which together with the IFC parallel investment constitutes HEECP2 (program to be referred to as simply "HEECP").

4. The operational details of the HEECP program implementation represents over four years of development by IFC. The objective has been to operate a disciplined financial intermediation tool using commercial credit procedures. IFC operates in parallel a flexible and results-oriented technical assistance (TA) program which responds to and directly supports the specific needs of the individual ESCOs and FIs which actually execute the transactions supported by the facility. IFC has refined the management of the program to ensure appropriate credit oversight in part by maintaining incentives to allow the primary transaction review and credit analysis burden to be shouldered by the FIs (whose capital is lent for the projects). IFC has also developed program management processes which minimize transaction costs associated with both the FIs' participation and IFC's own administration of the program. The creation of credit analysis tools, legal documents, TA programs, and streamlined program administration procedures has been an invaluable output of the program. It is this "technology" which IFC seeks to leverage in the multi-country replication of the HEECP model in the proposed CEEF project. The HEECP mid-term evaluation report independently verified the program's accomplishments which were also featured in GEF's Second Overall Performance Study.

PROGRAM OBJECTIVES, BENEFITS, BARRIERS ADDRESSED, AND RATIONALE

5. In this next-stage development of the partial loan guarantee model, which has been successfully demonstrated in Hungary, GEF funds will leverage a parallel investment by IFC in the guarantee facility from the projects outset. CEEF will thus help to mainstream within IFC the programmatic objectives of the GEF for expanded mobilization of private sector capital to finance EE measures that produce global environmental benefits. In so doing, IFC will seek to mainstream the financing of EE within the private capital markets of the CEEF countries.

OBJECTIVES

6. The Project's primary objective is to reduce emissions of greenhouse gases through implementation of EE projects directly supported by the guarantee and TA programs. Parallel objectives are to:

- a) promote entry of domestic FIs into the EE financing market;
- b) build greater experience and capacity of domestic FIs to provide EE project finance;
- c) provide more favorable credit conditions to borrowers;
- d) promote financial innovation in this market to establish a range of financial products responsive to the structuring requirements of several different sectors, including municipalities, cogeneration, multi-unit residential buildings, institutions (including hospitals), industrial, commercial and SMEs;

- e) build capacities of the commercial EE/ESCO industry to market, structure, and finance EE projects, and to accelerate development of the EE market generally;
- f) expand deployment of non-grant contingent finance tools for the GEF, thus achieving greater leverage of GEF funds while mainstreaming EE finance within IFC;
- g) refine and streamline administrative and management procedures developed under HEECP, including credit review and project preparation procedures used in administering the guarantee facility and TA program, in order to enable broader scale adoption of the joint IFC and GEF EE guarantee product in other regions through IFC's mainstream investment operations.

7. CEEF is designed as a market intervention, responsive to short- and medium-term market conditions existing in the five participating CEEF countries. The overarching objective of CEEF is to build sustained market capacity to develop and finance EE projects on commercial terms using local private capital. The long-term success of CEEF will be measured by the existence of a competitive market for developing and financing EE projects after the CEEF guarantee facility is no longer available to support new transactions. In that context CEEF will have fulfilled its role of introducing FIs to a relatively untapped market, and helping both ESCOs and FIs to develop the capacity to exploit that potential.

BENEFITS

8. Benefits of CEEF will include:

- a) direct implementation of cost-effective EE projects with associated global and local environmental and economic benefits, including energy cost savings for energy users;
- b) development of capacity in the domestic financial markets of the CEEF countries to provide project-based debt financing for EE projects with SME sponsors;
- c) establishment of a sustainable and competitive market for EE project finance with multiple private FIs offering financial products to address the needs of a variety of EE sectors;
- d) development of capacity among project developers to structure "bankable" EE projects and to present them effectively to banks;
- e) mobilization of both domestic and international sources of debt and equity financing for EE projects; and
- f) mobilization of investment capital for infrastructure modernization critical for meeting EU environmental guidelines and achieving EU accession targets.

9. The program uses a market-based approach. CEEF proposes to work in a non-exclusive manner with those FIs and project sponsors that meet CEEF guidelines for participation. By building a base of experience and technical capacity to develop and finance EE projects CEEF seeks to establish the foundation for a sustained market for EE project investment on commercial terms. The benefits which can flow from CEEF's successful implementation are substantial and will be enjoyed both by direct participants in the EE projects, the CEEF countries' economies and the global environment.

10. Specifically, the GEF commitment of \$18 million (\$15 million of which will be applied to the guarantee facility) is expected to leverage \$112 - 225 million in private capital investment in EE projects. This is based on a 50% guarantee of loan principle amounts provided for EE investments supported by a guarantee facility which will range in size from \$45-90 million (depending upon

demand), plus an assumed average private equity contribution of 20% for each EE investment (an amount which is consistent with FI requirements for typical deal structuring in the CEEF countries). Should demand for the guarantees by FIs be substantially less than anticipated, then GEF's contribution to the guarantee facility will be limited to the first tranche commitment of \$9 million (\$11.25 million in total Project costs). Such a down-sized facility would still be expected to leverage \$67.2 million in private capital investment in EE projects.

- Assuming a loss rate of 5% on the portfolio, of the \$15 million in GEF funds placed in a first-loss position within the facility, between \$2.25 to \$4.50 million would be expected to be lost to non-performing loans over the seven year life of the project, depending upon the ultimate size of the facility. This is expected to leave between \$12.75 to \$10.50 million which will allow redeployment by IFC into other GEF Council endorsed activities at the end of the Project life.¹
- GHG emissions of 7.4 million metric tons of CO₂ are estimated to be eliminated in addition to emissions of various local pollutants associated with energy use reductions. The cost of avoided carbon emissions is estimated as \$0.70 per metric ton of CO₂. (In the event of a substantially down-sized guarantee facility associated with a GEF contribution to the facility of only \$9 million due to FI demand for guarantees inadequate to justify the full GEF commitment of \$15 million, GHG emissions of 4.2 million metric tons of CO₂ would be expected at a cost per metric ton of \$0.86.)

BARRIERS ADDRESSED BY CEEF

11. CEEF is designed to address the following barriers to commercial EE finance that are common across the five CEEF countries:

- a) shortage of readily available debt financing for EE due to structuring aspects of ESCO transactions as well as lack of experience and expertise with EE finance on the part of domestic FIs;
- b) perceived high end-user credit risks, especially for SMEs, municipalities, hospitals, multi-family housing and other end-user sectors which have lacked access to financing from commercial FIs in these markets;
- c) lack of collateral value associated with EE projects/equipment;
- d) imposition by FIs of high collateral requirements which are onerous for potential borrowers ;
- e) capital market conditions (including historical experience with large-scale defaults resulting from previously lax credit procedures) which cause FIs to be particularly risk adverse and overly cautious in their credit risk management practices; and
- f) lack of well-prepared investment-ready EE projects, which are in part due to lack of project development capacities of EE/ESCO businesses, limited seed capital available to many local ESCO, relatively high project preparation costs and risks, and lack of familiarity on the part of end-users of the benefits and business aspects of EE projects.

¹ The 5% non-performing loan percentage represents a conservative estimate based on the experience in HEECP where the only losses in the facility to date are related to a specialized retail loss reserve product associated with a portfolio of retail consumer loans (average size \$1000), and total losses on the outstanding loans guaranteed under the facility represent less than 2% of the total loan value guaranteed.

TABLE I: Barriers addressed by CEEF

Barrier	CEEF Project Response
a) Lack of debt financing: experience and capacity deficit in host country financial sector.	Provision of guarantee to induce/support FI lending. TA support to FIs to develop understanding of market opportunity; facilitate introduction to ESCOs; technical support for developing credit analysis skills and financial products.
b) High perceived risk for SME borrowers and EE projects by FIs.	TA support to develop credit analysis skills for appraising EE project risk; provision of partial guarantee to mitigate actual risk to FI.
c) Lack of collateral value associated with EE projects/equipment.	Provision of partial guarantee to mitigate FI risk; TA support to FIs to develop project finance capabilities and value the positive security features of EE projects: cost savings that improves free cashflow of end-user, and essential use nature of EE equipment.
d) Excessive collateral requirements imposed by FIs.	Provision of partial guarantee to mitigate actual risk to FI.
e) Extraordinarily risk averse financial markets resulting from historical experience with poor credit procedures.	Provision of partial guarantee to mitigate actual risk to FI. Selection of priority markets, e.g., SMEs, where project finance techniques can be applied, viability of borrowers demonstrated and competition between FIs can result in new lending.
f) Lack of well-prepared projects.	Selection of markets where fundamental economics of EE projects are attractive; TA support to ESCOs to assist in project structuring and presentation to FIs.

12. These barriers combine to create a general lack of access to financing on terms that are well-matched to EE projects and business methods that are attractive to end-users. Even in the presence of several EE-focused private equity funds active in the Central and Eastern European market, the lack of available debt financing has significantly constrained the development of EE projects. In addition to these barriers, which are common across these five countries selected to participate in CEEF, there are several country-specific barriers and conditions which impede the markets in individual countries, as detailed in the Annex 1 Country Profiles. The implementation strategy for CEEF will explicitly address these barriers either through the TA program designed for those countries or through the structure employed in executing the guarantee facility.

13. Numerous studies over the last decade have identified the primary barrier to EE investment as lack of "financing". A lack of financing can have many different meanings. In the five CEEF countries, the pre-appraisal process established that the specific finance barriers are derived from a lack of experience with project financing for SMEs in the finance sector, and a lack of financial skills on the part of project developers. (Country-specific findings and opportunities are detailed in Annex I.) Based on IFC's experience in Hungary, we saw that these conditions can effectively be addressed by the combination of:

- a flexible TA program which is responsive to the needs of *individual* FIs and ESCOs active in the market and which engages quality expertise in the structuring intensive process of preparing projects for investment, coupled with; and
- a guarantee product, paid for by the FIs, which provides the credit enhancement needed to induce a few commercial lenders to develop and market new EE project finance products.

14. Fundamentally, this approach is sustainable. It is also a logical response to existing market conditions and a natural extension of the market interventions and capacity building work undertaken in these markets to date. Further, the overriding government policy objective of EU accession is a market driver – enhanced by short timelines for energy price rationalization and tightened environmental standards – which provides a unique window of opportunity to apply the guarantee approach for maximal impact and lasting results.

RATIONALE FOR CEEF APPROACH

15. The Project rationale is to balance the complementary tools of the guarantee mechanism and a multi-faceted TA program focused on preparing projects for investment and building capacities of FIs and EE/ESCO businesses. Capital market and EE market conditions which are suitable and make a good application for these tools are present in the CEEF countries. They include:

- a) liquidity in local currency the capital markets, including for medium-to-long term financing;
- b) existence of credit risk barriers as a limiting factor in mobilizing these local financial resources;
- c) macro-economic conditions that are otherwise reasonably attractive for adequate borrowing and investment, i.e., interest rates to end-borrowers maximum in the mid- to high-teens, and reasonable positive outlooks for inflation and economic growth outlooks;
- d) a capable FI sector (including both commercial banks and non-bank FIs) interested in the EE market;
- e) strong economics and technical potential for EE;
- f) an existing base of EE/ ESCO businesses that can market and deliver EE projects and can respond effectively to technical assistance to structure and prepare projects for investment; and,
- g) policy and institutional support for EE (including prior market preparation activities as mentioned above) and for business investment generally.

This combination of conditions is found in each of the CEEF countries.

16. Through CEEF, IFC will transfer its experience with the partial guarantee mechanism, successfully demonstrated on a commercial basis in Hungary through HEECP, to other countries. The Project will achieve mainstreaming of EE finance within IFC by using GEF funds in parallel with IFC investment funds invested through IFC's investment departments. It will also expand the GEF's knowledge base regarding the appropriate application of various credit enhancement schemes in a variety of market profiles. As a regional multi-country program, CEEF would enable efficient knowledge transfer across countries, greater and more rapid mainstreaming of EE investment within IFC and the financial industry, and an expanded portfolio of non-grant contingent finance operations for the GEF.

CEEF COUNTRY CONDITIONS: COUNTRY SELECTION CRITERIA

17. A number of other GEF-eligible countries were evaluated for participation in this program but were deemed to be unsuitable based on current economic conditions. The country selection process was informed partly by IFC's experience in attempting to develop a similar contingent finance facility under difficult conditions in Albania and Macedonia. IFC's experience there has reinforced the selection criteria developed for identifying appropriate markets for contingent finance instruments. In addition, the countries of Egypt, Brazil, and Mexico, originally conceived as part of CEEF at the time of pipeline entry, have been removed from the Project. IFC has determined that it would be difficult to realize implementation efficiencies associated with the implementation of CEEF in multiple regions with such a global program approach. As a result, IFC has focused on a single region in executing CEEF.

18. IFC will consider displaying a similar financing instrument, with GEF support as appropriate, in other countries and regions in future. The country selection process for CEEF was driven primarily by IFC's assessment of a number of key criteria related to market readiness for this type of financial instrument. A partial guarantee executed through private commercial banks and leasing companies is effective only under certain circumstances. Such guarantees will not address issues of extremely high interest rates which can constrain project economics. Nor can they catalyze bank lending where inadequate liquidity is an issue or an absence of competition in the financial sector enables banks to be content with a narrow focus on investing in low-risk government securities or financing blue-chip corporate customers. On the other hand, the guarantee instrument can be very effective where there exists an excess of liquidity in the capital markets, coupled with substantial competition in the sector, thus leading FIs to seek new markets and who therefore are motivated to develop new financial products to exploit these markets. Where there is some market driver – such as rapidly increasing energy prices, environmental laws mandating energy-using infrastructure investment, or an active network of experienced project developers such as ESCOs who are developing projects—then a specific country market represents fertile ground. In such countries CEEF is an appropriate intervention which provides an effective and strategically implemented complementary TA program to generate substantial investment entirely financed through private sector investment.

19. The CEEF countries, including the Czech Republic, Estonia, Latvia, Lithuania, and the Slovak Republic exhibit conditions that make them ripe for the guarantee instrument proposed under CEEF. As near-term EU accession countries, they face aggressive schedules for energy price rationalization and environmental emissions regulation which will effectively drive the market. The present period provides a critical but brief window of opportunity to catalyze a substantial deepening of the capacity of the capital markets to support EE finance in each of these countries. Specifically, competitive conditions and excess liquidity in the markets provide conditions which will enable the CEEF TA program to build capacity in the market, and establish project financing-oriented lending for small and medium-sized enterprises (SMEs), while CEEF also provides the guarantees to enable the FIs to build an initial portfolio of EE projects in the long-neglected SME sector. Capital markets in each CEEF country are at a stage of development where the competitive dynamics encourage the development of new market niches using new financial products, but where – absent a guarantee product and an aggressive and focused TA program – it is unlikely that any substantial lending for EE projects could be expected to result. While a variety of important national, EU, bilateral, EBRD, and World Bank initiatives in the CEEF countries have produced important demonstrations of EE, as

well as establishing local capacity to design EE investments, while creating a policy environment which supports EE investment (see Annex I for country-specific information), CEEF represents a critical step for catalyzing a sustainable market for EE investment which builds upon the work that has been done to date. The potential local development benefits and global environmental benefits associated with the large-scale development of private sector investment in EE projects in this region, which is characterized by extraordinarily inefficient energy-using infrastructure (See TABLE II: Energy-Intensities of CEEF Countries), would thus remain largely unrealized or be delayed in their implementation in the absence of this intervention.

TABLE II: Energy-Intensities of CEEF Countries

COUNTRY	ENERGY CONSMPTN (quadrillion (10¹⁵) Btu)	GDP (US\$ bio)	ENERGY INTENSITY	POPULATION (million)	CONSUMPTION /POP
Czech Republic	1.5	53.1	0.028	10.3	0.146
Estonia	0.1	5.1	0.019	1.37	0.073
Latvia	0.16	6.6	0.024	2.44	0.066
Lithuania	0.32	11.2	0.028	3.7	0.086
Slovak Republic	0.7	19.7	0.035	5.4	0.130
Average			0.027		0.100
EU Average	62.7	8207.7	0.008	378.7	0.166

20. Annex I provides a detailed overview of the country market conditions in each of the CEEF countries. These form the basis of each country's selection for CEEF. They reflect information gathered during pre-appraisal and will help define the focus of the subsequent appraisal work to be completed in preparing the IFC investment in CEEF (see Annex VII: - Appraisal Guidelines). A brief synopsis of the country conditions which justify each country's participation in CEEF follows:

- **Czech Republic**

The Czech Republic has a combination of financial and energy efficiency market conditions which represent a good application for the guarantee product coupled with a TA program. Financial markets are characterized by relatively low interest rates, plentiful liquidity available in Czech Kroner for medium and long term financing, continued highly risk averse lending practices in light of the recent severe non-performing loan problems, but a rapidly improving and competitive financial sector with tight margins and many banks moving down market and seeking new products. In these conditions, the guarantee can be instrumental in mobilizing local financial resources for EE investments; appetite for the guarantee program is strong, as evidenced in interviews with key staff of prospective FI partners. EE project economics are sufficiently attractive to motivate investment. Energy prices remain slightly below full cost recovery levels and cross-subsidization between ratepayer classes still exists and future price increases are expected to be an EE market driver. A

substantial base of EE companies are operating in CR, a number as ESCOs. Several successful government and international programs promoting EE market have been operating, including, most notably, programs of the Czech Energy Agency. These activities have built core capabilities in the market and a pipeline of projects in preparation. With an effective TA program, and local financing mobilized by the guarantee, a good opportunity exists to build on and significantly augment the base of current EE project investment activities.

- **Slovak Republic**

CEEF's partial guarantee approach could substantially stimulate lending for EE projects in Slovakia. Financial institutions appear ready to explore opportunities in the EE sector and to begin lending to SMEs. In this context, the program could reduce both their risks and transaction costs for developing new financial products and marketing to a new customer sector. The Project will assist Slovakia to meet the higher EE requirements of upcoming EU accession and is synergistic with other Government policies. Slovakia enjoys stable macro-economic conditions and reasonably low interest rates; generally good conditions for investment. A substantial TA effort under CEEF could bring great benefit given the support needs of the relatively undeveloped ESCO sector in Slovakia.

- **Estonia**

Conditions in Estonia combine several key factors needed for a successful guarantee program: (i) a well-developed, competitive, aggressively managed financial sector; (ii) reasonably low interest rates and available liquidity in both local and international currencies; (iii) credit origination practices requiring, by regulation, collateral of 150% of loan principal being a principal barrier to many finance transactions; (iv) stable and positive macro-economic conditions; and, (v) strong technical and economic EE potential and a market driven to improve energy efficiency as a core part of the EU accession process. FIs have expressed strong interest in the guarantee program particularly as a means to meet collateral requirements and make more transactions possible. Government policy and the interests of end-users in several sectors -- housing, public buildings and industry -- are aligned to pursue EE projects. The EE/ESCO industry is young in Estonia but many local and international firms are active offering capacities in engineering, equipment supply, project installation and servicing. Technical assistance is needed for both FIs and EE/ESCO companies.

- **Latvia**

FIs have responded aggressively to IFC inquiries about the guarantee product. Bolstered by a strong housing renovation market potential, coupled with several government and international EE initiatives preparing the market for EE projects, the FIs see a large opportunity for EE lending. With EU accession targets driving reform efforts in the financial services and energy sectors, CEEF would enter the market at an opportune time. The existence of regulations mandating over-collateralization of bank loans makes a flexibly structured guarantee facility a potentially high-impact vehicle for encouraging lending for EE projects. IFC and the World Bank see substantial opportunities for collaboration on World Bank initiatives for housing sector finance market development and privatization.

- **Lithuania**

A highly competitive commercial banking sector, growing activity of the international and local SME ESCO players, rising energy prices and the EU accession process are important factors driving the EE market and creating suitable conditions for the guarantee program in Lithuania. Four commercial banks and leasing companies expressed strong interest in participating in an energy efficiency guarantee program; all have EE project pipelines with two to four projects each, and all have experience in EE lending. Banks are eager to implement new financial products in order to penetrate into new markets; the EE guarantee product can be a very attractive vehicle for FIs to do so. Lithuania enjoys stable macro-economic conditions and reasonably low interest rates. Technical assistance is required for building EE risk assessment capacity at the FI level and for project preparation at the ESCO level.

Implementation Efficiencies of the CEEF Country Selection

21. CEEF country selection also reflects the necessary management commitment of IFC's Europe Capital Markets Department to undertake and manage a parallel IFC investment. There are substantial efficiencies to be gained by implementing CEEF across five countries as a single project. In addition, the relatively small size of these markets on an individual basis makes the aggregation of the countries an important structural element in order to create a viable IFC investment. These efficiencies take several forms:

- Administrative efficiencies gained through geographic proximity, integrated transport and communication infrastructures, and integrated financial markets (with major FI players operating in multiple countries in a coordinated fashion) within the two groupings of CEEF countries: (i) the Czech and Slovak Republics, and (ii) the three Baltic countries. These two groups lend themselves to a consolidated administrative structure for administering and managing the Project. (See Program Management and Administration section for further details).
- Credit review procedures can be standardized, with deal structures, hurdle rates, financial analysis ratios, appraisal criteria, and review processes all benefiting from the ability to apply a single template to projects developed in the participating countries. We anticipate that minor modifications to each of these might be made based on local country market conditions or legal requirements, but that standardized procedures will in general be adopted.
- Relationships with FIs and the negotiation process for completing the guarantee facility agreements which define the IFC-FI relationships will be managed at a corporate level as several FIs operate in multiple countries. While IFC's country program managers will develop close working relationships with local FI representatives in each country in developing and processing individual transactions, as well as in tailoring and delivering customized TA support, IFC will utilize its corporate-level relationships with the primary banks in these countries – each of which have operations in several of the CEEF countries, and most of which IFC already has relationships with based on previous investments. (See ANNEX I: Country-Specific Profile summaries).

- Lessons learned and "software" developed in HEECP will be transferred to CEEF country operations. Due to their fundamental similarities to the Hungarian market and the presence of affiliated ESCOs and other companies that are also active in Hungary, the CEEF countries provide an ideal environment for the replication of HEECP within the region.
- TA contractors may be used in more than one country, allowing experience gained by these contractors to be applied efficiently in other countries. Finally, CEEF will build on the market development activities established through the IFC/GEF Efficient Lighting Initiative (ELI) whose work on developing the market for efficient lighting technology and services, and its financial transaction support activities provides a natural bridge to CEEF's expanded EE financing. The ELI project teams in the Czech Republic, Hungary and Latvia have directly supported the CEEF project development process and are expected to be a source of deal flow under the guarantee facilities, as they have been for HEECP.

USE OF GEF FUNDS

22. The Project will use GEF funds in three ways: (i) as reserves supporting the guarantee mechanisms, (ii) for the TA program, and (iii) for co-financing Project administrative expenses in-country. IFC resources will leverage GEF funds for each purpose. GEF funds used as guarantee reserves will be combined with IFC funds for each country guarantee facility. The initial target ratio of IFC to GEF funds is 2:1 (for the \$45 million facility, as well as the \$27 million facility supported by GEF's first tranche contribution); this ratio may increase up to 5:1 depending upon demand for the guarantee product in the CEEF countries and the performance of the loan portfolios under the facility in the first. The GEF role is essential to leverage IFC's investment in the guarantee facility as well as to support the market development activities in each of the target countries:

- for such a project to be successful, it needs a substantial TA activity to prepare investment projects in a newly emerging market;
- careful stewardship of the facility and marketing of the guarantee product requires a standing Project team to actively manage the facility and cultivate relationships with FI and ESCO partners;
- these operational costs cannot be supported by fees on guarantees; and
- there is inadequate performance data on EE loan guarantees in the CEEF countries to enable IFC to comfortably assess the risk of offering this product and provide pricing for the guarantee product which the market would be willing to pay.

23. IFC will also seek to leverage GEF funds for the TA program with IFC Trust Fund support, as IFC has done successfully with HEECP; the availability of GEF funds is essential to obtaining additional IFC Trust Fund support. Finally, GEF funds will support part of the administrative, management, and oversight functions of the Project, with co-financing provided by the participating IFC investment department as part of the Project's mainstreaming objective. In addition to leveraging IFC resources, the Project will also mobilize and leverage domestic financial resources both from participating FIs (typically representing 80% of project costs) and from EE project sponsors and end-users (whose equity contributions typically amount to an average of 20% of project costs). (See discussion in the next section).

24. Of the \$18 million of GEF funds requested, \$3 million (17%) will be used to support direct program operating costs, including: monitoring and evaluation, administration, and technical assistance. These costs are leveraged by IFC and Trust Fund contributions to the Project of equal amounts. The remaining \$15 million (83%) will be deployed in a non-grant contingent financing modality and placed in a risk position as security in the guarantee facility. A substantial portion of these funds are expected to be preserved over the course of the program. Using the experience of HEECP as a point of reference, but assuming the possibility of substantially higher losses in the CEEF countries on a conservative basis, IFC's reasonable case estimate of losses is 5% on the total loan portfolio. With the GEF funds in a first-loss position in the facility leveraged by IFC money, the GEF funds might be expected to cover from \$2.25 to \$4.50 million in losses under the facility. This would result in unused GEF funds at the end of the program after eleven years of between \$12.75 to \$10.50 million.

25. It should be noted that absent the GEF support, IFC would not be considering undertaking such a program. IFC works regularly with FIs but does not typically engage in "directed credit" operations such as this or make partial guarantee programs available to FIs on a pari passu basis. The GEF co-financing makes possible the use of this new financial product by IFC which is specifically tailored to the EE finance market.

LEVERAGING GEF FUNDING WITH IFC RESOURCES IN THE GUARANTEE FACILITY

26. GEF funds will be combined with IFC resources to create the guarantee reserves needed for IFC to take on guarantee liabilities. IFC resources will be combined with GEF funding on a ratio of between 2:1 to 5:1, providing important leverage for GEF funding. The 2:1 ratio will be used initially in conjunction with the first stage of IFC's investment. Additional IFC resources will be provided in subsequent tranches as demand for the guarantee product builds, and subject to analysis of the portfolio performance to date regarding loss/default rates. Within the guarantee program structure, GEF funds will be placed in a first loss position with respect to IFC's guarantee liability. That is, GEF resources will be used first to satisfy any guarantee claims. The lower risk for the IFC funds means that IFC can provide two to five times the funds contributed by GEF, thus further leveraging GEF monies. However, experience from the IFC/GEF guarantee program in Hungary, where total losses are less than 1.5% of total guarantee liabilities, suggests that the risk of the guarantee funds being called is relatively low. Please note that all losses in the HEECP have occurred in the retail guarantee program which utilizes a loss-reserve structure supported by both GEF and commercial bank resources in equal amounts and which targets smaller (average \$1000) loans made to residential homeowners.

LEVERAGING ANALYSIS

27. Given the guarantee program structure, and a midrange estimate of a 3:1 ratio of IFC to GEF funding for the guarantee, the GEF can support financing projects valued at up to 20 times the amount of GEF funding. This leverage is achieved at several stages in the chain of financial intermediation. This leveraging is illustrated in the Table III below. The fundamental financial leveraging of the guarantees is not effected by a potential downsizing of the guarantee facility. However, the operational efficiencies of the program would be reduced, as the cost of GHG emissions avoided by the Project would be increased as a result of a smaller guarantee facility (see Table IV).

Table III: Illustration of Guarantee Structure & Leveraging of GEF Funds: Single Country Example

1	GEF Funds for Guarantee Reserves	\$3,000,000	\$3,000,000	\$3,000,000	
2	Ratio of IFC to concessional Co-Finance	2.00	3.00	5.00	to be determined by IFC risk analysis
3	IFC Guarantee Reserves	\$6,000,000	\$9,000,000	\$15,000,000	
4	Total Guarantee Reserves	\$9,000,000	\$12,000,000	\$18,000,000	max. of all Guarantee Facility Liability Limits
5	Average Guarantee Percentage	50.00%	50.00%	50.00%	
6	Max. Loans before Leveraging at FI level	\$18,000,000	\$24,000,000	\$36,000,000	=line 4 div. by line 5
9	Average ratio of Debt in Project Financings	80.00%	80.00%	80.00%	
10	Maximum EE Project Financing Supported**	\$22,500,000	\$30,000,000	\$45,000,000	
11	Max. single loan size for risk diversification	\$1,200,000	\$1,200,000	\$1,200,000	= 20% of GEF funds
12	Ratio, GEF funds to Total Project Financings	7.50	10.00	15.00	
**NOTE: Additional leveraging may be gained at the FI level by allowing the sum of outstanding TGLs to exceed the FLL by up to 2:1. This provision is included in the standard IFC GFA, but, to be conservative, and because the willingness of FIs to use this provision is uncertain, this level of leveraging is not included in this analysis.					

28. Further leverage is potentially achieved at an additional rate of 2 to 1 through the "gearing mechanism" applied in the individual GFAs signed with participating FIs. With this mechanism, FIs are allowed to enter into Transaction Guarantees such that the sum of the transaction guarantee liability limits (TGLs) may be up to two times greater than the facility liability limits (FLL), even though IFC would never pay out claims greater than the FLL. This feature allows the FI to gain coverage for more transactions and allows IFC to obtain greater leverage to support more EE finance transactions with GEF funds. This gearing ratio is only expected to be a factor if an FI's demand for the guarantee exceeds their FLL, and the FI concludes that the value of the guarantee coverage is greater than the guarantee price.

PROJECT ALTERNATIVES AND REASON FOR SELECTION OF THIS APPROACH

29. The commercial EE finance guarantee approach proposed by IFC represents the highest-leverage opportunity available at this stage of the market development in the five selected CEEF countries. As was the case in Hungary, each of the CEEF countries has been the recipient of a variety of EU and bilateral-funded EE sector support. These grant-funded activities have been successful in establishing a functional level of technical capacity in each market to identify, design, and implement EE projects. Several of these programs remain active and will be integrated into CEEF's country strategies to stimulate deal flow. At the same time, liberalization of the capital markets has resulted in the gradual development of competitive banking and leasing markets ripe for a "deepening" of the industry's capacity to deliver more sophisticated financing products and thus expand access to finance for investment projects. These include financial products developed to

reach into the SME sector and extend financing on a project finance basis. With adequate or excess liquidity available in these capital markets, the opportunity to leverage private capital is timely. In this context, direct grants for EE projects, EE interest rate subsidy lending schemes, and more basic technical education programs are comparatively less cost-effective and appropriate. With a focus on both maximizing the impact of a market intervention activity and ensuring its sustainability, IFC views it as essential to undertake an activity which will enable existing market players to respond to market conditions and establish a sustainable capacity to build competitive markets for EE project development. This outcome is what CEEF seeks: the establishment of a vibrant lending market for EE projects, one which is seeded under the protective umbrella of the CEEF guarantee facility but not dependent on such an intervention in the longer term.

IFC'S COMPARATIVE ADVANTAGE

30. IFC is perhaps uniquely positioned to deliver the Project in the selected CEEF countries. As the private sector affiliate of the World Bank Group with a focus on private sector investments which facilitate sustainable development, support of a GEF co-financed EE guarantee facility and its successful delivery is aligned with IFC's core business. IFC's capabilities and breadth of experience support this focus. IFC's credit review procedures and experience providing credit enhancement products to FIs will enable successful administration of the guarantee facility operations. IFC's extensive investments and relationships in the FI sector of the CEEF countries provides a platform from which the program's marketing activities will be launched. The substantial preliminary interest displayed for the Project by FIs during pre-appraisal demonstrates the value of these relationships and illustrates the credibility IFC enjoys in the CEEF country capital markets. IFC will leverage this position on behalf of GEF in building the broad constituency of private sector participants in CEEF necessary to ensure sustainable market impact.

31. IFC's experience in the development and delivery of HEECP is directly relevant to CEEF. The procedures, TA program designs, documentation, guidelines, and legal documents which underpin HEECP will provide CEEF with an effective jumping-off point. By undertaking a regional program supported by program "software" developed for HEECP under similar conditions within the same region, as well as the program management expertise developed in implementing HEECP, IFC hopes to diminish the often steep learning curve that is typical in program initiation.

32. Finally, IFC's capacity and willingness to invest alongside GEF provides multiple advantages. From a financial leveraging standpoint, the Project's impacts are multiplied in direct proportion to the IFC investment – ranging from some three to six times the amount of private capital that the GEF money alone would generate through the guarantee instrument. From a project management standpoint, the mainstreaming of the GEF objectives together with a parallel IFC investment brings IFC's substantial investment management expertise to bear. Specifically, with IFC funds at risk alongside the GEF resources, the risk management resources brought to bear by IFC in managing its own exposure will similarly protect the GEF investment through adoption of IFC's credit and appraisal standards and procedures in the Project's preparation and administration. This benefit has already accrued to the project in the pre-appraisal effort undertaken by IFC's regional team of capital markets specialists who are working to prepare the IFC investment on a parallel track for management and Board approval alongside the preparation of CEEF's GEF funding request.

GLOBAL ENVIRONMENTAL OBJECTIVES AND BENEFITS

33. The overall objective of CEEF is to build an active and sustainable EE financing capacity in the commercial finance sector of the five selected CEEF countries. The direct result intended from this activity is to accelerate private sector investment in EE projects, thereby reducing the energy intensity in the participating countries' economies, and reducing emissions of greenhouse gases (GHGs) associated with the combustion of fuel oil, natural gas, coal and other thermal energy resources. Because the majority of GEF funds deployed in the Project are utilized as a non-grant contingent finance modality, with only private sector capital (driven by economically attractive conditions present in each of the CEEF countries) used for direct investment in the EE projects, the ratio of potential global environmental benefits of the project to the requested GEF funding is substantial. In addition to the direct global environmental benefits accruing directly from the loans which the guarantee facility will support over the life of the project, there will be additional indirect benefits resulting from the Project, including: (i) projects financed by FIs without the use of the guarantees as a result of CEEF's TA support to the project developers or the FIs, and (ii) projects developed and financed after the Project's conclusion by ESCOs and FIs who participated in CEEF and developed capacity through their participation in the Project.

34. Based on an estimate of the direct benefits from projects financed under the guarantee facility, CEEF is expected to generate GHG reductions of 3.4 to 9.9 million (7.4 million in most likely case) metric tons of CO₂ equivalent at an average cost of \$.70 per metric ton (see Table IV.). In addition to the global environmental benefits, CEEF will generate a host of local health and environmental benefits, most notably a reduction of particulates, SO_x, and NO_x emissions to the atmosphere of the CEEF countries that are presently associated with current levels of combustion of fuel oil, natural gas, coal and other fossil fuels.

Table IV: Projected Level of Cost-Effectiveness of Energy Savings and their Associated Avoided GHG Emissions

[Assumption: full disbursement of GEF contribution and full first stage commitment of IFC guarantee facility contribution yields a \$45 million facility (GEF funds \$15 million, IFC funds \$30 million). Table IV does not reflect ultimate CEEF goal of obligating a full guarantee facility of \$90 million, which would double CO₂ savings.]

Cost-Effectiveness Estimates	CEEF GEF Program Budget (000s)	Potential Avoided GWh (Most Likely Case) (1)	Estimated (Most Likely) Avoided CO ₂ (million tons) (2)	Best case: Cost CO ₂ Avoided (\$/tons) (3)	Most likely case: Cost CO ₂ Avoided (\$/tons) (4)
Czech Republic	\$3,830	1,954	1.8	\$0.3	\$0.65
Slovakia	\$3,220	1,563	1.1	\$0.4	\$0.8
Latvia	\$3,400	1,758	1.4	\$0.3	\$0.7
Lithuania	\$3,400	1,758	1.3	\$0.3	\$0.7
Estonia	\$3,400	1,758	1.7	\$0.2	\$0.6
Total CEEF	\$18,000	8,791	7.4	\$0.30	\$0.70
[Note: If only 1 st tranche GEF contribution is realized, then:] (Note 5.)	<i>\$11,250</i>	<i>5,275</i>	<i>4.2</i>	<i>\$.40</i>	<i>\$0.86</i>

Notes to Table IV:

1. Assumes most likely case in which 75% of potential savings from a \$45 million facility are realized. Assumes only direct CEEF benefits as explained in Annex IV: Incremental Costs. Includes both electricity savings and the fuel savings (kWh equivalent).
2. Most likely case in which 75% of potential savings are realized (with a \$45 million facility). CO₂ emissions coefficients are assumed as weighted average of participating countries and range from 900 (diesel, gasoline) kilograms to 1100 grams (coal). In some cases, these coefficients are expected to increase over the next five years due to growth in electricity demand being met by mainly thermal generation capacity. Factors that mitigate against this will include increases in the operating efficiencies of existing plants and decreases in transmission losses.
3. To estimate CEEF's program costs per ton of avoided GHG, we determined electricity and fuel savings generated by various CEEF-supported loans by determining likely loan project portfolios by sector and energy type, as well as assessing the electricity generating infrastructure in each participating country. Assumes best case of CO₂ avoided scenario (see Annex IV) in which achieved energy savings are 100% of the potential savings and no GEF guarantee funds are called.
4. Assumes a most likely cost of CO₂ avoided scenario in which achieved energy savings are 75% of the potential savings associated with a \$45 million guarantee facility, and that 15% of GEF guarantee funds are called. (associated with a projected 5% non performing loan portfolio).
5. These estimates are to illustrate a scenario in which demand for the guarantees is well below projected levels, thus resulting in a GEF contribution of just \$9 million for the facility (GEF tranche 1). While the leverage of the GEF funds is greatly reduced under such a scenario, CEEF would still yield cost-effective GHG reductions.

PROJECT ACTIVITIES/COMPONENTS AND BUDGET

35. The design of specific activities under the technical assistance program, negotiation and sizing of guarantee facility agreements (GFAs) with participating FIs, and the development of specific financial products to be offered by participating FIs under the facility will be defined during appraisal. They will be further refined throughout the program life as conditions warrant. Annex VII describes the guidelines and issues to be addressed during the appraisal process. The individual country profiles provided in Annex I further detail country-specific research topics to be addressed during appraisal, as well.

36. The \$18 million of GEF resources contribute to a total program budget which will range from \$50.1 million to \$95.1 million, depending upon the ultimate size of IFC's investment. Specifically, the IFC investment will be tranching, with increasing levels of investment depending upon (i) the actual FI demand for the guarantees, as executed through GFAs, and (ii) the portfolio performance. Most of the GEF funding (\$15 million out of \$18 million) is proposed to be used in a non-grant contingent financing modality, most of which is expected to be conserved over the course of the program and will thus be available for re-deployment at the conclusion of the program.² Up to \$2 million of the GEF funding will be deployed for program administration and management to help operate CEEF program offices in Latvia and the Czech Republic, which will be responsible for the TA and guarantee facility operations in each of the CEEF countries. These functions are described in the Program Management and Administration section below. The program management and administration functions, including legal documentation, administration of the donor-funded TA operations, supervision of CEEF program field offices, as well as the credit review functions provided by the IFC investment department, and other Project support activities provided by IFC, will be supported with funds mobilized by IFC from non-GEF sources totaling approximately \$1.5 million. The remaining \$1 million in GEF funds will leverage matching contributions expected to total \$1.25 - \$1.5 million from European bi-lateral agencies, which will be administered by IFC in support of the TA programs and Monitoring and Evaluation operations.

² Following the program's conclusion, IFC will either re-deploy the remaining funds to other possible Council-approved GEF operations under IFC's management or return the funds to the GEF Trust Fund as agreed with the GEF Secretariat.

Table V: GEF Budget Allocations by Country

COUNTRY	Guar. Facility GEF Contrib.	Tech Assist. & M&E	Program Admin & Mgt	TOTAL GEF Funding
[Source of \$]	[GEF \$]	[GEF]	[GEF]	[GEF]
(footnote)	1	2	3	
Czech Republic	\$3.33	\$0.25	\$0.40	\$3.98
Slovakia	\$2.67	\$0.30	\$0.40	\$3.37
Latvia	\$3.00	\$0.15	\$0.40	\$3.55
Lithuania	\$3.00	\$0.15	\$0.40	\$3.55
Estonia	\$3.00	\$0.15	\$0.40	\$3.55
Total	\$15.00	\$1.00	\$2.00	\$18.00
[Note: If only 1st tranche GEF is realized, then:]	\$9.00	\$0.75	\$1.50	\$11.25

Table V: Notes by column

1. The GEF contribution to the guarantee facility will be blended with the IFC contributions. The ratio will be 2 (IFC) to 1(GEF) up to a \$45 million facility. Then – once sufficient demand has been established in the market and the loss rate is determined to be acceptable to IFC for an extended exposure – IFC would commit additional resources to the facility, carrying the ratio of contribution as high as 5 (IFC) to 1 (GEF). From the FI perspective, the GEF and IFC funds would be indistinguishable. In terms of funds management, the GEF funds would be placed in a first loss position relative to the IFC funds in the guarantee facility.
2. These funds will be matched by contributions to the TA program mobilized by IFC’s investment department through cooperation with various bilateral donors. These funds could also support engineering analyses used to measure GHG impacts of projects financed through the facility.
3. Substantial efficiencies realized through the integration of a regional program will enable the maintenance of active program management engagement at the country level.

37. The individual country allocations of GEF resources for TA are based on opportunities to leverage existing TA support activities, the availability of IFC Trust Fund-generated direct support, and the scale of TA support expected to be needed to utilize the guarantee facility in each country. The individual country allocations for the guarantee facility are based on the demand indicated by FIs and ESCOs operating in each CEEF country, including an assessment of the project pipelines identified by potential Project participants and the size of the EE market potential identified during pre-appraisal. There is flexibility built into the budget allocations during Project implementation in two ways: (i) if deal flow is inadequate to utilize the facility, then more of the resources will be allocated to TA in order to further prime the deal pump; (ii) the guarantee facility can be substantially increased for each country – up to five times the size of the GEF country contribution to the facility – by obligating more and more of the full IFC commitment to the facility until FI demand for guarantees is satisfied. In addition, while IFC seeks GEF endorsement of the full \$18 million CEEF program, the initial tranche of GEF resource commitment will be limited to \$11.25 million – including partial funding of \$9 million of the total \$15 million GEF contribution to the guarantee facility. This reduces the risk to GEF of over-committing resources before sufficient demand for the guarantees is demonstrated by FIs. By adopting a quick approval process by the GEF CEO for the second tranche GEF commitment of \$6 million to the facility and an additional \$0.75 million for program operations and TA, this two step approach to full funding of the GEF contribution is operationally efficient as well as fiscally conservative.

38. Table III. presents a preliminary breakdown of budget allocations by program area and country based on pre-appraisal information. The figures will be further refined during appraisal, with greater detail developed at that time. Additional pre-appraisal data on each specific country – including the market analyses upon which the country selection was based and the size of the facility projected for each country was established -- are presented in more detail in Annex I.

Table VI: Guarantee Facility Budget Allocations and Leverage by Country

[All figures in US\$ Millions]

COUNTRY	Total Initial Facility Size (full GEF contribution)	Total Potential Facility Size	Guar. Facility GEF Contrib.	Guar. Facility (full GEF/\$30 million IFC)	Guar. Facility Max. IFC Contrib.	Total EE Investment (full GEF/\$30 million IFC)	Total EE Investment Full Potential Facility Size
[Source of \$]	[GEF and IFC]	[GEF and IFC]	[GEF]	[GEF]	[interest Earnings] [GEF \$]		
[footnote]			1	2	2	3	3
Czech Republic	\$ 10.00	\$20.00	\$3.33	\$6.67	\$16.67	\$ 25.00	\$ 50.00
Slovakia	\$ 8.00	\$16.00	\$2.67	\$5.33	\$13.33	\$ 20.00	\$ 40.00
Latvia	\$ 9.00	\$18.00	\$3.00	\$6.00	\$15.00	\$ 22.50	\$ 45.00
Lithuania	\$ 9.00	\$18.00	\$3.00	\$6.00	\$15.00	\$ 22.50	\$ 45.00
Estonia	\$ 9.00	\$18.00	\$3.00	\$6.00	\$15.00	\$ 22.50	\$ 45.00
Total	\$45.00	\$90.00	\$15.00	\$30.00	\$75.00	\$ 112.50	\$ 225.00
[Note: If only 1st tranche GEF is realized, then:] (see footnote 4)	\$27.00	\$54.00	\$9.00	\$18.00	\$45.00	\$67.50	\$135.00

Table VI: Notes by column

1. The GEF contribution to the guarantee facility will be blended with the IFC contributions. The ratio will be 2 (IFC) to 1(GEF) during the first stage of IFC investment (up to \$30 million). This covers both tranches of GEF investment, including the initial \$9 million, as well as the subsequent \$6 million GEF investment to the facility. Then – once sufficient demand has been established in the market and the loss rate is determined to be acceptable to IFC for an extended exposure – IFC would contribute its subsequent investments, carrying the ratio of contribution as high as 5 (IFC) to 1 (GEF). From the FI perspective, the GEF and IFC funds would be indistinguishable. In terms of funds management, the GEF funds would be placed in a first loss position relative to the IFC funds in the guarantee facility.

2. IFC’s investment in the facilities will be approved by the IFC Board contingent upon endorsement of the Project by the GEF Council. The IFC contribution will be disbursed in multiple tranches: Tranche 1 upon signing the first GFA in each country; subsequent tranches will be triggered by demand for additional guarantee resources on a country-by-country basis and the completion of a satisfactory assessment by IFC management of the performance of the loan portfolio under the facility during the Project’s life to that point. The IFC fund tranching is separate and distinct from the proposed tranching of GEF funds.

3. The value of EE investments is based on a 50% guarantee on the project debt, plus an assumed 20% project equity investment made by project sponsors.

4. These estimates of a partial GEF disbursement scenario are for illustration purposes only. A partial disbursement of the full \$15 million GEF contribution to the facility will yield approximately 60% of the projected benefits of the full CEEF program at the same level of fixed costs, thus reducing the leverage of GEF resources substantially.

Table VII: Administration/TA/M&E Budget Allocations by Country
 [All figures in US\$ millions]

COUNTRY	Tech Assist. & M&E	Tech Assist. & M&E	Program Admin & Mgt, incl. Program Office operations	Legal, Guarantee Facility Management, Administration	Total
[Source of \$]	[GEF \$]	[IFC Trust Funds]	[GEF]	[IFC]	
(footnote)	1	2	3	4	
Czech Republic	\$0.25	\$0.20	\$0.40	\$0.30	\$1.15
Slovakia	\$0.30	\$0.25	\$0.40	\$0.30	\$1.25
Latvia	\$0.15	\$0.30	\$0.40	\$0.30	\$1.15
Lithuania	\$0.15	\$0.30	\$0.40	\$0.30	\$1.15
Estonia	\$0.15	\$0.30	\$0.40	\$0.30	\$1.15
Total	\$1.0	\$1.35	\$2.0	\$1.50	\$5.85
(If 1st Tranche Only)	\$0.75	\$1.35	\$1.50	\$1.50	\$5.10

Table VII: Notes by column

1. These funds will be matched by contributions to the TA program mobilized by IFC's Trust Funds Department through cooperation with various bilateral donors. These funds could also support engineering analyses used to measure GHG impacts of projects financed through the facility as part of M&E.
2. These funds would come from a combination of existing IFC Trust Funds and bilateral sources. They would also support M&E activities. The TA program would also be leveraged through cooperation with a variety of on-going EE market support activities being implemented in participating countries by various NGO, private sector, and governmental partners whose work will be formally integrated into the program through their participation in the five CEEF country-based Advisory Committees.
3. Substantial efficiencies realized through the integration of a regional program will enable the maintenance of active program management engagement at the country level.
4. IFC's administrative costs are proposed to be met from two sources, from IFC's regular budget to cover both standard administrative costs associated with a normal capital markets investment as well as some of the extraordinary costs associated with operating an innovative guarantee facility. IFC's investment department will commit resources necessary to maintain credit review procedures for each transaction and appraisal of each participating FI under the program. IFC's costs associated with establishing and administering the GFAs, as well as the internal program administrative and management costs of the investment, will also be covered by IFC's investment department. However, additional administrative cost burdens are imposed on IFC's investment department associated with running a program of this type which are proposed to be met by the GEF. These are incremental costs associated with ensuring that global environmental objectives of the GEF are met as well as the incremental costs associated with developing EE investments at this early stage of market development.

PROGRAM COMPONENT I: THE PARTIAL GUARANTEE PROGRAM

DESCRIPTION OF THE GUARANTEE MECHANISM

39. The Project will provide guarantees to local private financial institutions (FIs) to share in the credit risk of EE loans/leases which the partner FIs fund with their own resources. Participating FIs can be commercial banks, bank-owned leasing companies and qualified non-bank financial institutions. The FIs' borrowers or lessees must be private sector entities, although they can be private ESCOs providing services to public sector clients.

40. Participating FIs will execute a "Guarantee Facility Agreement" with IFC under which IFC will partially guarantee the FI's credit risk on qualified EE transactions. Individual transactions will be approved using a "Transaction Guarantee Agreement" that incorporates all the details of the specific transaction under the GFA.

41. Eligible transactions are investments in projects and equipment aimed at improving efficiency of energy use in buildings, industrial processes, municipal facilities and other energy end-use applications, for example, lighting, boiler and cogeneration systems, energy management control systems, efficient and variable speed drive motors, power factor correction, waste heat recovery, etc. Investments must be for new projects, not refinancing existing projects, and for projects using proven technology which are developed with competent energy audit/feasibility studies and include energy savings monitoring plans. The FI's borrower or lessee must be a private sector entity, consistent with IFC's private sector investment mandate. Financing for projects with public and governmental sector end-users can be supported with loans to EE service companies, contractors or equipment vendors. Finance terms of three to seven years are typically required; terms up to ten years may be appropriate for thermal plant projects. Financing can be provided direct to the energy user or to the EE business or energy service company (ESCO) which contracts with the end-user.

GUARANTEE FACILITY AGREEMENTS

42. Pursuant to the Guarantee Facility Agreements (GFAs) with IFC, participating FIs propose qualified EE project transactions by providing summary information on the transaction to IFC; IFC reviews the transaction for approval under the guarantee. The guarantee program gives participating FIs a risk management tool to create creditworthy financings and allow projects to be funded that otherwise might not be funded because of credit concerns. Projects are funded with the FI's own resources, but with CEEF guarantee support.

43. Key terms of the GFAs are as follows. Each GFA defines a "Facility Liability Limit" (FLL), which is the maximum amount of guarantee claims that IFC would ever pay out under a GFA, and a "Transaction Guarantee Liability Limit" (TGLL), which is the maximum amount of the guarantee liability which IFC can assume for any single transaction. When Transaction Guarantees are written, a TGLL schedule is created which defines the guarantee liability at any point in time under the transaction. The TGLL amount declines as the outstanding principal balance of a guaranteed transaction is amortized and declines. The guarantees are *partial*, up to 50% of transaction principal, and are provided on a "pari passu" basis, meaning that, in a default and loss event, IFC as Guarantor shall pay to FI, or its designated Guarantee Beneficiary, the Guarantor's proportional share of the

principal loss and that all recovered monies, net of reasonable collections costs, will be distributed to the Guaranteed Beneficiary and to IFC in similar proportion.

44. The GFA also includes provisions which allow IFC to reduce the FLL if the FI does not meet certain targets for use of the guarantee facility; this provision allows IFC to reallocate guarantee capacity to other FIs.

45. A guarantee fee will be charged by IFC. Actual pricing will be determined on a country-by-country basis during appraisal subject to local market conditions. This pricing could be somewhat concessional, and not fully risk weighted, if the program strategy warrants it for a particular country. Some positive price is probably deemed essential to ensure that participating FIs allocate the guarantee resource appropriately. At the same time, IFC wants to ensure that the guarantee pricing is not so high as to discourage use of the guarantee and hence limit the Project's development impacts. IFC will also charge a modest origination fee to defray local legal costs of originating GFAs, as well as a commitment fee to encourage use of the guarantee resource.

GUARANTEE PRODUCTS

46. Based on market opportunities in each CEEF country, the guarantee program could offer three different products: (i) individual transaction guarantees; (ii) residential portfolio guarantees; and (iii) special project guarantees. "Individual transaction guarantees" would cover the most common projects (such as lighting, motor, space conditioning, automated control and cogeneration system) with loan sizes of approximately \$50,000 - \$2,000,000.

47. "Residential portfolio guarantees" would be designed to address the relatively uniform nature and small size of EE loans to the single-family and multi-family residential sectors; reserves for residential portfolio guarantees will be funded mostly with GEF resources. IFC will agree to guidelines for these transaction types and approve those transactions on a no-objection basis, subject to certain criteria being met. The retail guarantee is structured on a portfolio basis, where large numbers of small projects are being financed systematically. The retail guarantee is implemented by joint IFC/FI funding of a loss reserve fund which is available to be drawn on by the FI to cover losses up to the amount of the reserve. The probability of losses is higher with this type of guarantee but it allows IFC to gain greater leverage of GEF funds. The retail guarantee product is documented with a modified Transaction Guarantee Agreement and an Escrow Agreement, both of which act in concert with the GFA.

48. Larger projects, greater than approximately \$2 million in size, that fall outside these criteria may still be considered for a "special project guarantee" and will be evaluated and approved by IFC on a case by case basis. Guarantee resources will be reserved, unallocated amongst participating FIs, for use and allocation on special project guarantees. Typically, these will be projects which require more substantial appraisal directly by IFC. They therefore fall outside the bounds of the streamlined approval procedures designed for the portfolio guarantee facility, which is populated by deals representing categories with similar structures and technical risks.

GUARANTEE PROCEDURES AND UNDERWRITING GUIDELINES

49. IFC has developed procedures and underwriting guidelines for Transaction Guarantees (TGs) prepared and administered under the HEECP; these guidelines will be adapted to each CEEF participating country's condition and in line with the internal IFC management plan for the program. Preparing TGs and administering the GFAs have the following requirements: (i) GFA requirements for FIs to originate TGs; (ii) IFC procedures for reviewing, approving, and issuing executed TGs; (iii) credit and risk analysis and structuring guidelines for transactions proposed for TGs; (iv) post-closing administration of TGs and GEF requirements for project monitoring; and, (v) GFA administration and management of FI relationships.

50. The HEECP guarantee program has been built around financial products designed for specific end-user sectors and EE applications, for example: single family residential (retail gas program), multi-family housing (blockhouse program), municipalities (streetlighting program), and ESCO projects for new boiler and cogeneration systems. Credit and underwriting guidelines and due diligence checklists for reviewing and approving TGs have been developed for specific products in practice. These guidelines have also been provided to FIs to provide prescriptive guidance, upgrade the quality of information they submit, so that the FIs carry the main burdens of transaction origination and analysis. This practice will be continued in the new CEEF country programs.

51. To initiate a Transaction Guarantee, the participating FI submits an Appraisal Report providing all essential information needed by IFC to approve the transaction for a guarantee. Schedule 1 to the GFA outlines necessary information in an Appraisal Report. In practice, the country program manager will review this information with the FI in advance of formal submittal of an Appraisal Report, to confirm that the transaction is eligible, and to identify key issues in the credit risk structure and analysis. IFC will also assure that proper engineering information is provided to establish an energy and emissions savings baseline and monitoring plan for the project. IFC further reviews the underlying loan or lease documentation for the transaction; this documentation is standardized to the greatest extent possible to streamline due diligence. Overall exposure to particular borrowers is also monitored. This review becomes critical when an FI has a concentration of EE project business with individual ESCOs.

52. Once a complete Appraisal Report has been submitted, internal IFC management review is conducted to approve the transaction for a guarantee. This process is defined further in the Management and Administration Section, below. When an FI has developed niche EE finance products, for which multiple similar transactions are being prepared (e.g., for multi-family housing or municipal streetlighting projects), then streamlined approval procedures can be invoked, at IFC's option. These establish standard underwriting and credit guidelines for such transactions, and allow those transactions meeting these agreed guidelines to be approved for guarantees on a rapid no objections basis.

PROGRAM COMPONENT II: A TECHNICAL ASSISTANCE PROGRAM RESPONSIVE TO THE NEEDS OF THE FI AND ESCO PARTNERS

53. The CEEF technical assistance (TA) programs have two main purposes: (i) to prepare projects for investment; and (ii) to build EE and FI industry capacities in each country. TA will be provided at several levels:

- for financial institutions (FIs) participating in the guarantee program, for marketing their EE finance services, preparing projects for investment, developing new EE finance products, and building their capacities to originate EE project financings;
- for EE and ESCO businesses, for building their corporate capacities and developing EE projects; and
- targeted EE market promotion activities, generally undertaken in cooperation with other organizations.

54. In addition, the TA program will fund necessary monitoring and evaluation activities to define baselines and confirm post-installation the energy and emissions savings achieved by projects supported by the guarantee and TA program.

55. This section describes the TA program design generally; specific TA program activities will be adapted to needs of each country and its market participants. Remarks on special features of each country TA program are included in the country sections of this Project Brief (Annex I).

FI TRAINING AND MARKETING

56. For participating FIs, the TA program will offer training in EE finance. Training will include introduction to EE technologies, economics and end-user savings benefits.³ Special features of EE transaction structuring, including ESCO lending and project finance techniques relevant for EE projects, will be taught. These techniques will vary and must be applied to specific end-user sectors. Specific cases for use of project finance techniques applied to EE, thermal plant and small cogeneration projects will be developed with participating FIs. Training will also focus on marketing EE finance services and one-on-one consultations with each FI to establish an EE finance unit within an appropriate department of the FI.

57. *Appointment of Lead FI Managers.* The program must assure internally within the FI that EE finance knowledge and availability of the guarantee program is broadly understood. This knowledge must be developed amongst FI staff involved in both finance origination and in credit structuring and decisions, and then promoted within the FI's branch network. Therefore, each FI participating in the guarantee program will be required to appoint one senior person responsible for credit and one senior person responsible for marketing and origination to lead the FI's participation in the guarantee program. The senior credit manager will be responsible for assuring that the availability and terms of the guarantee are recognized throughout the credit structuring, analysis and decision-making process within the FI. The senior marketing and origination person will be responsible for leading the FI's EE finance marketing and transaction origination program, and assuring training of product line and branch managers who will also be originating transactions. Each participating FI, early in their tenure

³ EE equipment tends to lack collateral/asset value, a negative credit feature. However, EE projects create cost savings for the end-user, improving their ability to pay, and they typically involve essential functions of an end-user's facilities, ones they can *not* do without, improving the end-user's willingness to pay.

with the guarantee program, will be required to prepare a marketing plan for their EE finance activities; technical assistance will be provided to both help them prepare and to implement the marketing plan.

58. EE Finance Marketing Plan. The TA program will focus particularly on marketing. The program will be proactive in engaging FIs in this market, especially by assisting FIs to establish relationships with EE businesses, equipment vendors, contractors and project developers; these companies need FI financing to support their sales. A primary means for FIs to market EE finance services is through relationships with EE businesses. Workshops and events sponsored through the CEEF TA program will facilitate such engagement with the industry.

59. Development of Niche EE Finance Products. An FI's marketing plan will also define the EE finance products it will offer by target end-user sector, transaction size, credit characteristics, security structure, tenor, economic parameters and documentation requirements. Because EE finance can address a range of end-user sector and project types, it is important to take a "financial product" approach to development of various financing structures. For example, in HEECP, financing products have been developed for EE financing for multi-family housing, municipal streetlighting, district heating, industrial cogeneration implemented pursuant to energy sales agreements, and hospitals, with financing offered both direct to end-users and to ESCOs. Financing structures have been adapted to the institutional and credit requirements of each type of end-user and include direct recourse to end-users, direct recourse to EE/ESCOs and limited recourse project financing; CEEF will continue to develop new financial products during its operation. An FI's selection of the financial products to be offered will be based on their finance appetites and capabilities and market opportunities. The TA program will assist each FI to develop and adapt EE finance products to target sectors.

TECHNICAL ASSISTANCE FOR ESCOS AND EE BUSINESSES

60. The TA program includes several activities for EE and ESCO businesses, both for building their corporate capacities and developing EE projects for investment. These programs are designed to ensure a pipeline of transactions for financing by participating FIs and supported by the guarantee. Specific efforts to assist EE/ESCO businesses include assistance in developing projects, finance and contract structuring of projects, transfer of ESCO business tools and best international ESCO business practices, and assistance arranging financing for projects. In addition, for the strongest most active EE/ESCO companies, the TA program will provide assistance in business planning and raising equity capital for their further development.

61. Capacity Building and Training for EE/ESCO Companies. Capacities of EE/ESCO businesses vary throughout CEEF countries. ESCOs are operating already in Czech Republic and Slovakia but ESCO business concepts are fairly new in the Baltic countries. The TA program will establish relationships with a range of EE businesses -- engineering firms, mechanical and electrical contractors, equipment suppliers and vendors, as well as project developers and ESCOs. These firms need assistance in EE project development, finance structuring and investment preparation. Once projects are well-structured, they can be presented to participating FIs for financing. The TA program will assist EE businesses to arrange debt facilities for their projects with participating FIs; structuring a debt facility allows the EE business to standardize their project finance structure terms, make financing offers with greater confidence to their customers, and expedite due diligence on and closing of financing arrangements.

62. **ESCO Business Planning and Equity Capital Raising.** The TA program will also provide financial advisory support for business planning, corporate finance planning and equity raising for select EE/ESCO businesses. Such support has proven important in HEECP where a few smaller ESCOs which have been active deal generators under the facility have become over-extended in their debt exposure relative to their capitalization. Their ability to continue to initiate loans depends on their ability to raise equity. Building upon this experience, the work scope for TA support within CEEF for particular companies can include a mandate to raise equity capital. Equity investment opportunities for IFC and other relevant private equity funds such as the IFC-sponsored Renewable Energy and Energy Efficiency Fund (REEF) will be identified and pursued, as will opportunities to assist local ESCOs to raise equity from other funds and investor sources. Increasing the financial capacity of EE/ESCO businesses will increase the volume of EE transactions for the Program. This support will be provided on a co-financed basis, with the costs of the selected financial advisor shared 50/50 with the EE business.

63. ***SME Programs.*** The TA program will include specific initiatives targeting SMEs. SMEs will participate in CEEF in two ways. First, as energy users, SMEs will receive financing supported by the Project for EE investments in their facilities. Second, as EE businesses SMEs are involved in delivering EE equipment, projects and services.⁴ With training, these businesses can expand their product and service offerings and their sales. Training curriculum can include: efficient technologies and equipment, energy auditing techniques, financing EE projects, fundamentals of project development, marketing efficiency services, working with specific partners organized by the Project (FIs, district heating companies, ESCOs, etc.), and business management. The Project can help create sales for these businesses by organizing markets, supporting energy audits for potential customers, and providing access to customer financing.

64. ***Energy Audits and Project Development.*** The TA program will also work at the project level and support development of projects, beginning with energy audits if necessary. Performing an energy audit for a prospective EE customer is the beginning of the project sales cycle. Information gained on EE investment opportunities, their costs and savings, are used to make decisions about project design and implementation. By supporting energy audits, CEEF will assist in building a pipeline of projects for financing. Participating FIs and EE businesses will identify prospective customers. Preliminary "walk-through" level audits can be performed for relatively low cost, between \$1500-2500 per facility. The TA contractors will establish guidelines for performing the audits and qualify the set of engineering firms to perform the audits. End-users will be asked to sign an audit agreement to evidence their cooperation, commitment to provide necessary information and intent in developing cost-effective EE projects, including appropriate levels of project engineering necessary to fully develop the projects opportunities identified preliminarily through the walk-through audits.

GENERAL AND TARGET MARKET DEVELOPMENT

65. The TA program will include activities to support general EE market development and to target hard-to-reach niche markets. Priority markets include: (i) end-use EE for district heating system customers; (ii) cogeneration and EE for district heating systems, hospitals, universities and other public sector buildings; (iii) multi-family housing; (iv) municipal streetlighting; and (v) thermal

⁴ The standard EU definition of SME is that a "small" business has less than 50 employees and annual revenues of less than approximately \$2 million and "medium" business has less than 250 employees and annual revenues of less than \$10 million.

plants and end-use EE for SMEs. This work is structuring intensive and there is overlap between it and project finance structuring work to be performed with FIs and EE businesses. The TA program will have some flexibility in use of these funds to respond to opportunities. The program will also seek to co-sponsor EE finance workshops in cooperation with other interested agencies.

PROGRAM EVALUATION AND PROJECT MONITORING

66. The TA program includes budget for program evaluation and also monitoring and verification activities. These functions go beyond what commercial parties are generally willing to conduct themselves. They are designed to meet GEF requirements to verify energy savings and emissions reductions achieved by projects supported by the program.

CONTRACTING AND MANAGEMENT OF TECHNICAL ASSISTANCE PROGRAM

67. The TA program will be contracted out to teams of local and international contractors. Primary contractors will include: (i) engineering firms experienced in project development, to conduct the energy audit and project development programs, and the project monitoring activities; (ii) qualified not-for-profit organizations whose mission is to promote energy efficiency; and (iii) financial advisory firms, to conduct the FI training and ESCO business support programs. These firms may utilize sub-contractors. The TA contractors will be managed by IFC, through the local Program Managers in each subregion. TA and training tools and methods will be developed by IFC for use and adaptation in all countries. Many TA activities supporting participating FI's will be conducted directly by each respective country Program Manager, who will have line responsibility to manage program relationships with FIs.

PROJECT IMPLEMENTATION: MANAGEMENT AND ADMINISTRATION

68. Program implementation will be administered by IFC. A local program manager will work out of IFC's office in Prague (with the possibility of working regularly from the World Bank satellite office in Bratislava), overseeing implementation of CEEF in the Czech and Slovak Republics. A second program manager will work out of the World Bank office in Riga overseeing implementation of CEEF in Latvia, Lithuania, and Estonia. These office arrangements and operations budgets will be confirmed during appraisal. These two country local program managers, as well as the financial analyst and administrative support staff who work with them, will be supported from the GEF Program Administration and Management budget.

69. The aggregation of program operations for five countries within two program offices provides substantial administrative savings. The geographic characteristics of the CEEF countries and communications/transportation infrastructure within these two sub-regions enables this to be done efficiently and effectively. The office locations also allow IFC to leverage the information systems and administrative support infrastructure available through existing World Bank and IFC offices where the program will be based. In addition, because of the size of the target markets, and the regional integration which characterize the operations of many of the partner FIs, equity funds, ESCOs and other private sector organization partners through whom CEEF will be implemented, these sub-regional groupings are expected to be operationally efficient as well. The resulting sub-regional synergies provide cost saving opportunities which IFC will exploit through this integrated implementation structure.

70. It is anticipated that each program manager will supervise a team including a financial analyst and an administrative assistant. These arrangements mirror the program team which was necessary in Hungary to support HEECP's implementation. The role of the two CEEF Program Managers, patterned on HEECP's structure, is as follows:

- *Relationship manager with FIs:* negotiate and oversee GFAs; market the program to new FIs; manage the project pipeline with each participating FI; advise FIs on transaction credit reviews and appraisals; drawing on technical support, work with FIs to develop new financial products and market them; working with FIs develop and support custom TA program to support their development of EE financing capacity.

- *First stage credit review for streamlined IFC approval of transactions under the guarantee facilities:* work with FIs to ensure that transactions presented for approval under the facility meet pre-agreed criteria; evaluate transactions as they are presented by FIs; present transactions to IFC Credit Committee for approval under GFA – presentation to be accompanied by recommendation memo detailing notable elements of transaction pursuant to the decision criteria established by the Committee under streamlined approval procedures; work with Credit Committee to develop credit guidelines appropriate for each sector, financial product, client type, and country under the program.

- *Marketing of program:* work with ESCOs, NGOs, government agencies, and FIs to develop new financial products, marketing materials, strategic partnerships appropriate for each country market; educate potential partners and stakeholders about the program.

- *Manage the Technical Assistance program:* work with FIs and ESCOs to develop TA products responsive to the market needs; maintain the focus of the TA program on developing short-term EE project dealflow and developing capacity in the financial sector to finance EE projects; develop and manage a network of TA providers contracted for the marketing, deal structuring, investment guidance, financial analysis, business development, engineering, monitoring and other TA program functions and assure responsiveness of TA contractors to the needs of the program participants.

- *Maintain a nimble program which is responsive to new opportunities in the market,* and presents few costs, complexities, and costs for participating program partners; develop streamlined processes for program participants; manage a lean and efficient program team; ensure focus on deal generation and completion.

71. Overseeing the CEEF Program Managers in their execution of the guarantee facility will be an Investment Officer from the IFC investment department which will supervise both the parallel IFC investment and the GEF Funds. IFC's credit and appraisal standards will be maintained through the supervision provided by this investment officer, who will also supervise the administration of the program and ensure fiscal prudence in the execution of the guarantee facility, in addition to providing technical financial structuring guidance. The Investment Officer will also meet reporting requirements and fulfill grant management responsibilities associated with the donor co-financing initialized through the IFC Trust Funds Department, which will administer the co-funded TA grants. These positions will be funded by IFC.

72. Working at arms length from the investment department will be a Program Officer of the Environmental Markets Group. This Program Officer will independently supervise the use of GEF funds and ensure that GEF reporting is completed and GEF guidelines are followed in the execution of the project. This includes the development and execution of a comprehensive monitoring and evaluation program to measure the GHG emissions reductions resulting from the Project. This GEF supervision role will be supported from IFC's GEF supervision budget associated with the Project implementation, in accordance with the latest guidelines available from the GEF Secretariat's monitoring and evaluation unit.

PROJECT SCHEDULING

73. IFC has completed a pre-appraisal for CEEF, which resulted in the selection of the five CEEF countries. The pre-appraisal process established a preliminary list of potential country partners, concentrating primarily on issues related to the sizing and execution of the guarantee facility through FIs. The pre-appraisal was the basis for both this GEF Project Brief, and for IFC's own early stage investment decision document necessary to determine the parameters for the project and its subsequent appraisal.

74. IFC's investment appraisal will proceed during April and May of 2002 in preparation for IFC Board approval of the IFC investment in June 2002, contingent upon obtaining the initial endorsement of the Project Brief at the GEF Council meeting in May 2002. IFC expects to submit the final GEF Project Document by August 2002 and initiate implementation of CEEF using the initial tranche of GEF funding (\$11.25 million) in October 2002.

75. There will be a four year period of TA implementation and origination of loan transactions under the guarantee facility. It is expected that the initial guarantee facility representing the full commitment of GEF resources to the Project (US\$45 million consisting of \$15 million from the GEF and \$30 million from IFC) will be fully committed through GFAs to participating FIs during the first 18 months of the Project. Once the facility is fully committed in any individual country, IFC will review credit conditions and market demand before releasing subsequent tranches of additional IFC investment in an expanded facility, thus further leveraging the GEF resources in the facility. This can total an additional \$45 million of IFC funding for the facility across the five countries. The GEF Council's endorsement of the full CEEF program described in this Brief will provide the basis for the commitment by IFC's Board to invest up to \$75 million in the facility. The initial GEF contribution of \$9 million to the facility ("GEF first tranche") will provide the critical mass needed to market and launch the guarantee product in the CEEF countries. IFC anticipates FI commitments to grow during the first six months of program operations to a level which will justify GEF commitment (executed through a GEF CEO quick response approval) of the remaining \$6 million GEF contribution to the facility plus \$0.75 million for Project operations and TA. The CEO approval of the full GEF commitment will be triggered by clear outputs from the Project resulting from operations with first tranche resources. Specifically, IFC will notify the CEO when FI demand for the guarantee facility exceeds \$18 million, as indicated by FI requests for GFAs in this amount, thus signaling the imminent need for the full GEF commitment to the guarantee. A quick response approval by the CEO at that milestone would enable the program implementation to move forward without delaying the initiation of additional GFAs under the facility – a critical operational requirement of the program necessary to maintain credibility with participating FIs.

76. During the initial 18 month period, early signatory FIs are expected to begin obligating transactions under their facility agreements. FIs will continue to originate transactions over the course of the first four year period, with loan guarantee coverage extending up to seven years for transactions initiated during this period. Therefore, the projected active life of the Project will be four years, with no further loan originations or TA activities anticipated beyond that point, subject to CEO approval of any extension. However, IFC notes the possibility that this four year active loan obligation period could be extended if market opportunities suggest a high leverage opportunity. An additional seven years of low-level Project maintenance activities will be maintained beyond the loan obligation period in order to manage the portfolio of GFAs, including standard supervision and GEF-related monitoring and evaluation, execution of guarantee payments when appropriate, and recovery actions related to poorly performing or bad loans.

RISK ANALYSIS

77. The key risk issues identified during pre-appraisal and IFC's strategy for managing or mitigating them include the following. IFC will pursue further analysis and program design refinements intended to manage these risks during appraisal, (see ANNEX VII).

78. *Slow liberalization/limited awareness.* None of the CEEF countries have yet reached the level of energy price liberalization which will be a pre-condition for EU accession. Even though below market energy prices greatly impact project economics and EE related awareness, our preliminary analysis of the individual country markets has already shown a sufficient pipeline of economically attractive EE investment projects to support the inclusion of these countries in the program, even at current price levels. Furthermore, these countries are likely to be expected to fully liberalize energy prices before joining the EU, as EU competition laws prohibit state assistance in the form of price controls and subsidies. Therefore energy prices have started and are expected to continue rising in these countries, further strengthening the economics of EE related investments.

79. *Deal flow under the facility is less than projected because FIs are unable or unwilling to reduce collateral requirements in response to the guarantee.* Because of a legacy of historically poor credit procedures and the resulting high proportion of non-performing loans, FIs in each of the CEEF countries presently require over-collateralization from borrowers. In the Baltic countries, regulatory guidelines mandate minimum collateral levels. While initial GFAs executed under CEEF will be done on a simple pari passu basis, there is scope to modify the structure of the guarantee – such as by placing the GEF portion of the guarantee facility in a first-loss position relative to the FI's exposure – thus enabling the FI to reduce its security requirements for loans executed under the facility.

80. *Weakness of project developer sector.* As part of a preliminary review of these markets, it was found that in the case of Estonia and Latvia, the project developer / ESCO segment of the EE market is somewhat underdeveloped. This might make it difficult to carry out more complex projects. Nonetheless, the FIs confirmed great potential for EE related lending in these countries, most often directly related to end-user borrowing. In addition, the TA program will be designed to support the development of EE businesses, building on and complementing pre-existing ESCO support activities sponsored by the EU and bilateral support agencies working in the region.

81. *Untested legal environment.* Based on a preliminary analysis of the markets, the legal environment was found to be generally supportive of lending for residential EE upgrades.

Nonetheless, some of the relevant legislation was only recently implemented and has not been widely tested in courts. The team would evaluate this risk during appraisal.

82. The guarantee mechanism proves to be inadequate for addressing financial barriers. It is possible that, due to high perceived credit risks on the part of FIs or a lack of bankable projects, a guarantee might not address the limiting factor to motivate FIs to lend. The CEEF countries have been selected through a pre-appraisal process which included assessment of the economics of EE investment and the appetite of FIs in the markets to invest in EE projects with a partial guarantee and their willingness to pay for the guarantee. The sizing of the project has been based upon preliminary indications from the FIs of the size of the guarantee facility which they are willing to support.

83. Participating FIs fail to market the guarantee program and devote sufficient internal resources to originating EE project investments. As in HEECP, participating FIs will have to pay an obligation fee associated with the commitment of IFC and GEF resources to an umbrella guarantee facility under which they will guarantee transactions. This secures their up-front commitment to generate loans under the facility. Further, the TA support provided under the program is explicitly intended to support each FI's marketing and product development efforts with the intention of limiting the transaction costs associated with entering a new line of business in the EE sector. Finally, the terms of the GFAs allow IFC to de-obligate guarantee resources not yet committed to specific transactions so that they can be re-allocated to other FIs.

84. Greater than expected credit defaults. This factor could cause extraordinary losses for the guarantee program, exhausting the GEF guarantee reserves, and triggering losses for IFC thus diminishing the prospects for future replication of these instruments. IFC's GFA agreements with the FIs enable IFC to control the exposure of guarantee resources on a transaction-by-transaction basis. Exposure limits and risk criteria develop over time, based on experience, with conservative criteria initially used and then extended based on performance. Pari passu exposure with the originating FIs ensures the FIs' rigorous credit analysis and portfolio management. Finally, the credit procedures developed in HEECP, where actual losses have been negligible, and lessons learned in the execution of HEECP, provide a good experience base to inform the risk management procedures to be adopted in CEEF.

85. Adverse macro-economic conditions including increased inflation and interest rates or economic contraction. The CEEF countries were selected in part based on economic conditions and trends which provide a reasonable level of comfort regarding market conditions over the initial life of the Project. Beyond that, the Project success does depend upon macroeconomic conditions which provide an enabling environment for private sector investment generally. As an example, the volume of investment under HEECP increased greatly coincident with a drop in interest rates in the Hungarian commercial lending market below 15% midway through the pilot stage of that program. A guarantee instrument cannot be relied upon to overcome larger economic forces which hinder investment more generally.

IFC RISK MANAGEMENT STRATEGY

86. These risks are anticipated, assessed and addressed at each stage of the Project's development: (i) in pre-appraisal where IFC's assessment of country market conditions informed selection of countries where the CEEF approach is most likely to be successful; (ii) during appraisal, during which guarantee terms will be refined and negotiated, and TA program work plans detailed,

and participating FIs and EE businesses are selected who can make effective local partners; and, (iii) during Project execution.

87. *IFC's comparative advantage mitigates risk.* IFC's Project pre-appraisal and appraisal processes are conducted both for GEF funds and the parallel IFC investment. They draw upon IFC's experience with HEECP and other credit enhancement projects and EE investments in order to determine fully the appropriateness of the target countries for a guarantee or other credit enhancement product targeting EE investments. IFC will not undertake its investment in any country where the market risk is considered too great to manage. Thus, the GEF investment in CEEF not only benefits from the financial leverage provided by the parallel IFC investment, but also from IFC's vested interest in a successful execution of its parallel investment. This means that the project is designed and will be managed to ensure that the private sector investments underlying the guarantee will be undertaken and the loans ultimately repaid. Further, structuring the guarantee facility agreements with the FIs appropriately, and selecting only capable, motivated, financially stable, and well-managed FIs to participate in the facility, will ensure effective participation and loss rates from non-performing loans to be within a commercially acceptable range.

88. *Working through multiple partners diversifies risk.* Even an effective appraisal and well-structured guarantee facility undertaken with "blue chip" FIs will not fully address or manage all risks associated with: changing strategy or ownership or management in participating FIs that may result in reduced commitment to the EE financing products created with the IFC and GEF credit enhancements; changing macroeconomic conditions in the target countries that create a more difficult investment climate generally; changing economics of EE investments due to energy price controls or reductions; or changing government policies resulting in eliminating a market driver which might have existed during appraisal (such as a coal-to-gas boiler retrofit incentive program). These risks could diminish demand for the guarantee product and the numbers of EE projects which the Project can support. In managing this set of risks, IFC will use a portfolio diversification strategy. By establishing a diversified set of FI and EE/ESCO business relationships and developing a diversified set of EE market niche activities IFC will seek to establish an adequate project pipeline and delivery of financing to an array of priority EE sub-sectors under an variety of market conditions.

89. *TA Program focuses on building the project pipeline.* The risk of developing an adequate EE finance deal pipeline is probably the greatest risk associated with the program. Development and investment preparation of EE projects is structuring intensive. The TA program responds to this risk with training, business development, finance structuring and marketing assistance at several levels -- FIs, EE/ESCO businesses, and end-users -- all focused on building the project pipeline. The program will proceed using a financial product approach, designing and implementing suitable financial structures for priority niche markets.

SUSTAINABILITY

90. CEEF is fundamentally designed to ensure the sustainability of the market impacts it seeks to deliver. The credit enhancements provided through the partial guarantee arrangements are intended to bridge the gap between the FIs' high perceived risk and the actual risk of EE project loans. Specifically, the perception of high risk by FIs without experience lending to SMEs for EE on a project finance basis constrains their lending practices to this sector at present. The partial guarantee is intended to provide support to enable FIs -- driven by competitive pressures to expand their market reach -- to develop experience and establish a market for EE lending. The Project aims to

ensure that the experience gained in lending under the guarantee facility umbrella will enable participating FIs to develop portfolios of EE projects which will form the basis for the corporate expertise necessary to manage EE lending risk on an continuing basis absent a guarantee. The fact that the guarantees are provided on commercial terms also grounds CEEF in market principles, further ensuring the sustainability of FI lending in the absence of further concessional support.

91. Because the Project is implemented by multiple FIs simultaneously, CEEF will also leverage competitive forces which will help to support a sustained market capacity as well. This is partly because the various FIs will develop specialized financial products targeting niche markets (such as specialized products for the industrial, municipal, institutional, residential sectors). This has been the case in HEECP, where product differentiation has driven the creation of financial products addressing opportunities across a range of sectors. The early participation of one FI in HEECP, and their success in establishing market share in the residential and SME sectors, subsequently drove the participation of an additional four FIs in the program, with each establishing aggressive marketing commitments for their new niche products.

92. The Project's TA program targeting ESCOs is a fundamental element of the sustainability strategy of CEEF. By building capacity to develop bankable projects within the ESCO industry – and then supporting the financing of deals necessary to establish a track record – CEEF seeks to build a sustainable capacity in the market to deliver EE projects. Further, in providing financial advisory support to successful (but under-capitalized) ESCOs operating in the CEEF countries, the Project will support the equity-raising efforts of project developers which they need in order to support expanded operations over the long run. In HEECP, such support has successfully enabled three ESCOs to raise equity from a variety of equity funds and international joint venture partners, enhancing the sustainability of the ESCO market and building a success story with a strong economic development outcome and generating sustained environmental benefits in the market.

93. Finally, CEEF's focus on EU accession countries during the final pre-accession period when intensive market liberalization and environmental regulatory and compliance reforms will be undertaken represents a significant piece of IFC's sustainability strategy. Specifically, CEEF will serve as a bridge to ready the market – building capacity and establishing competitive market for both FIs and ESCOs during the transition period to EU accession. As EU-compliant energy price liberalization and regulations proceed aggressively during this period, this will create strong market drivers for the EE sector. These market conditions will be an impetus for sustaining the capacity and market activity developed through CEEF.

REPLICABILITY

94. CEEF's replicability is limited to countries where market conditions support a guarantee product. See the earlier section on "Country Selection" for a summary of the conditions appropriate for a successful use of partial guarantees to stimulate lending. At this time, the replicability of CEEF is limited by the need for a limited level of grant funding necessary for a TA effort to support the participating FIs and ESCOs upon whom a successful facility depends, and to support program administration. Given the substantial leverage offered by the guarantee approach – leverage which is compounded by the IFC parallel investment which is fully replicable – it is reasonable to expect that funding agents besides GEF can provide a source of program replication as well.

95. It is IFC's intent to maximize the replication of CEEF, both through mechanisms of disseminating the lessons of CEEF and by sharing the program guidelines and "software" with appropriate institutions able to leverage this information in other countries. IFC has begun this process both through speaking engagements undertaken by the HEECP manager in Europe, as well as through workshops and presentations organized by the World Bank Group. In addition, the project implementation team seeks to continue the "roll out" of the HEECP model – coupling GEF funds with direct IFC investment -- to other GEF-eligible countries where IFC does business, and where country conditions indicate that a successful deployment of the approach is possible.

96. IFC recognizes the importance of an effective model for applying GEF funds in a contingent liability modality which leverages private sector funds. Therefore, CEEF – as a replication in its own right -- is intended as a tool to further refine the HEECP model. As such, the implementation of CEEF will focus on further streamlining credit review, appraisal, and administrative functions within the program, thus moving the model closer to commercial terms and reducing the level of concessional money required for future replications. This is the ultimate goal of the process, although it is not reasonable to expect that the administrative and TA functions in the present program model will ever be fully sustainable from program fees and revenues alone. However, the goal of proportionally reducing the concessional portion of the financing is a realistic one. IFC will seek to refine the model and continue to replicate it in other regions with ever-greater leverage objectives.

STAKEHOLDER PARTICIPATION AND IMPLEMENTATION ARRANGEMENTS

97. CEEF is implemented principally through private sector actors. The primary private sector partners fall into three categories:

- a) *Privately-owned FIs*; including commercial banks, leasing companies, and special purpose companies which provide debt financing for EE projects.
- b) *Private ESCOs*; including project development companies, mechanical contractors, engineering firms, and any enterprise which is in the business of developing EE projects able to implement such projects and present them for financing.
- c) *Technical Assistance providers*; including individuals and firms able to provide financial advisory services, marketing advice, technical training on EE project elements to the participating FIs and ESCOs for whom the CEEF TA program will support.

98. In addition, IFC has worked during pre-appraisal and project development, and will continue to work during implementation, with a variety of partners from the NGO and governmental sector, as well as bilateral and multilateral development and finance institutions. Among those active in the field of EE finance in the CEEF countries with whom IFC has worked in developing CEEF are SEVEN and the Czech Energy Agency (Czech Republic), Ekodoma (Latvia), The Slovak Energy Agency and the Energy Center of Bratislava (Slovak Republic), the Estonian Energy Research Institute and the Estonian Union of Co-operative of Housing Associations (Estonia), and the Housing and Urban Development Foundation, EE Center, and EE Foundation (Lithuania). These organizations bring experience and capabilities, and in many cases are implementing EE market promotion activities which will complement or assist the delivery of the CEEF TA program. Specific partners

and their complementary activities identified in each of the CEEF countries during pre-appraisal are discussed in the expanded country background discussion found in Annex I. These activities will form the starting point as CEEF designs specific TA plans in each country which support the specific needs of the FI and ESCO partners implementing the Project. CEEF will seek to leverage all complementary activities identified during pre-appraisal (and subsequently during appraisal) by inviting direct participation and collaboration in the delivery of the CEEF market development activities.

99. Broad scale stakeholder participation will be ensured through the establishment of CEEF Advisory Committees in each CEEF country. Modeled on the Advisory Committee which guides the HEECP program implementation, the Advisory Committee provides a formal vehicle for ensuring on-going stakeholder participation and input throughout the implementation of CEEF. Advisory Committee membership will grow and change throughout program implementation as new partnerships are developed and opportunities for collaboration are identified. The active participants in the Advisory Committee meetings for HEECP, which serves as a proxy for the expected function of the CEEF Advisory Committees, now numbers 25 members. The Committee membership includes relevant host country government ministry representatives, representatives of other GEF Implementing Agencies with GEF programs in the market, NGOs active in the field, representatives of other bilateral development agencies active in the market, as well as the FIs, ESCOs, and TA service providers participating in the program. While the Advisory Committee holds no direct authority or responsibility in the delivery of the program, its role is important in ensuring visibility and securing buy-in and support for the program across a range of institutions and sectors, as well as providing valuable guidance to program management to ensure that leverage opportunities are realized in the implementation of the Project. IFC places a high priority on the Committee's works. Senior IFC representatives regularly participate along with the program manager in the Committee meetings.

APPROPRIATENESS OF PROJECT IN TERMS OF CAS AND NATIONAL POLICIES

100. IFC's investment department, which will implement the guarantee facility in this CEEF, coordinates IFC's capital markets investments with the World Bank Country Assistance Strategy (CAS) and with national policies to develop the capital markets. During pre-appraisal, IFC held consultations with its World Bank counterparts and reviewed appropriate CAS Sections to ensure the appropriateness of the CEEF investment in the context of on-going World Bank work in capital markets and the national policies they support in each CEEF country. In particular, the World Bank has endorsed the proposed CEEF project as being directly supportive of national strategies in housing finance, the development of private sector-funded mortgages, and capital investment in the housing sector. IFC also met with government agencies responsible for EE to ensure the complementarity of the CEEF approach to be taken in each country relative to national energy, environment and economic development strategies.

MONITORING AND EVALUATION

101. Monitoring and Evaluation (M&E) of program results and in relation to GEF's objectives is an important element of CEEF. While indirect benefits – as reflected in the establishment of sustained market capability to develop EE projects and an expanded market for EE project finance --

are expected to accrue from the Project, the focus of the M&E program will be on documenting the direct impacts of the project. The indicators of success will be concrete:

- Number of projects financed under the facility;
- Number of new financing products developed and marketed by participating FIs;
- Number of FIs originating EE loans under the facility;
- Number of ESCOs and end-users receiving loans under the facility;
- Total value of loans provided under the facility;
- Total value of loans provided by FIs participating in the facility, including non-guaranteed products;
- Total value of EE investments (including equity) under the facility;
- Energy saved in projects guaranteed under the facility; and
- GHG emissions avoided due to projects guaranteed under the facility.

102. Data will be developed during the course of the Project through contractors hired in each CEEF country under the TA program. These contractors will conduct verification exercises to confirm the successful completion of installations for which financing has been provided by participating FIs, and to confirm the appropriate use of those funds for EE-related applications. They will also review engineering studies prepared by project developers and estimate energy savings and GHG emissions reductions produced through the investment.

103. An M&E contractor will develop an M&E plan in consultation with IFC at the outset of the project, which will define the monitoring and verification activities undertaken during the Project in each CEEF country. By establishing this plan at the outset of the Project, IFC will establish a credible baseline from which to measure project impacts, and will establish continuity and efficiencies in the execution of a multi-country M&E exercise. The M&E contractor will conduct a mid-term evaluation following the second year of program implementation to inform program management of mid-course progress and to advise on any needed modifications required to maximize impact during the remaining implementation process. The M&E contractor will conduct a final evaluation two years after the four-year loan obligation period is concluded. This will not provide a full report on the final performance of the loan portfolio, but will be based on available data considered indicative of portfolio performance, CEEF's success in originating loans, and the impacts of the Project on ESCO and financial industry activity. To await the end of the loan repayment period – eleven years following the initiation of the program – would undermine the value of the final evaluation for influencing future program designs and to achieve timely reporting to the GEF.

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ANNEX I: CEEF COUNTRY-SPECIFIC PROFILE SUMMARIES

CZECH REPUBLIC

COUNTRY OVERVIEW

Basis for Country Selection

Czech Republic has a combination of financial and energy efficiency market conditions which represent a good application for the guarantee product coupled with a TA program. Financial markets are characterized by relatively low interest rates, plentiful liquidity available in Czech Kroner for medium and long term financing, continued highly risk adverse lending practices in light of the recent severe non-performing loan problems, but a rapidly improving and competitive financial sector with tight margins and many banks moving down market and seeking new products. In these conditions, the guarantee can be instrumental in mobilizing local financial resources for EE investments; appetite for the guarantee program is strong, as evidenced in interviews with key staff of prospective FI partners. EE project economics are sufficiently attractive to motivate investment. Energy prices remain slightly below full cost recovery levels and cross-subsidization between ratepayer classes still exists and future price increases are expected to be an EE market driver. A substantial base of EE companies are operating in CR, a number as ESCOs. Several successful Government and international programs promoting EE market have been operating, including, most notably, programs of the Czech Energy Agency. These activities have built core capabilities in the market and a pipe line of projects in preparation. With an effective TA program, and local financing mobilized by the guarantee, a good opportunity exists to build on and significantly augment the base of current EE project investment activities.

Baseline Market Conditions

Current level of energy efficiency investment. While the EE project investment market is modest, with investment levels still well below the economic and technical potential, it has been growing steadily. Estimates of EE market size range from several billion to several tens billion CZK (from hundred millions to billions US\$) of total market size. Based on the historical data of major market players and their forecasts it is possible to estimate that the market could be up to several billion CZK (around \$100 million) per year assuming that current conditions will continue and market liberalization would proceed successfully. A substantial backlog of investment need exists for replacement of basic energy systems such as thermal plants.

Energy intensity of economy. Energy intensity in the Czech Republic fell dramatically during the last decade but is still 1.6 times the average of IEA Europe and 25% higher than Hungary.⁵

Energy Sector Reform. In its transition from a centrally planned economy to a market economy, the Czech Republic has thoroughly reformed its energy policies and regulatory framework and restructured its energy sector. The country established a new energy regulator in 2001 and adopted a schedule for opening its electricity and gas markets to competition. The effective introduction of

⁵ Tons of oil equivalent per thousand US\$ in GDP, at 1995 prices and purchasing power parities, for 1999: for CR, 0.30; for Hungary, 0.24; Western Europe, average, 0.18. Source: International Energy Agency, Energy Policies of IEA Countries - Czech Republic, 2001 Review, August, 2001.

competition, however, will depend on regulatory details still to be defined and the privatization of the state energy companies that still dominate the internal market. The Czech Republic has only limited energy resources. Coal is still the leading fuel for power generation but its role is declining. This trend will accelerate with the commissioning of a second nuclear power plant, at Temelín. Oil and gas imports have been diversified and the Czech electricity grid has been connected to Western Europe.

Capacity of ESCO industry to develop projects. CR has a number of companies operating as ESCOs, both domestic and international in origin; (list provided below as potential program participants). These firms focus mainly on the public, municipal and institutional sector markets and cover a full range of project sizes. Capacities to do EE audits have been supported by the CEA audit grant program, which has also established a network of EE auditing centers around the country. Project engineering, equipment procurement/ and supply, and installation capacities exist locally. ESCO companies suffer from lack of readily available financing and difficulties associated with project development. Programs to build project development and finance capacities of ESCO companies and to educate end-users are needed. A sufficient base of ESCO demonstration projects have already been implemented in the marketplace and end-user familiarity with ESCO concepts is growing. Among major market drivers for EE projects are: liberalization of energy prices resulting in necessity of energy savings, favorable developments of interest rates and increasing competition in banking sector, environmental legislation targeting reduction of emissions, on-going restructuring of corporate sector aiming to increase its cost competitiveness.

Current capital market conditions. Inflation is moderate at 4.1% and GDP growth is picking up (3.2%, Q3, 2001) following two years of recession. The exchange rate has been fairly stable in the range of 36-37 (KC/\$). Benchmark interest rates in CR are low: the Prague Interbank Offering Rate (PIBOR) is at 4.5%. Local currency rates are often even lower than foreign currency interest rates. Rates to end-borrowers, depending on deal size and credit quality, are in the 6-10% range. Some fixed rate lending is being done. Liquidity is generally available in KC for medium and long term financing, even for terms of 10+ years.

The Czech Republic, through the state-owned Konsolidacni Bank, appears on its way to solving the non-performing loan debt problems which have overhung the economy and financial sector for the last several years. Many new acquisitions of CR banks by foreign banks have occurred in the last two years. Several Czech banks have some experience in structured and energy project finance, notably Ceskoslovenska Obchodni Bank (CSOB), one of the best candidates for participation on the guarantee program. The leasing industry is active in CR and leasing laws are fairly liberal in allowing lessors to take depreciation under finance lease arrangements. FIs report that margins on loans are fairly competitive and tight, at least for the most creditworthy borrowers. Many banks moving down market and seeking new products as a means to boost their yields.

Lending to SMEs is an important new area being developed by several banks, e.g., Raiffesien, Citibank, Ceska Sporitelna Bank and CSOB. Market experience by these banks in the SME sector is still fairly new but the move down market is genuine and reflects a deepening of the financial market generally. Training and new market development programs are underway at several institutions, e.g., Ceska Sporitelna, reflecting new international ownership and management teams. Security practices amongst banks still reflect fairly onerous terms with collateral requirements set conservatively high (150-200% of loan principal). CSOB reports a credit rejection rate as high as 50% (ratio of completed loan applications to approvals). In these conditions, a guarantee can also make loan terms more attractive for borrowers. FIs have

indicated a strong appetite for medium to long term plant and equipment finance; minimum and maximum transaction sizes vary by FI but, taken together, cover the full range of typical EE project sizes.

Some banks, notably CSOB and Raiffeisen, have experience in the EE sector. Many examples of EE project lending can be found. The strongest node of EE finance experience by far is CSOB, which has operated a EU-Phare co-finance program for several years. Phare has provided 4.5 million Euro in co-financing which CSOB blends 1:1 with its own funds. The Phare funds are lent to CSOB recourse to CSOB, so 100% of the end-user credit risk is borne by CSOB. The Phare funds are at 0% interest. CSOB lends the blended funds at 50% of the prime rate (currently around 6.0%) plus the risk margin. The Phare monies must be repaid in 2007, so that maximum remaining term is 5 years, and diminishing. 42 projects have been funded⁶, some with repeat borrowers. Six projects involved performance contracts. Most borrowers are SMEs; housing co-ops, district heating enterprises, hospitals and two large industrials have also participated. Typical equipment types are gas-fired boilers, heating distribution system and building envelope upgrades and controls. CSOB sees more demand for this type of financing, especially for projects > 50 million KC (\$1.25 million). Many applications for financing are rejected because of credit and CSOB expressed strong interest in a guarantee program.

The Czech Moravian Guarantee and Development Bank (CMZRB) is a state-owned development bank that operates several guarantee programs targeting SMEs that could overlap with the proposed IFC/GEF program but which are not being marketed for EE purposes. FI's interviewed in pre-appraisal reported relatively little and in one case poor experience with CMZRB; CMZRB does not appear to represent competition for the proposed IFC/GEF program.

Current economics of energy efficiency investments. EE project economics are not as strong as in other countries but are still reasonable, with simple paybacks cited in the lighting area of 3-4 years, in motors of 4-5 years, in thermo-modernization in 5-7 years, and in thermal plants and cogeneration in 5-7 years (for equipment with useful lives of easily 15-20 years). Energy prices have risen for both for power and for thermal energy, and have a bit further to rise to reach full cost-recovery levels. These trends improve the economics of EE projects. There remains a substantial backlog of investment and equipment replacement/upgrade need in primary energy systems such as gas thermal plants and motors, similar to what we have seen elsewhere in the region. Business opportunities for EE exist in thermal plants, multi-family housing heating and building envelope improvements, lighting, controls, motors, municipal streetlighting, industrial process efficiency, and cogeneration.

Government Policies and Programs. While CR energy policy has focused on energy sector restructuring, improving energy efficiency is a priority for the country's energy policy to capture its environmental, macro-economic and enterprise competitiveness benefits and to alleviate the effects of planned energy price increases. The Czech Energy Agency (CEA) is responsible for implementing energy efficiency policy, but "...needs adequate resources to be effective".⁷ A core EE program of the CEA operating since 1996 provides grant funding for energy audits and project development and then grants equal to 15-40% of project costs with a maximum of 5-10 million CZK (US\$140,000-280,000) depending on the nature of the project; grant recipients must mobilize the balance of financing, thus representing a need for a complementary commercial finance program.

⁶ Data as of July, 2001; source: interview with CSOB EE finance director.

⁷ International Energy Agency, *Energy Policies of IEA Countries - Czech Republic, 2001 Review*, August, 2001.

This program is administered in part through several regional Energy Information Centers, which also have developed expertise in EE auditing. The annual budget for the program in 1999 was 325 million CZK (about \$10 million), 219 million CZK for 2000 and a slightly smaller amount for 2001. The pace of audit activity is high; approximately 1500 audits were performed in 2000. The CEA has a significant backlog of projects pending grant awards, which have been prepared and qualified, but for which there is insufficient funds; the backlog is estimated at 2.4 billion CZK (US\$65 million) total project cost. Cooperation with CEA can be an important component of the IFC/GEF program project pipeline. Other government programs focus on reinvestment and modernization of multi-family housing and municipal infrastructure, within which there are substantial EE components and opportunities. CR has a strong EE NGO in SEVn which has been operating for over 10 years and has cooperated with IFC on several programs and research assignments.

MARKET BARRIERS TO ENERGY EFFICIENCY PROJECT DEVELOPMENT

Non-finance related. Faster growth of EE market is constrained by relatively slow transformation/privatization of energy sector; lack of familiarity of end-users with the benefits of EE and unwillingness of end-users to undertake projects due to perceived risk and unwillingness to borrow or take on contractual commitments; some administrative barriers in public tendering procedures, tax issues, bureaucracy in the public/municipal sector; and economic weakness of municipal and corporate sectors, and general recession which adversely affects the investment climate and the ability and willingness of end-users to undertake borrowings for projects. Most ESCO companies are also undercapitalized and may lack some of the necessary project development skills.

Access to finance. Lack of readily available and attractive financing for EE projects reflects relative lack of experience of FIs in this field. Credit risk barriers are inherent to the finance market at present which result in unwillingness to lend by FIs or imposition of high collateral requirements which potential borrowers find too onerous to be attractive.

PROGRAM DESIGN ELEMENTS

Cooperating organizations and partners. Interviews have been conducted with nine FIs and several lead candidates for participation have been identified: CSOB, Raiffeisen and Citibank and Cseka Sportelna. CAC Leasing and Corfina Leasing (subsidiary of Cseka Sportelna) are also good candidates. Groundwork for cooperation with CEA has been laid and will be very important for rapid dissemination of guarantee and TA program tools. The CEA project backlog and network of Energy Information Centers and related EE companies present a good opportunity to market complementary commercial financing and create a project pipeline. The EE NGO SEVn may be an attractive candidate to undertake some TA program activities. The Canadian International Development Agency and is contemplating a program to build capacities of ESCO industry; this will be researched further in appraisal for coordination. The World Bank has also been assessing the potential for setting up the Czech Energy Agency as a carbon aggregator. CR has a substantial number of companies operating as ESCOs including: MVV/EPS, Harpen, Honeywell, Johnson Controls, ABB, Ahlstrom, Komterm, Stredisko pro Usporg Energie (SUE), Valiant, Danfoss, Siemens Landis & Staefa, EVC, Moopex, and EFIS. Relationships with these and other EE companies will be developed to generate a pipeline of projects for financing.

IFC parallel activities and leverage opportunities. IFC has had a long history of excellent relationships with the Czech financial sector. IFC supported the first bank privatization in the Czech Republic in 1992 and thus until recently had been a shareholder of Zivnostenska Banka. IFC also supported the privatization of one of the largest Czech banks, CSOB, where IFC has been a shareholder since 1998. The market assessment for CEEF identified CSOB as the most active bank in the country in EE finance. IFC was also involved in the setting up of the first leasing and factoring companies in the country. In addition, IFC has an investment in the PEF Czech/Slovak Private Equity Fund and is currently working on an investment in an SME fund in the Ostrava region in addition to several investments in the Czech industrial sector. Through these investments IFC does not only play the role of awareness raising through its environmental policies and project monitoring but also may contribute to additional EE projects under CEEF.

Technical Assistance. The CR is expected to utilize the full menu of TA program activities with emphasis on FI training and marketing and transaction structuring working with EE/ESCO companies. Programs for end-user education and ESCO development will be coordinated with other agencies and co-sponsorship sought in some cases. TA will also be focused on developing EE projects in the SME sector. Major potential for EE projects exists in corporate sector but ESCOs (and banks) are quite reluctant to deal with newly established or privatized companies with limited track records and negative experiences from the recent past.

SPECIAL PROJECT RISKS & APPRAISAL ISSUES

In addition to general program risks, the following factors are important for the success of the CR program. First, it will be important to establish a good working relationship with the CEA. This work will continue in appraisal and will likely be formalized in some fashion early in program operations. Second, the CR could lag in its pace of energy sector reform. Privatization of power companies has been setback for political reasons. This could affect the EE markets adversely if only by causing confusion and delays in decision making by end-users and project sponsors and a slower rate of energy price increases.

SLOVAK REPUBLIC

COUNTRY OVERVIEW

Basis for Country Selection

CEEF's partial guarantee approach could substantially stimulate lending for EE projects in Slovakia. Financial institutions appear ready to explore opportunities in the EE sector and to begin lending to SMEs. In this context, the program could reduce both their risks and transaction costs for developing new financial products and marketing to a new customer sector. The program will assist Slovakia to meet the higher EE requirements of upcoming EU accession and is synergistic with other Government policies. Slovakia enjoys stable macro-economic conditions and reasonably low interests, good conditions for investment. A substantial TA effort under CEEF will bring great benefit given the support needs of the relatively undeveloped ESCO sector in Slovakia. .

BASELINE

Current level of energy efficiency investment. About 40 EE projects implemented mainly in the municipal/public sector worth about SKK 5.5 billion (about \$113 million) in total. The investors are satisfied with overall economics of the projects.

Energy intensity. Slovakia's is at 0.035 (quadrillion BTUs per US\$1 billion in GDP), about four times the average EU level. Energy intensity in Slovakia is substantially higher than in the EU countries due to lower productivity, high share of industry on GDP and inherited industry structure. In industry, energy intensity is generally 3 to 5 times higher than in EU countries. In the residential sector, the energy consumption is in average 25% lower than in the EU average, which is mainly due to the households' low income and their difficulties in dedicating a large part of their budget to heating bills. A proper energy policy is needed to counter balance the expected increase of energy consumption in all sectors, with specific attention to the building sector (both residential and tertiary). Measures to improve the district heating are also necessary to avoid further disconnection from users and an additional shift to other means of heating.

Capacity of ESCO industry to develop projects. There are a limited number of companies in Slovakia providing ESCO-type services. On the other hand, there are many engineering and service companies offering EE products and services representing virtually all major manufacturers established in the international markets. Growth of the EE market is constrained by lack of experience with financing EE projects by providers, end-users, and financing institutions.

Current capital market conditions

Macro-economic conditions for borrowing and investment. The results of the structural reforms returned the country back to the sovereign investment rating enjoyed at the end of 2001. The spread premium on the Slovak Eurobond fell below 100 basis points at the end of January 2002. GDP growth is expected to accelerate from 3.1% in 2001 to 3.7% in 2002 and 4.3% in 2003. Inflation is supposed to further decline from 6.5% in 2001 to 4.9% in 2002. The Slovak koruna is

expected to be relatively strong in 2002. Its further development will be influenced by autumn parliamentary elections and then the NATO summit in Prague, where Slovakia expects an invitation for membership.

Financial sector/capital markets conditions. Notable recent developments in the financial markets were the successful privatization of the two largest private banks and the largest insurance company. Foreign ownership of banking and other financial services companies has increased significantly and resulted in the transfer of know-how and new products and services, which is benefiting banking clients. Favorable macroeconomic development in combination with growing financial market competition has led to further decrease in interest rates. In search for new sources of profit, financial institutions are expanding in new areas such as mortgage finance, consumer lending, credit cards, and Internet banking. A move from collateral-based to cash-flow-based lending is another characteristics of recent developments. Many FIs are reorienting their business towards lending to SMEs by introducing streamlined risk-assessment techniques. In general, experience with EE project financing is limited but some banks have expressed interest in further exploring the business opportunities in this segment.

The central bank has not changed the key interest rates since March 2001. Thus, the two-week REPO rate is at the level of 7.75% p.a. Because of the growing current account trade deficit, which is now close to 10% of GDP, decrease in the key interests rates are not expected in 2002. The end-borrower rates are in the range from 10% to 11% p.a. with maturities up to five years, exceptionally up to seven years, in local currency. Cheaper hard currency loans are available but negative experience from the past has made borrowers cautious regarding foreign exchange risk exposure.

SME borrowers for potential EE projects face two major barriers to access commercial financing: (i) lack of collateral even under less stringent requirements, (ii) lack of credit history and the track record. The only currently available guarantee program is provided by the state-owned Slovak Guarantee and Development Bank. The impact of the program is quite small because of its limited size.

Current economics of energy efficiency investments

Sectoral opportunities. In absolute terms, the industrial, residential and service sectors have the largest potential for energy savings. In terms of relative savings to the total consumption per sector, the potential for EE projects is high in district heating.

Energy prices. The process of restructuring distorted energy prices started in 1998. Increasing energy prices has favorably impacted economics of EE projects. There are still cross subsidies in natural gas prices favoring households. It is expected that these will be eliminated in the near term as the process of utility privatization progresses. Cross subsidies were virtually eliminated in electric energy and central heating prices for households by 2001. An independent regulatory body has been recently established and the restructuring and privatization process of the energy industry is continuing. Trends look positive for positive EE investment economics going forward.

Range of simple payback opportunities. Simple payback period for EE projects ranges from four to ten plus years. The most favorable opportunities in the residential sector are for building envelope improvements: garret floor (4 years), between timber (7), retrofit windows (8). EE investments for combined heat and power plants in the district heating sector have payback periods of approximately

8 years. The least favorable is the situation in industry where EE projects compete with more profitable investments in the core business. The economics are improving with energy price rationalization and are expected to continue to improve according to a radical price rationalization schedule corresponding to the expected EU accession schedule.

Policy and institutional actions supporting energy efficiency. New energy legislation is being driven by the needs of the EU accession process. The Energy Act no. 70/1998 follows the most important EU directives 96/92/EC and 98/30/EC. An independent regulatory body was established under act no. 276/2001. The Energy Policy of The Slovak Republic document was approved in September 1999 and among other strategic goals includes a reduction of “ the energy intensity down to the level in the EU member countries.”

Unfortunately there is a little connection between the stated policies and actual EE programs. The only currently available program, for interest rate subsidies on 3-year loans, is not well used because of administrative burden and requirements. Small co-generation projects (up to 10 MW) are exempt from VAT payments. International programs focus mainly on technical assistance and are provided on multilateral basis such as ISPA, SAPARD, PHARE, SYNERGY, JOULE-THERMIE, SAVE II, and ALTENER or bilateral cooperation such as with DEPA, SENTER, etc. The World Bank currently sponsors “The Development of a National Energy Efficiency Study” which aims to provide input for EE policy formulation.

In 2001 the newly established independent regulatory body took over the Ministry of Economy’s function to regulate so-called "network industries" including those in the energy sector. The government specified deadlines for gradual market opening for electricity (from 1/2002 to 1/2005) and gas (from 7/2002 to 1/2008). The restructuring of electricity generation, transmission, and distribution and major heating plants in 2001 has enabled privatization to begin in 2002. The privatization of 49% of the Slovak Gas Industry is scheduled for mid-2002.

MARKET BARRIERS TO ENERGY EFFICIENCY PROJECT DEVELOPMENT

Non-finance related

The cost effectiveness of EE measures in the building sector is primarily distorted by the famous owner-user dilemma, which is depriving the investor from the energy saving benefits of his investment. The atomization of ownership in residential building in most cases prevents the implementation of energy saving measures. The majority of building owners take a short-term view and do not reflect long term benefits in their current decision making. The majority of households are not aware of EE technical opportunities and their benefits. Considering that the heating bill in apartment buildings is still shared and billed between households according to surface area and not based on real heat consumption, there is not much incentive for good housekeeping measures in the field of heating.

A major limitation in the industrial sector is the relatively low priority given to energy savings. The economics of combined heat and power project in district heating sector depends on the sale price of electricity to the grid, as well as on the gas price. At current prices, the payback period for CHP plant investments is eight to ten years and therefore not so attractive.

Access to finance

The lack of collateral is typical for SME projects and start-ups. Banks have very limited or no experience and knowledge in EE field including risk assessment and finance structuring. The economic weakness of municipal and corporate sectors results in higher project and credit risk.

PROGRAM DESIGN ELEMENTS

Cooperating organizations and partners. Tatrabanka of Raiffeisen Group, CSOB of KBC and SLSP of Erste are the local banks the most opened to cooperate now. Others like VUB of IntesaBCI Group or Volksbank are possible candidates later on.

The Slovak Energy Agency and the Energy Center Bratislava could serve as a local partners for the program information outreach and dissemination to the general public.

IFC parallel activities and leverage opportunities. IFC will undertake investment in the guarantee facility, management contributions and arrange IFC Trust Fund/bilateral potential contributions to the Slovakia program.

Technical Assistance needs

The program should include technical assistance for building EE finance origination and risk assessment capacity at the FI level, for project identification and structuring at the ESCO and FI levels, and general awareness at the end-users level.

SPECIAL PROJECT RISKS & APPRAISAL ISSUES

Further research is needed confirming the economics of EE projects.

ESTONIA

COUNTRY OVERVIEW

Basis for Country Selection

Conditions in Estonia combine several key factors needed for a successful guarantee program: (i) a well-developed, competitive, aggressively managed financial sector; (ii) reasonably low interest rates and available liquidity in both local and international currencies; (iii) credit origination practices requiring, by regulation, collateral of 150% of loan principal being a principal barrier to many finance transactions; (iv) stable and positive macro-economic conditions; and, (v) strong technical and economic EE potential and a market driven to improve energy efficiency as a core part of the EU accession process. FIs have expressed strong interest in the guarantee program particularly as a means to meet collateral requirements and make more transactions possible. Government policy and the interests of end-users in several sectors -- housing, public buildings and industry -- are aligned to pursue EE projects. The EE/ESCO industry is young in Estonia but many local and international firms are active offering capacities in engineering, equipment supply, project installation and servicing. Technical assistance is needed for both FIs and EE/ESCO companies.

BASELINE

Current level of energy efficiency investment

Energy intensity: Estonia's energy intensity is one of the lowest among the Central European countries at 0.019 (quadrillion BTUs per US\$1 billion GDP), but still 2.4 times the EU average.

Capacity of ESCO industry to develop projects: The ESCO industry is considered underdeveloped in Estonia. There are a few ESCOs active throughout the Baltics, including Estonia. However, there are numerous, mainly smaller local project developers fulfilling some of the ESCO functions. These companies are typically in need of assistance (technical as well as financial) in order to be able to develop into full-fledged ESCOs.

Current level of commercial finance for EE projects

FI lending practices: The Estonian financial sector is highly competitive and all major banks and leasing companies are controlled by reputable foreign partners. Lending practices appear prudent in general. The level of collateral is the greatest obstacle to EE finance, as collateralization of min. 150% is required for all loans by the regulators, which many EE projects do not meet.

FI lending experience and capability: Most FIs have limited experience with EE finance which they usually treat as project finance. Projects funded by the local FIs interviewed included boilerhouses, water and heating company modernization, residential refurbishments, refurbishment of utility companies, industrial EE upgrades.

Liquidity/capital availability: There is sufficient liquidity in the financial sector to support EE projects. Transactions with terms longer than five years are rare but liquidity for long-term (> 5 year) transactions is available in international and some also in local currency. FIs have some

exposure to maturity mismatches as their main sources of local currency funds are short-term deposits. Banks are active in foreign exchange lending, primarily Euro. Loans in Euro carry lower interest rates. Borrowers have demonstrated willingness to borrow in international currency and accept foreign exchange risk, which is perceived as acceptably low as the Estonian currency exchange rate is pegged to the Euro. Therefore, the guarantee can become an effective instrument to mobilize available financial resources for financing EE investments and may help in addressing FI maturity mismatch concerns.

Interest rates: With inflation of 5-6% over the last two years, lending rates have been in the range of 8-12%. Due to the perceived high risk of EE projects, those are financed at margins closer to the top of the range.

Current economics of energy efficiency investments

Sectoral opportunities: FIs see opportunities in the residential, municipal and industrial sector for financeable EE investments, subject to adequate credit support.

Energy prices: Energy prices are generally no longer subsidized, even though some cross-subsidization continues between user sectors.

Range of simple payback opportunities: In the residential sector, investments of EEK600-1000/m² result on average in energy cost savings of 30%.

Policy and institutional actions supporting energy efficiency

Government policies: EE is a top priority for the Government, as stated in all its policies. Nonetheless, budgetary allocation has been seriously declining. Hence there is a need and opportunity for commercial financing for EE projects.

Government and internationally supported programs: FIs, government agencies and NGOs interviewed were not aware of any programs available to support EE projects. One FI mentioned an "EU aid program for municipal EE investments", but it is not clear whether such program is still active.

MARKET BARRIERS TO ENERGY EFFICIENCY PROJECT DEVELOPMENT

Non-finance related

Some legal restrictions exist regarding residential (block house) EE projects, such as the need for consensus of all tenants to ensure adequate security for FIs to extend financing. Technical assistance, through raising awareness, can help address this barrier.

Access to Finance

The primary finance barriers concern perceived high credit risk due to both the nature of EE projects, borrower profile (SME, residential, municipal) and weak or lack of available collateral sufficient to meet the regulatory minimum 150% threshold.

PROGRAM DESIGN ELEMENTS

Cooperating organizations and partners

Financial Institutions. All Estonian FIs interviewed expressed strong interest in the guarantee program. Best prospects, based on current lending experience and interests, are Sampopank and Hansapank. See Annex II for a list of all FIs interviewed.

Government Agencies and NGOs. Potential cooperating partners include the Estonian Energy Research Institute and the Estonian Union Co-operative of Housing Associations.

IFC parallel activities and leverage opportunities

Existing IFC investments and activities in the country which provide leverage: IFC has a long history of excellent relationships with the Estonian financial sector which is a great help in encouraging the participation of FIs in the program. Furthermore, through its years of experience with the Estonian financial sector and through sponsoring studies such as the Estonian Leasing Sector Review, IFC has the expertise needed to structure the right product for the region. IFC established the Estonian Industrial Leasing Company, today the most active in Estonia in leasing productive equipment, which has recently been acquired by the Nordea Group. IFC has also had two credit lines Eesti Uhispank. Furthermore, IFC has made several investments in the industrial sector in Estonia and is an investor in the to be launched Baltic SME Fund, through which it does not only play the role of awareness raising but also may contribute to additional EE projects under CEEF.

IFC Trust Fund potential contribution: IFC will approach the Scandinavian donors in support of CEEF in Estonia.

Technical Assistance Needs

The main menu of TA program activities is needed and relevant for Estonia: FI support programs, ESCO support programs and end-user education and awareness programs.

SPECIAL PROJECT RISKS & APPRAISAL ISSUES

The multi-family residential sector is expected to be a prominent end-user sector for EE lending in Estonia, as in the other Baltic countries. There is a relatively new and untested regulatory framework for lending to the residential sector. Further research is needed and the guarantee promises to be instrumental to overcome perceived risks in this sector.

LATVIA

COUNTRY OVERVIEW

BASIS FOR COUNTRY SELECTION

FIs have responded aggressively to IFC inquiries about the guarantee product. Bolstered by a strong housing renovation market potential, coupled with several government and international EE initiatives preparing the market for EE projects, the FIs see a large opportunity for EE lending. With EU accession targets driving reform efforts in the financial services and energy sectors, CEEF would enter the market at an opportune time. The existence of financial regulations mandating over-collateralization of bank loans makes a flexibly structured guarantee facility a potentially high-impact vehicle for encouraging lending for EE projects. IFC and the World Bank see substantial opportunities for collaboration with on World Bank initiatives for housing sector finance market development and privatization.

BASELINE

Current level of energy efficiency investment: Current level of EE investment is judged to be low but several key activities have been underway to prepare the market. Considerable internationally supported engineering oriented technical assistance programs have been conducted that identify cost-effective EE investment opportunities in a range of industries, district heating, public buildings, and multi-family residential sectors⁸ and built capacities of small energy auditing companies. Government policies have been adopted to promote EE and raise end-user awareness. The Government of Latvia's National Energy Program has identified financially viable end-use EE investment opportunities of almost one billion lats (\$1.6 billion).⁹ In 2001, 28 energy sector projects (total amount \$25 million) that were included in the Latvian National Public Investment Program, the majority for renovation and modernisation of district heating done by local governments. Latvenergo, the national electric utility, is now obligated by regulation of offer favorable power purchase buyback rates from qualified small hydro, wind and co-generation plants.

Energy intensity of economy: Energy consumption per unit of GDP is high compared to developed countries. Latvia's energy intensity is 0.028 (quadrillion BTUs per US\$1 billion GDP), 3.5 times the EU average level. Energy intensity increased rapidly between 1991 and 1994 as GDP fell more rapidly than total energy consumption, but it has since been declining. Energy intensities of specific industries, e.g., food processing, are two to three times those of the EU average measured by energy input per unit of product output.

Capacity of ESCO industry to develop projects: While there is limited capacity within the ESCO industry to provide comprehensive services, including full project financing, there are a companies offering boiler house upgrades, installation of and service for thermal plants as well as other energy efficient equipment. It is common practice for consultants to be also equipment dealers. Most

⁸ This work is well-summarized in "Analysis of Energy Efficiency Aspects in Latvia", Dagnija Blumberg, Ekodoma, Riga, August, 1999; commissioned by the Danish Energy Agency.

⁹ *ibid*, page 9.

energy consultants and ESCOs have gained experience through participating in the implementation of projects and programs supported by the Danish Energy Agency, Phare, STEM, EAES, SCORE, PSO, PROCEED as well as governments of Netherlands, USA (USAID), Norway, Denmark in energy planning, EE in industry, generation, buildings. These firms, and the work of these internationally supported engineering-oriented technical assistance programs, provide an initial base of project development capacity which, supported by IFC's targeted business-oriented TA, could be a good source of dealflow.

Current capital market conditions

Macro-economic conditions for borrowing and investment: The banking sector of Latvia is relatively stable, dominated by banks that are largely foreign owned (Scandinavian) and operate in more than one country. Foreign ownership often means good access to cheaper longer term financing. Loan terms of 5-7 years are typical, with the larger banks offering 10+ years in most currencies. EURO and US\$ dominate in lending, followed by local currency (Lats). Leasing has been developing rapidly. The share of industrial equipment in leasing portfolios is increasing and is now about 20%. The financial sector is being reformed in line with EU regulations.

Inflation, economic growth and exchange rate outlook. The Latvian economy has been growing steadily since mid-1990s. GDP, between 1996 and 2000, rose 25.6%, an average of 4.7% per year. GDP per capita in PPP terms in 2000 was 29% of the average in the EU, and 25% in 1996. Growth has substantially accelerated during the last two years, with GDP growth of 6.6% in 2000 and in 3 quarters of 2001 of 7.9%. GDP growth in 2001 is expected to reach 7.5%.

The exchange rate of the Lat (LVL) has been unofficially pegged against SDR currency basket (1 SDR = 0.7997 LVL) since the Lat was introduced, and will remain so until the accession of Latvia into the European Union.

Inflation is among the lowest in the group of countries of transition economy, and in the last three years has been within the 2-3% range. Further decline of inflation is not expected due to the adjustment of relative prices to the world prices, but it is also not expected to increase significantly.

Financial sector/capital markets conditions:

Summary: The banking system remains overbanked for a country with 2.4 million people, although the number of banks has come down from 63 in 1993 to 23 banks in 2001. The small size of the market (total banking system assets just over \$5 billion) limits business opportunities and growth for financial institutions. The banking system is concentrated with the three largest banks holding 52% of the total assets of the system, two of the three largest banks are majority owned by SEB and Swedbank from Sweden. The large proportion of nonresident deposits in the system (50%) is a potential source of instability. Competition in the market is expected to increase as foreign ownership influences the performance of the larger banks favorably, further squeezing the market shares of smaller players. The credit quality in the banking system remains satisfactory, despite strong asset growth.

Liquidity/capital availability: Liquidity seems to be available for medium term financing, and the foreign-owned banks also offer long term financing in most currencies. The share of time deposits in

the total structure of deposits is increasing, from 35% in 1999 to 40% in 2001. The relatively high share of short-term deposits and non-resident deposits (50%) is a certain risk factor as economic shocks may result in dramatic decrease of deposits. The bank reserve requirements are 5% as of 2002.

Benchmark interest rates and interest rates to end-borrower. The benchmark six-month Riga Interbank Offering Rate is currently at 4.86%. Typical FI lending margins have come down, especially for local “blue chip” companies, and even for average borrowers are in the range of 200 to 550 basis points making rates to end-borrowers in the range of 7.0-10.5% in local currency. Average weighted interest rate for short-term loans in LVL in November 2001 was 9.3%, for long term – 10.7%, in OECD currencies – respectively 11.4% and 7.9%. Long term lending and the reduction of interest rates is restricted by scarcity of long-term resources in banks, high costs of raised resources and the risk that the lent capital will not be returned. Refinancing rate of the Bank of Latvia is 3.5% per year.

FI lending/credit practices: Banks are comfortable lending against collateral, and are increasingly looking at cash flows of their borrowers for additional risk mitigation. Collateral requirement is 130% as a rule of thumb. Sophistication is increasing especially in the large foreign owned banks as operational procedures and monitoring of loans is improved, which is also reflected in the reduced number of non-performing loans. At the end of September 2001, 95% of all loans were classified as standard, 1.8% were “close-watch” and only 3.2% were classified as substandard, doubtful or lost. The amount of loans to domestic enterprises and private persons is increasing - 35% in 11 months of 2001. Banks are increasingly granting loans for longer periods, and as of November 2001, short term loans (less than 1 year) were only 22% of total loan portfolio (in 1997 - 44%).

Interest of FIs for medium to long term plant/equipment finance. Most of loans in 2001 (38%) were for working capital of enterprises; 28% went for acquisition of fixed assets and financing of investment projects. Of all loans, 25% went to trade, 20% to manufacturing, and 12% to warehousing and communications. Loans to construction business went up especially fast – by 98%. The Latvian leasing sector had 22% of assets financed in manufacturing, with term structure of 34% of leases for 1-3 years, 31% for 3-5 years and 1% over 5 years.

FI lending experience, capability, and appetite

Project finance. FIs have some but generally relatively little experience in project finance, but recognition of the need for project finance techniques is growing.

Lending to SMEs. SMEs still have difficulties getting loans due to lack of sufficient collateral, underdeveloped land and other real estate markets, lack of credit information, low or uncertain quality of accounting, and other reasons. However, as FI lending margins fall, banks are focusing more on new products and market segments including SMEs.

Experience lending for EE projects. Most FIs have had some EE lending experience through financing boilers and boiler houses, as well as EE improvements as part of larger upgrades and new investments of industrial enterprises. Some banks are participating in financing the projects developed by a World Bank program aimed at increasing EE in school buildings.

Other finance guarantee programs in the market at present. There are currently no other guarantee programs available in Latvia. The World Bank Housing improvement project is expected to be

launched in May 2002, and will have guarantee components that could also apply to EE related housing improvements financed as part of a mortgage for first-time owners.

Current economics of energy efficiency investments

Sectoral opportunities

Housing. There are 53 million m² of housing in Latvia, of which approximately 1/3 has been built before the First World War, and 1/3 after 1958 from pre-fabricated panels. More than 90% of the buildings do not correspond to modern insulation parameters, and to improve the situation an estimated investment of \$50-100 US\$/m² is required. Renovation of the pre-fabricated buildings is most urgent, and the total cost is estimated close to \$900 million, with EE savings of \$120 million per year.

Housing accounts for 57% of energy end use and has great potential for energy savings. Standards for thermal insulation have been in place since 1991, gas meters are now installed in most apartments, majority also have water meters, with individual heat meters for houses also increasing. Energy efficiency is a major concern as people spend about 17% of their income on housing maintenance and utility payments.

After a slow start about 70% of housing was privatized by the end of 2001, and only now people are starting to consider making EE improvements and renovating their apartments. Mortgage finance that sometimes allows also for housing improvement finance has been the fastest developing loan product in 2001.

Public Buildings. The only EE activities that have been carried out in the public building sector is the World Bank project on schools. Inventory and analysis of energy consumption in 1150 schools was performed before financing of \$30 million was allocated.

Industry. Availability of wood and rapid development of the forestry sector form favorable conditions for utilization of wood in energy production. In the future, wood is expected to be one of the least expensive fuels for solid-fuel boiler plants of <8MW capacity. Wood-fired thermal plant projects that have been implemented in the food industry show good energy savings and paybacks below 3 years.

Heating. The majority of DH systems were installed 30-40 years ago and are approaching the limits of their technical life. Average annual efficiency of installed boilers does not exceed 85%. The average efficiency of boilers below 1MW is between 50-80%. Of the 3,500 boiler houses with capacities of 0.2-0.4MW, approximately 1,000 need replacements of old cast iron section boilers with corresponding fuel savings of 10-30%. Optimization of production capacities in plants with >4MW capacity could bring estimated fuel savings of 50%, improvements in fuel preparation and storage 15%, and installation of new burners 5-30%. Electric heating appliances manufactured in former USSR are typically oversized; replacement or modernization of these can reduce electricity consumption by 50-70%.

CHP plants generate district heat (1/4th of total energy consumption) with about 70% of households connected to DH systems. Municipalities have started investing in upgrades but investments are

limited, as municipality's borrowing cannot exceed 25% of their annual turnover. Of the total heat energy sold, 3% is sold to industry, 76% to the housing sector and 21% to other consumers.

Energy prices

There are no direct energy subsidies nor cross subsidies for residential consumers of electricity and heat. Non-payment of utility bills still remains a problem, with 75% collection rates. Although the National Program on Energy foresees gradual increase of the average electricity sales tariff, generation of cheap electricity and cheap electricity imports leave a positive impact on the dynamics of tariffs and they have not changed since 1998. Energy prices are regulated using price cap method to determine tariff "ceilings", taking into account inflation and the expected efficiency level of utilities' operation, separating costs of generation, transmission and distribution. Prices for primary resources are set by the market.

Range of simple payback opportunities

Industrial. Many EE investments have been identified in the food industry (dairies, bakeries, meat processing) with simple payback periods of 9 months to 2 years. A hospital investment program of roof insulation, secondary heating substation improvements and weather-stripping of windows has a demonstrated cost of \$100,000 with energy savings of 40% and an actual payback of 4 years. In general, paybacks for building envelope improvements such as window improvements/replacements are between 2 to 25 years; for heating systems, 3 to 5 years; for insulation of heating systems pipes, 10 to 12 years; and for insulation of attics/roofs, 4 to 9 years.

POLICY AND INSTITUTIONAL ACTIONS SUPPORTING ENERGY EFFICIENCY

Government policies

The law "On Energy" says that the state energy strategy is contained in the "National Program on Energy" document approved in 1997. It is developed for 15 years and once in five years updated. The "Concept on State Energy Efficiency Strategy" document was approved in 2000. The objective of the EE strategy is to achieve a 25% decrease of the primary energy consumption per GNP unit by 2010, reaching the average OECD level in 1997, and encourage competition in energy supply. It provides for loans and subsidies to EE measures in public buildings through the Public Investment Program, regulations for purchase of surplus electricity from small CHP plants, soft loans from the Latvia Development Authority Energy Efficiency Fund and Environmental Investment Fund.

Government and internationally supported programs

The National Program on Energy was approved in September 1997. Measures included are aimed at providing stable supply of energy resources, limiting inefficient use of energy resources as well as reducing the share of primary resources in national imports. Investments in the EE improvements in buildings envisaged by the program are \$110 million between 2001-2010, \$150 million between 2011 and 2020. Total investments for reconstruction of district heating network are estimated close to \$800 million for the same period. The program at the moment is temporarily suspended because of shortage of funding. Other notable government and international EE initiatives include the following.

EU Directives require for providing minimal EE indicators regarding boilers, energy consumption of household commodities, building insulation, and energy audits of buildings and enterprises. Application of these Directives is one of the preconditions in evaluation of compliance of Latvia with the criteria for the accession regarding energy legislation.

Latvia has ratified the European Energy Charter as well as UN Convention on Climate Change and signed the Kyoto agreement.

The Energy Efficiency Fund (established in 1998 by EU PHARE) provides loans to small projects for equipment upgrades during reconstruction of heat supply systems as well as for reconstruction and construction of small hydro power plants (HPP). The Fund covers no-more than 70% of total project costs. Projects are implemented through the Mortgage and Land Bank (state owned). First tranche was EUR1 million, and the 2nd tranche of 2.6 million EUR was disbursed recently.

The Danish government within the scope of bilateral assistance program is training personnel of industrial enterprises on how to introduce Environment Management Systems and cleaner technologies in line with ISO 14001 standard. Some companies also receive assistance during the certification process. Two projects were completed in 2001 (Introduction of the Environment Management System in the Pharmaceutical Industry, and Food Industry), and three new were started - ISO 14001 EMS introduction of the wood production and processing industry; in chemical, pharmaceutical, rubber and plastics industries and enterprises of the textile sector; and in the metal processing industry.

Nordic Environmental Finance Corp. (NEFCO) has created a foundation for investments in cleaner production, with preference to the Baltic countries. Payback period of the projects has to be less than 3 years, interest rate offered 3.5% per annum.

World Bank loans are available for reconstruction of DH in municipalities (Riga, Jelgava) and for EE improvements in school buildings.

EBRD has been lending for EE to municipalities, Latvijas Gaze, Latvenergo and some industrial companies.

Energy sector regulation and reforms

Energy sector. Apart from peat and timber Latvia has insignificant energy resources. More than three-fourths of energy is imported, with Russian heavy oil fuel accounting for more than 50% of heating fuel, and gas for a further 25%. Although energy efficiency has been improving with industrial restructuring it still remains at only half of EU average. The electricity monopoly Latvenergo provides about 2/3 of Latvia's electricity needs with the rest largely imported from Lithuania. Latvia has no nuclear power and relies on hydro- and thermal –electric plants.

Reform. Despite regulated energy prices and large payment arrears, the state owned energy companies are profitable. Restructuring and privatization of the energy sector has proceeded slowly and has been controversial. Latvijas Gaze, the gas storage and distribution monopoly, is currently majority owned by a consortium involving Ruhrgas-PreussenElectra and Gazprom. Disputes over privatization of Latvenergo, the most profitable utility company in Latvia, have brought down many governments, and it is still not clear whether and when it would be privatized.

Regulator: A unified public utilities regulation system on central and local government levels was established in October 2001. Energy (except heat supply), telecommunications, post and railway are regulated by the Public Utilities Regulation Commission, while household waste management, water supply, sewerage and heating industries are regulated on local government level by institutions established by the respective municipalities. The Law on Energy defines the notion and main principles of energy efficiency improvements. The Law states that the Regulator, when regulating energy supply business shall promote efficient usage of the energy supplied to consumers. It provides for efficient operation of energy supply enterprises and promotes competition in energy supply, as well as allows inclusion of energy efficiency measures in the tariff calculation methodologies for heat, gas and electricity.

Institutions: Ministry of Economy has the overall responsibility for energy sector, while EE improvements in housing sector are under the Ministry of Environmental Protection and Regional Development. EE in transport and main oil transit and oil product transmission pipelines is under Ministry of Transport and Communications. National Energy Inspection promotes, supervises and controls efficient use of energy resources.

MARKET BARRIERS TO ENERGY EFFICIENCY PROJECT DEVELOPMENT

Non-finance related

Principal non-finance market barriers to EE include: limited availability and high costs of EE products and technologies (often cost 2-3 times more than in EU); initial costs of energy audits which can prevent development of smaller projects; inadequate consumer information on the benefits of EE upgrades and lack of credible sources of information; and, lack of quality standards or performance guarantees to reduce consumer risk.

Access to finance

Limited access to finance for EE projects is due mainly to: lack of collateral, credit risk associated with smaller companies that are often financially weak. Further, FIs are often not equipped to understand and assess the economics of EE upgrades.

PROGRAM DESIGN ELEMENTS

Cooperating organizations and partners

FIs: IFC identified 6 FIs during pre-approval who expressed strong interest in the EE guarantee facility. See Annex II for a summary list. The FI operating the EU-Phare supported EE finance on-lending program is a promising candidate.

Government Agencies and NGOs. Cooperation will be explored with the government and international EE programs cited above. Cooperation is anticipated also with the state-owned Latvian Environmental Investment Fund.

IFC parallel activities in country and leverage opportunities. The IFC/GEF Efficient Lighting Initiative is entering its final year of implementation in Latvia. The CEEF guarantee facility serves as a natural outgrowth of ELI's financial transaction support activities. The CEEF pre-

appraisal work has been supported and guided by the local ELI team, which has facilitated meetings with ESCOs and provided guidance on market opportunities established through ELI. IFC has a long history of excellent relationships with the Latvian financial sector which is a great help in encouraging the participation of FIs in the program. Through its years of experience with the Latvian financial sector and through sponsoring studies such as the Latvian Leasing Sector Review, IFC has the expertise needed to structure the right product for the region. IFC brought in the first foreign bank in Latvia - Vereins-und-Westbank and set up a joint venture bank. Vereinsbank Riga has grown to become one of the leading private banks in Latvia. Recently, IFC helped 2 local banks to syndicate the local bank financing component for an IFC retail investment. IFC has made several investments in the industrial sector in Latvia and is an investor in the to be launched Baltic SME Fund, through which it does not only play the role of awareness raising but also may contribute to additional EE projects under CEEF. IFC's strategy for the country is to support complex projects that are too difficult for the local financial sector to support on their own, and projects in areas where private participation must be encouraged. Technical Assistance.

The main menu of TA program activities is needed and relevant for Estonia: FI support programs, ESCO support programs and end-user education and awareness programs. Cooperation and coordination with the World Bank housing program will be sought.

SPECIAL PROJECT RISKS & APPRAISAL ISSUES

Weakness of project developer sector. During the preliminary review of Latvia the project developer and ESCO segment of the EE market seems to be at an early stage of development, which might make it difficult to carry out more complex projects. Nonetheless, the FIs confirmed great potential for EE related lending in these countries, most often directly related to end-users. In addition, the TA program will be designed to support the development of EE businesses. Finally, Latvinergo -- the major electric utility serving Riga -- has contacted IFC through its IFC/GEF Efficient Lighting Initiative program team to request support in pursuing its interest in establishing an ESCO operation as a subsidiary of the core utility business.

LITHUANIA

COUNTRY OVERVIEW

Basis for Country Selection

A highly competitive commercial banking sector, growing activity of the international and local SME ESCO players, rising energy prices and EU accession process are important factors driving the EE market and creating suitable conditions for the guarantee program in Lithuania. Four commercial banks and leasing companies expressed strong interest in participating in an energy efficiency guarantee program; all have EE project pipelines with two to four projects each, and all have experience in EE lending. Banks are eager to implement new financial products in order to penetrate into new markets; the EE guarantee product can be a very attractive vehicle for FIs to do so. Lithuania enjoys stable macro-economic conditions and reasonably low interest rates. Technical assistance is required for building EE risk assessment capacity at the FI level and for project preparation at the ESCO level.

BASELINE

Among the Baltic countries the EE market is largest in Lithuania. During the past several years local and international ESCOs have implemented EE projects in the district heating sector both on the generation and end-user level. The implemented projects represent a very small portion of the potential EE market in Lithuania. A few FIs are very interested in financing EE projects in the household sector.

While energy prices in Lithuania are still subsidized, they have been rising and in many cases energy costs are high enough to provide incentives for saving energy. However, in many cases technically and economically viable projects don't have access to financing. The main barriers are lending limit on municipalities, lack of understanding of risk factors at FI level, lack of understanding at end-user level and underdeveloped legal environment.

Current level of energy efficiency investment. Through the WB housing project Lithuania has invested more in housing upgrades than its neighbors, but the amounts are still insignificant relative to the need for upgrades. About \$7 million have been invested in school upgrades, covering less than 5% of the need

Energy intensity of economy. Lithuania in 1999 had the highest energy intensity of all EU applicant countries, and it also appears that it preserved a larger part of the energy intensive industries inherited from the former soviet regime than the other Baltic states. Lithuania's energy intensity is 0.028 (quadrillion BTUs per \$1 billion GDP), 3.5 times the EU average level. According to IEA in 1999 Lithuania used 1.09 TPES per \$1,000 of GDP, while the average in OECD countries was 0.2. In 1998, 34% of energy was consumed by residential consumers, 28% by transport, and 23% by industry. The residential sector has precedence in heat consumption, the industry sector – in electricity consumption.

Capacity of ESCO industry to develop projects. The ESCO industry has been developing slowly, however, there are several companies offering boiler house upgrades, installation of and services for thermal plants as well as other energy efficient equipment. there are a good number of developers that offer boiler house upgrades in exchange for longer term heat supply services, as well as install

boilers and other energy efficient equipment. There are a number of companies active in the EE market in Lithuania. Dalkia Vivendi and Seed Kraft are the major international players, and there are also five to ten local companies operating in the sector.

Macro-economic conditions for borrowing and investment: The Lithuanian economy has recovered from the decline caused by the Russian crisis of 1998, which resulted in GDP contraction of 3.9% in 1999. It resumed growth in 2000 with 3.9% GDP increase; real GDP growth is expected to be close to 5% for the year

The Lithuanian currency, the Litas, was pegged to the EURO at the rate of 3.4528 LTL/EUR in February 2001, thus ending the Litas-US dollar peg which lasted for almost 8 years. The new peg is expected to improve Lithuania's competitiveness in European markets, which account for about 50% of the country's exports.

Inflation is among the lowest in the group of countries of transition economy, and in the last three years has been within the 2-3% range. For 2001 it is expected to be about 1.3%. Inflation is expected to increase to about 2.7% in 2002-2003 as the taxes are brought into line with EU standards, and utility tariffs rise following restructuring and privatization of the energy sector.

Financial sector/capital markets conditions

General statement. The banking crisis in 1995 and Russia crisis in 1998 accelerated the consolidation of the Lithuanian banking sector, with the number of commercial banks shrinking from 28 in 1995 to ten at end-2000. The sector is highly concentrated. The largest bank, Vilniaus Bankas, owned by Skandinaviska Enskilda Banken (SEB) of Sweden, accounted for 40% of total assets in 2000. Lithuanian Savings Bank was sold in 2001, to Hansabank (owned by Swedbank of Sweden). The Lithuanian Development Bank, a state-owned investment bank initially set up to finance development projects, was transformed into a commercial institution in 2000, and sold at the end of the year to Sampo of Finland. Foreign capital in Lithuanian banking has increased from 16% at the beginning of 1996 to 58% in 2001, according to Bank of Lithuania data.

FI lending/credit practices. Banks are comfortable lending against collateral, and are increasingly looking at cash flows of their borrowers for additional risk mitigation. Collateral requirement is over 100% and is bound by regulation. Sophistication is increasing especially in the large foreign owned banks as operational procedures and monitoring of loans is improved. This is also reflected in the reduced number of non-performing loans. Banks still have to face lack of trust from the people in a country where many people have seen savings evaporate in the transition from Soviet-controlled to market-driven economy.

FI lending experience, capability, and appetite.

Project finance: FIs have some but generally relatively little experience in project finance, but recognition of the need for project finance techniques is growing.

Lending to SMEs. FIs target SME sector, however, SMEs are reluctant to borrow. Many have difficulties getting loans due to lack of collateral, underdeveloped land and other real estate markets, and lack quality credit and accounting information.

Experience lending for EE projects. Most FIs have had some EE lending experience through financing boilers and boiler houses, as well as EE improvements as part of larger upgrades and new investments of industrial enterprises.

Interest of FIs for medium to long term plant/equipment finance. FIs provide medium and long term financing. However, they prefer to provide up to 10 year financing only for big multinationals active in the EE sector.

Liquidity/capital availability. Liquidity seems to be available for medium term financing, and the foreign-owned banks also offer long term (10+ years) financing in most currencies. However, banks usually offer maximum 5-6 year terms.

Interest rates. Benchmark interest rates in Lithuania are relatively low: the Vilnius Interbank Offering Rate (VILIBOR) is at 4.24% (three months). Some fixed-rate lending is being done. Lending rates depend on the deal size and credit quality, and are in the 7-10% range. LIBOR + 3 to 4% floated interest rates apply to USD, EUR short-term lending and LIBOR + 4.5 to 5.5% to long-term lending (up to 9 years).

Other finance guarantee programs in the market at present

The work of the Housing and Urban Development Foundation (HUDF), initially a project implementation unit of a WB housing loan, has resulted in a strong network of EE engineer consultants with expertise in the housing sector. HUDF manages a loan facility under which they provide financing for individual homeowners and multi-family houses. The fund was disbursed, and revolving with approximately \$2 - 2.5 million per year in funding available. HUDF expressed interest in a co-guarantee program with IFC similar to that which IFC has developed and administers through HEECP with the Budapest district heating company.

PHARE, WB and the HUDF have helped to develop and implement a number of EE projects and the demand remains strong. There are other donor programs available, though most of them are being cut back. Major emphasis is on reconstruction of district heating systems, both on the end-user and DH plant level (more than 80% of the population is connected to DH).

CURRENT ECONOMICS OF ENERGY EFFICIENCY INVESTMENTS

Sectoral opportunities

Residential buildings. Total building stock in Lithuania is 89 million m² square meters, and about 90% of housing was privatized by 1999. More than 45% of buildings (residential and public) are heated by the centralized district heating system.

The WB Energy Efficiency/Housing Pilot Project (EEHP) signed 49 loan agreements during the first 20 months of operation (set up in 1996). Vilnius Bankas administers the loan facility and up to date has financed 25 individual home owners and 225 HOAs. Total disbursement has been \$8 million and further \$ 2.5 million is available in 2001-2002. The average investment is \$15,000 per multi-family housing block; on average approximately 20% of energy can be saved on heating and the average payback period varies between 3 to 7 years. Based on the experience of EEHP it seems that home owner associations (HOAs) will take loans albeit with reservation and in small amounts. Vilnius Bankas believes the market for commercially viable EE projects in the residential building sector is

50-60 times bigger than what they have financed already, and see a huge opportunity in EE lending for multi-family houses and individuals.

Public Buildings. Public buildings represent about 13 million m², hospitals are 14% of them, and there is no program available for hospital EE improvements. During 1997-1998 the two biggest municipalities, Vilnius and Kaunas invested \$1.8 million to renovate 8 schools. In 1998 \$2.9 million was allocated for school renovations and feasibility studies prepared for further 36 schools in 9 other municipalities. Of the 2,361 schools in Lithuania only approximately 35 schools have been renovated.

Industry: can be divided into three main sub-sectors: (i) mining and quarrying, (ii) manufacturing and (iii) electricity, gas and water supply. Manufacturing, mining and quarrying industry accounts for 86% of industrial sales in Lithuania. EE opportunities in motors in the mining industry should be explored. Energy consumption in the industrial sector decreased almost 3 times during 1990-1997, however, energy intensity in manufacturing increased. 40 companies consume about 50% of all industry final energy, and EE improvements in these companies would have significant effect on total energy consumption. Manufacturing and mining could be main targets for EE project development and financing support with the guarantee.

Energy prices

While energy prices in Lithuania are still subsidized, they have been rising in accordance with IFI stipulations. In many cases energy costs are high enough to provide incentives for saving energy. Consumption of heat coming from DHC is currently not metered at the end user level, and payments are calculated based on square footage. This represents a fundamental issue for EE investment in the sector. Reform efforts underway need to be successful if the retrofit market in this sector is to be fully developed.

Range of simple payback opportunities

Industrial. Opportunities identified during pre-appraisal indicate simple paybacks ranging from 3 years around 3.2 and 8.3 years depending on project.¹⁰

Residential/buildings. Opportunities identified during pre-appraisal indicate simple paybacks ranging from 3.5 to 7.0 years.¹¹

Policy and institutional actions supporting energy efficiency.

Government Policies. The political environment of the energy sector in Lithuania is defined by the EU accession plans. A National Energy Strategy was approved in 1994 and updated in 1999 with aims to diversify sources of primary energy, increase energy efficiency, and eliminate consumer price subsidies. A National Energy Efficiency Program, approved in 1992 and revised in 1996, sets the following priorities: (i) legal, normative and fiscal documents enabling NEEP operations, (ii) renovation and insulation of buildings, modernization of heat supply systems in buildings, insulation of buildings and construction of energy efficient buildings, (iii) install of metering devices, (iv) use of indigenous energy resources, etc.

¹⁰ "Analysis of Energy Efficiency Aspects in Lithuania", Vytautas Martinaitis, Vilnius, August, 1999; commissioned by the Danish Energy Agency.

¹¹ ibid

Government and internationally supported programs

For home owners. The Energy Efficiency/Housing Pilot Project (EEHPP) was prepared by the Lithuanian Ministry of Construction and Urban Development and the Ministry of Finance in cooperation with the Danish Ministry of Housing and Urban Development, the Dutch Ministry of Economics and the World Bank, started in 1996. It is implemented through the HUDF and offers following loan conditions: 11% fixed interest rate; 10% down payment; no mortgage for home owners associations (HOA); payback period up to 10 years; 30% state subsidy for HOAs. Eligibility: valid registration of a HOA; no outstanding arrears for utilities; only for energy saving measures and urgent repairs ensuring improved energy efficiency.

For industry. The funds of the HUDF are available to finance programs of industrial EE projects, including development of thermal and cogeneration plants using renewable and waste fuel resources, but this program has not been well-utilized for industrial projects as yet. The Government is supposed to make an additional contribution to the HUDF, to be supplemented by EU PHARE funds.

Energy sector regulation and reforms

Energy sector. Lithuania has a rather well diversified energy sector. It has the Ignalina nuclear power plant which is due to be shut down as part of negotiations for EU accession within the next 5 years, and the Mazeikiu nafta oil refinery.

Reform. Despite regulated energy prices and large payment arrears, the state owned energy companies are profitable. Restructuring and privatization of the energy sector has proceeded slowly and has been controversial. Government still has not privatized either Lietuvos Dujos (Lithuanian Gas) nor Lietuvos Energija (Lithuanian Energy) companies. The latter is currently undergoing reorganization in preparation for privatization, and the privatization of both companies is expected to move substantially ahead in 2002-2003 under pressure related to EU accession. Several Laws are in various stages of development which will encourage energy efficiency projects, including: (i) Energy Saving Law, (ii) Housing Law, (iii) Law of Construction Operation and Supervision, (iv) Law of Multi-flat Home Owners Associations. For industry - ratification of the law of Energy Saving and additional sub-laws for its implementation would be appropriate.

Institutions. The Ministry of Economy has the overall responsibility for the energy sector, while EE is under its implementing body, the Energy Agency, that has a separate center for Energy Conservation, Consulting, Information & Research. A State Energy Inspectorate promotes, supervises and controls efficient use of energy resources, except nuclear power.

MARKET BARRIERS TO ENERGY EFFICIENCY PROJECT DEVELOPMENT

Non-finance related

Principal non-finance market barriers to EE include: initial costs of energy audits which can prevent development of smaller projects; inadequate consumer information on the benefits of EE upgrades and lack of credible sources of information; lack of quality standards or performance guarantees to reduce consumer risk; lack of quality standards or performance guarantees to reduce consumer risk; and, a weak legal framework

Access to finance

Limited access to finance for EE projects is due mainly to: lack of collateral, credit risk associated with smaller companies that are often financially weak. Further, FIs are often not equipped to understand and assess the economics of EE upgrades. Borrowing limit on municipalities is often a barrier to financing in the municipal sector.

PROGRAM DESIGN ELEMENTS

Cooperating organizations and partners

FIs. IFC interview four FIs during pre-approval who expressed strong interest in the EE guarantee facility. See Annex II for a summary list.

Government Agencies and NGOs. Cooperating agencies include potentially: the EE Agencies of the Ministry of Economy, (Energy Agency and Energy Efficiency Center) and the District Heating Association. The Housing and Urban Development Foundation has expressed interest in a co-guarantee program with IFC. There are other donor programs available, though most of them are being cut back. Major emphasis is on reconstruction of district heating systems, both on the end-user and DH plant level, considering that more than 80% of the population uses district heating for heating their houses and commercial buildings.

Technical Assistance

Several local ESCOs have reached already their lending limits with 5 to 10 projects and they are over-leveraged. A special TA program could help them to strengthen their financials through financial advisory work and improve the quality of loan applications of bankable project. A TA program should be designed to help both FIs and ESCOs to market new products in difficult and complex markets (SMEs and household sector).

SPECIAL PROJECT RISKS & APPRAISAL ISSUES

Weakness of project developer sector: During the preliminary review of Lithuania it seemed that the project developer/ESCO segment of the EE market is dominated by two multinational companies, and the local companies are at an early stage of development which might make it difficult to carry out more complex projects. More information is needed about the local EE ESCO companies to assess their suitability as potential partners and methods to assist local EE/ESCO must be developed. The TA program will be designed to support the development of EE businesses.

Lending to Multi-Family Housing Sector. Legal procedures for borrowing by and lending to multi-family housing owners associations must be researched and developed to address the finance needs of this sector.

District Heating Sector. Further research regarding district heating companies and methods whereby they can participate in EE investments is needed.

ANNEX II: TABLE OF FINANCIAL INSTITUTIONS IDENTIFIED DURING PRE-APPRAISAL TO PARTICIPATE IN CEEF

(* Subject to negotiation and IFC appraisal)

Country	Financial Institutions	Main Shareholder (Nationality)	Profile / Strategic focus	EE experience (yes/no/some) / Area of interest	Financial Indicators
Estonia	Hansapank	Swedbank (Sweden)	Universal	Yes / Residential & public lighting and heating, large industrial upgrades	Assets: \$2.7 billion Equity: ROAE: ROAA
	Hansa Leasing	Hansapank (Estonia)	Leasing / real estate, cars	Yes / Residential upgrades, industrial cogeneration and public sector EE improvements	Portfolio: \$341 million
	Uhispank	Skandinaviska Enskilda Banken (SEB) (Sweden)	Universal	Yes / Residential & public lighting and heating, large industrial upgrades	Assets: \$ 1 billion Equity: ROAE: 11.3% ROAA: 1.4%
	Uhis Leasing	Uhispank (Estonia)	Leasing / real estate, cars	Yes / Residential & block houses, industrial equipment	Portfolio: \$86 million
	Sampopank	Sampo Leonia group (Finland)	Universal / SMEs and individuals	Yes / Residential, multi family & blockhouses, lighting and heating	Assets: \$286 million Equity: ROAE: 19.3 % ROAA: 1.2%
	Nordea Finance Estonia	Nordea Bank (Sweden/Finland)	Leasing / industrial equipment	Yes / Industrial boilers and other industrial equipment.	Portfolio: \$56 million
Latvia	Hansabanka	Swedbank (Sweden)	Universal / strong in corporate finance	Yes / Heating sector, insulation, DHC, industrial	Assets: \$894 million Equity: \$78 million ROAE: 12.2% ROAA: 1.3%
	Hansa Leasing	Hansabanka (Latvia)	Leasing / real estate, equipment	Yes / Boilers& boiler houses, heating	Portfolio: \$172 million
	Unibanka	SEB (Sweden)	Universal	Yes / Cogeneration, boiler houses, DHCs, heating mainly	Assets: \$963 million Equity: \$90 million ROAE: 20.5% ROAA: 1.9%
	Unileasing	Unibanka (Latvia)	Leasing / manufacturing equipment	Yes / Boiler houses, ESCO finance	Portfolio: \$86 million
	Parex Banka	Latvia, 2 individuals	Universal, includes leasing operations	Yes / Heating systems, cogeneration	Assets: \$1.1 billion Equity: \$95 million ROAE: 19.7% ROAA: 1.7%
	Vereinsbank	Vereins-und-Westbank (Germany)	Corporate / medium to large corporates and high net worth individuals	Yes / For industrial projects with any kind of large EE component	Assets: \$137 million Equity: \$24 million ROAE: 9.9% ROAA: 1.7%
	Rietumu Banka	Latvian, 3 individuals	Corporate / medium to large corporates and high net worth individuals	Yes / Heat and lighting	Assets: \$493 million Equity: \$31 million ROAE: 35.1% ROAA: 2.3%

Country	Financial Institutions	Main Shareholder (Nationality)	Profile / Strategic focus	EE experience (yes/no/some) / Area of interest	Financial Indicators	
Lithuania	Vilnius Bankas	SEB (Sweden)	Universal	Yes / Residential, multi-family housing, heat and lighting	Assets: \$1.4 billion Equity: \$164 million ROAE: 14.4% ROAA: 1.7%	
	VB Lizingas	Vilnius Bankas	Leasing	Yes / SME ESCO finance, heat and lighting	Portfolio:	
	Hansa Bankas LTB	Swedbank (Sweden)	Universal	Yes / DHC, ESCOs, heating	Assets: \$ 1 billion Equity: ROAE: ROAA	
	Hansa Lizingas	Hansabankas	Leasing	Yes / DHC, heating, boilers etc.	Portfolio:	
Czech Republic	Ceskoslovesnka Obchodni	KBC (Belgium)	Universal	Yes / Residential, multi-family, DHC, hospitals	Assets: \$13.8 billion Equity: ROAE: ROAA	
	Raiffeisen bank		Universal / SMEs	Yes / DHC, misc.	Assets: Equity: ROAE: ROAA	
	Ceska Sportelna Bank		Universal/ SMEs, municipal, multi-family housing	some	Assets: Equity: ROAE: ROAA	
	Citibank		Corporate	Yes / Public sector borrowers and SMEs	Assets: \$1.4 billion Equity: ROAE: ROAA	
	Cesky Leasing	Deutsche Leasing (Germany)	Leasing	Some / Tentative interest	Portfolio:	
	Zivnostenska bank		Corporate / large corporates	Some / DHCs	Assets: Equity: ROAE: ROAA	
	Slovakia	Vseobecna Uverova Banka	IntesaBCI Bank (Italy)	Universal / corporate	No / EE in food processing and paper industries	Assets: \$3.8 billion Equity: ROAE: ROAA
		Tatrabanka	Raiffeissen (Austria)	Corporate	Some / Residential?	Assets: \$2.3 billion Equity: ROAE: ROAA
	Ludova banka	Volksbanken (Austria/Germany)	Universal	Yes / DHCs,	Assets: \$566 million Equity: ROAE: ROAA	
	Slovenska Sportelna	Erste bank (Austria)	Universal	Some? Interested	Assets: \$4.6 billion Equity: ROAE: ROAA	
	HypoVereinsbank	Germany	Universal	Yes /	Assets: \$696 million Equity: ROAE: ROAA	
	BOF Leasing		Leasing	No / Interested	Portfolio:	

ANNEX III: PROJECT DESIGN SUMMARY (LOGICAL FRAMEWORK)

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p>(a) Sector-Related Country Assistance Strategy (CAS) Goal CEEF addresses respective country CAS goals related to environmental protection and private sector development. CEEF will directly support the EU accession goals in the CEEF countries.</p>	<ul style="list-style-type: none"> • Increases in EE projects undertaken by the private sector. • Increased FI lending for EE projects 	<ul style="list-style-type: none"> • M&E program, including baseline data defined, investment project. 	Assumes: <ul style="list-style-type: none"> • Stable or growing national economies (including moderate interest rates and continued liquidity in FI sector). • Accelerated pace of energy price rationalization in the CEEF countries. • Full use of \$45 million guarantee facility by participant FIs. • Active ESCO market growth in target countries.
<p>(b) GEF Operational Program Goal Reduce greenhouse gas emissions.</p>	<ul style="list-style-type: none"> • Greenhouse gas emissions avoided through reduced thermal energy consumption. 	Same as above. Will include in the monitoring program an avoided GHG evaluation of each transaction under the facility.	Same as above.
<p>(a) Project Development Objective Accelerate the development of the EE finance market in participating countries.</p>	<ul style="list-style-type: none"> • Volume of EE finance mobilized. • Aggregate growth in number of EE projects and ESCOs in participating countries. • ESCOs able to raise debt for project finance. • A few SME ESCOs active as EE developers able to raise equity to grow their operations. 	<ul style="list-style-type: none"> • Market reports; • M&E program as described. 	<p>(Objective to Goal) Assumes</p> <ul style="list-style-type: none"> • Macroeconomics favor investment generally • Price rationalization continues to improve economics of EE investment. • ESCOs and FIs respond to TA and emergence of EE market • EU accession reforms continue in the CEEF countries

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
<p>(b) Project Global Objectives</p> <p>Greenhouse gas emissions reductions via removal of barriers to implementation of energy efficiency projects</p>	<ul style="list-style-type: none"> Decrease in greenhouse gas emissions based on decrease in : i) use of fuel oil, coal, and other hydrocarbon based fuels in the commercial, industrial, public sector; (ii) electricity from thermal sources 	<ul style="list-style-type: none"> Energy sector / EE studies for target markets <p>M&E mid-term and final evaluation reports (derived from avoided GHG evaluation of each transaction under the facility.)</p>	<p>Same as above</p>
<p>Project Outputs</p> <ul style="list-style-type: none"> (i) substantially increased volume of EE investment (ii) local capacity building with potential local ESCO firms and FIs improves capacity of FI and ESCO industries to develop EE investments in CEEF countries; (iii) partial guarantee facility generates lending from local FIs for EE projects 	<ul style="list-style-type: none"> Increase in number of EE projects. Increase in volume of business done by ESCOs in target countries and increase in EE finance products. Increase in \$s lent for EE projects. 	<ul style="list-style-type: none"> Consumer / Market Surveys Project management reports, participation reports from TA and guarantee facility portions of Project. <p>Value of GFAs implemented, Lending reports of participating FIs, \$ value of projects supported by the guarantee facility.</p>	<p>(Outputs to Objective)</p> <p>Assumes</p> <ul style="list-style-type: none"> Existence of local private sector actors interested in pursuing EE projects (ESCOs, local FIs, etc.)
<p>Project components/ Subcomponents</p> <p>(main activities that must be undertaken in order to accomplish the results)</p> <ul style="list-style-type: none"> Capacity building and TA with potential ESCOs and FIs Partial guarantee facility to be provided to local FIs for financing of the projects – execution of GFAs with participating FIs 	<p>Inputs (resources provided for project activities)</p> <p>GEF resources:</p> <ul style="list-style-type: none"> \$3.0 million for TA, Project administration, and M&E; approximately \$15 million for partial guarantee <p>Total: \$18.0 M</p> <p>Total Project Resources:</p> <ul style="list-style-type: none"> \$5.1 million for TA, Project Admin., and M&E \$45-90 million for guarantee facility <p>Total: \$50.85-\$95.85 million</p>	<p>Same as above</p>	<p>(Components to Output)</p> <p>Assumes:</p> <ul style="list-style-type: none"> TA is effective in developing EE projects; TA is effective in catalyzing ESCO businesses. Pipeline and TA is effective in catalyzing local FI interest in the market

ANNEX IV: INCREMENTAL COST ANALYSIS

1. Broad Development Goals and the Baseline

The relevant broad developmental goal of CEEF is the efficient provision of energy services. This is achieved by accelerating investment in energy efficiency through commercial private sector investments. CEEF's underlying premise is that the private sector is potentially well suited to undertake and finance profitable investments related to energy efficiency, once they have been made aware of the existing opportunities. However, it requires specific assistance in first identifying and assessing these opportunities and, second in overcoming institutional, financing and scale barriers. CEEF will use GEF funds to leverage substantial additional private sector capital for the energy efficiency (EE) market. Successful projects undertaken by CEEF's private sector collaborators will provide a multiplier effect by demonstrating the potential profitability of energy efficiency projects and ventures to commercial operators and FIs, hence making commercial financing resources more widely available in a sustainable way.

CEEF is designed to remove EE project development barriers, particularly in the financial sector of participating countries. Electricity and fuel saved through wider use of EE investments will reduce greenhouse gas (GHG) emissions associated with their use. This will also assist the CEEF countries in their efforts to reach targets of energy intensity, energy price rationalization, emissions, and macroeconomic indicators associated with their EU accession goals.

Expanded investment in EE offers national economic and environmental benefits for the participating countries including but not limited to the following: (i) avoided capital costs for new power and transmission/distribution capacity; (ii) reduced foreign exchange costs for fossil fuel imports; (iii) reduced state deficits from direct and indirect energy costs; (iv) reduced energy and electricity costs to end users and (iv) cost-effective reductions of global GHG emissions and local pollutants.

The baseline scenario implies increased CO₂ emissions through economic growth as well as the relatively small level of existing EE investment at present resulting mostly from limited existing subsidy programs and constrained by a lack of commercially-available debt financing for EE projects. The intensive use of fuel oil and other hydrocarbon-based fuels in inefficient technological processes as well as heating and combustion processes results in higher fossil fuel imports and constraints in economic development.

2. Global Environmental Objective

The global environmental objective of CEEF is to decrease emissions of GHGs associated with fuel use and electricity generation. By decreasing electricity consumption, CEEF will enable participating countries to avoid the emission of an estimated 3.4 to 9.9 million metric tons of CO₂ from additional adoption of EE technologies over a ten year time period.

Participating CEEF countries each recognize the importance of EE goals and have incorporated EE aspects into their national energy plans. However, the limited impact and non-sustainability of subsidy-based approaches lacks the greater leverage and sustainability of CEEF's targeted focus on supporting the development of enhanced commercial private sector investment.

3. Alternative

The proposed GEF alternative, the implementation of CEEF, will assist participating countries in achieving EE objective by catalyzing an active and sustainable competitive market for EE project development and finance. Various estimates indicate a technical and economic potential to save 20-30% of total energy consumption through EE projects in the CEEF countries. These typically have simple pay-back periods in the range of nine months to five years for the portfolio of projects determined to be commercially viable by the private sector actors who will implement CEEF.

The Program's main objective is to build local capacity with potential ESCO firms and respective local FIs. Through its activities, the Program will directly support the implementation of cost-effective EE projects and indirectly promote a commercially sustainable EE project development and finance market.

4. Scope of the Analysis

The GEF Alternative will primarily affect the participants in current EE market, including the FI partners, the businesses which deliver the EE equipment and projects and services, and the energy end-users whose equipment and facilities are improved. In general, increased EE investment will shift production, investment and consumption patterns away from current energy supply patterns and toward efficient use. Macroeconomic studies in North America and Western Europe indicate that such a shift can result in increased employment opportunities, all other things being equal. Reduction in energy imports into participating countries may also result, with consequences outside the national boundary. No other adverse consequences are foreseen.

In addition to the macroeconomic benefits cited above, expanded investment in EE will contribute to reduced local and regional air pollution and its related economic, social and health benefits; economic development and job creation for domestic equipment manufacturing; mechanical and electrical contracting, engineering services and financial services firms; and accelerated transfer of EE technologies.

5. Costs

The costs of the EE investments facilitated by the CEEF are estimated at between \$112.5 million (under best case assumptions) and \$39.3 million (a very conservative scenario in which only one-third of the potential investments supportable under the guarantee facility are made). As presented earlier in the Project document, actual net incremental costs to the GEF may range from \$5.25 million (under the most likely scenario whereby a \$45 million guarantee facility experiences 5% bad debt on the lending portfolio it supports) to \$18 million (under a highly pessimistic scenario whereby all guarantee funds are used). The program will support implementation of EE projects which would likely not otherwise be implemented due to institutional and financial barriers and the incremental risks perceived by FIs for a loan market in which they have limited experience.

The modalities for utilizing and transferring the requested \$18 million in GEF funds and the terms and conditions controlling their use have been developed on the basis of : (i) standard procedures that IFC and the participating FIs use to conduct business with the private sector; (ii) relating the GEF-funded grant element of the financing to the actual incremental cost of administering the program; (iii) providing commercial incentives to encourage financial innovations in the interest of the global environment combined with appropriate risk management in the interests of cost-effectiveness,

financial sustainability, and future replicability; and (iv) ensuring that GEF funds will in no case be used to exceed the “financing gap” (the amount of required credit support/enhancement via a guarantee that cannot be otherwise obtained from commercial sources).

The direct incremental costs associated with the Project will be financed in several ways. The GEF contribution is matched by IFC and bilateral resources totaling from \$32.85 to \$77.85 million, depending upon market demand for the guarantees. The \$3 million in GEF-funded program management administrative costs, monitoring and evaluation (M&E), and technical assistance represents a direct incremental cost to IFC and the participating FIs to participate in the Project. The expenditures will not be recoverable and thus an eligible GEF incremental cost. In addition, \$15 million of GEF resources will be put into a risk position to partially guarantee loans generated from the program. Of the amount, it is likely that \$12.75 million will remain unused at the close of the project, assuming a projected loss rate of 5% of the loan portfolio supported by guarantees. In a worst case scenario, all \$18 million of GEF resources would be expended, although this is neither likely nor a reasonable expectation given IFC experience with HEACP.

In accordance with the guidance of the UNFCCC, the GEF approach to incremental costs allows the justifiable level of incremental costs incurred in this project to be financed in full. Estimates of incremental cost, and their incidence, form the basis for the amount of grant (or grant equivalent funding) made available by GEF. These are discussed further below.

There are two categories of incremental costs to be met by the CEEF Program: (i) direct incremental costs; and (ii) FI incremental costs, as follows: (i) direct incremental costs are additional costs incurred by IFC and participating FIs associated with implementing CEEF; these include TA services, program administration, M&E training, and new procedures established and the associated costs incurred in the Project's execution. (ii) indirect incremental costs include higher FI transaction costs associated with processing and supervising an unfamiliar portfolio of EE investments-specific support by participating FIs that will be financed directly by CEEF through the TA program. In addition, incremental costs incurred by the FIs associated with the higher perceived risks for EE loans originated will be financed by IFC and GEF through the loan guarantee facility. It is expected that as the participating FIs become familiar with EE financing through this program that the level of incremental costs will decline and no longer require Project support.

Because the actual performance of the loan portfolio supported by the guarantees is not known, there is no firm basis for estimating a priori the amount of actual incremental cost to be met by the GEF funds under CEEF. It will be only after a period of actual loan portfolio performance (3-5 years) that good information on actual outcomes will be available. However, based on experience from HEACP and country conditions in the CEEF countries, IFC estimates conservatively that 5% of the loan portfolio could result in non-performing loans, thus necessitating in an average case between \$2.25 - \$5 million of the \$15 million GEF contribution to the facility will constitute the incremental cost to the GEF, depending upon an ultimate facility size which will range from \$45-90 million.

6. Incremental Cost Matrix

Attached is an Incremental Cost Matrix and accompanying notes. The matrix reflects the incremental cost discussion above and the analyses and cost information provided earlier. It should be noted that the estimates of CO₂ emissions reduction only account for projects *directly* supported by the guarantees. They do not include emissions reductions resulting from EE projects *indirectly* induced by the Project's catalytic TA activities and its contribution to creating a sustainable EE

finance market. Included in expected indirect effects, based on experience from HEECP, are a number of EE project financings – some of which result directly from the TA program – which are financed by participating FIs without utilizing the guarantee facility, as well as long term, post-Project investments developed by ESCOs and FIs who entered the market as a direct result of CEEF.

7. Process of Agreement

The primary technical counterparts for Project implementation are the partner FIs. The amount of EE investments which the Project will facilitate has been estimated in consultation with prospective FI partners as well as ESCOs' and both governmental and non-governmental agencies working in the EE sector of the CEEF countries. The general structure and terms of the proposed agreements with Project FI partners, the manner of reaching agreement, and the manner for development and origination of transactions are described more fully in the Project Brief.

Summary Incremental Cost Matrix -- CEEF

	BASELINE	ALTERNATIVE	INCREMENT
Global Environmental Benefit	(1) 51 – 95 million tons CO ₂ avoided	(2) 58.4 – 102.4 million tons CO ₂ avoided	3.4 – 9.9 million tons; 7.4 million tons CO ₂ avoided is most likely scenario
Domestic Benefit	Energy Services Demand Satisfied	Energy Services Demand Satisfied at a lower cost	Energy cost savings
Costs (expenditure items)			
• EE investments	(3) \$560 million - \$1.04 billion invested in EE over 4 year period in CEEF countries	(4) \$599.3million - \$1.162 billion invested in EE over 4 year period in CEEF countries	(5) \$39.3 - \$112.5 million cost of EE investments, including expected GEF cost of \$2.25 million in guarantees called on non-performing loans;
• TA/ Admin/ M&E Costs	\$0	\$5.85 million, (including GEF \$3 million)	(6) \$5.85 million, (including GEF \$3 million)
○ Total Costs	\$560 million - 1.04 billion	\$ 605.25 million - \$1.242 billion	(7) \$45.15 million - \$118.35 million

NOTES:

1. Baseline emission level assumed from estimates of existing levels of EE compiled during pre-appraisal. Estimate derived from investment activity levels indicated by FIs, ESCOs, development agencies and NGOs active in the sector, plus national investment plans developed by national governments, where available.
2. Baseline emission ranges less the incremental savings produced by CEEF under most likely case scenario.
3. Assumptions made are based on existing EE investment pipelines identified during pre-appraisal and exclude capital costs from district heating system privatization. Baseline of (i) \$40 - \$60 million per year (Czech Republic) (ii) \$25 - \$50 million per year per country

(Slovak Republic and the three Baltic countries) in EE investments for a period of four years with no intervention by CEEF (BAU=business as usual).

4. Assumes that a possible range of Project outcomes ranging from \$39.3 million to \$112.5 million in new EE investment is stimulated by the GEF alternative with these new EE investments drawn from the liquidity of existing investment funds (equity) and FIs (debt) in the CEEF countries, and that the \$560 million-\$1.04 billion of BAU EE investments also occur.
5. Incremental EE investments associated with a \$15 million GEF guarantee facility contribution range from \$39.3 million (only 35% percent of total EE investments are realized) - to \$112.5 million (100% of total EE investments are being realized). The incremental costs associated with GEF losses from the guarantee facility range from \$3.0 (zero losses) to \$18 (10% losses) million, depending on the volume of loans guaranteed and the losses from those loans; this does not include IFC's potential losses in the guarantee facility. IFC conservatively estimates 5% losses on a \$90 million loan portfolio (assuming a \$45 million guarantee facility), which amounts to \$2.25 million in losses from the guarantee facility.
6. The total of \$5.85 million consists of \$3 million in GEF contribution to CEEF admin, M&E, and TA plus the \$2.85 million in IFC and bilateral donor contributions.
7. The incremental costs to be met by GEF funds can range variously from: (i) \$3 million (admin/TA/M&E costs only) if all guarantee funds are returned to GEF; (ii) \$5.25 million in a conservative case of 5% bad debt for loans guaranteed under a \$45 million facility (reflecting an IFC parallel investment of \$30 million alongside GEF funds); (iii) A complete loss of the GEF's \$18 million in the highly unlikely worst case scenario. This would occur if all \$90 million in first tranche (IFC) loans extended are fully called without any debt service having been completed.

Incremental Cost and Benefits Matrix

	Baseline	Alternative	Increment
Domestic Benefits	<p>Heavy hydrocarbon based fuel usage in the heating sector and for a portion of electricity generation (varies by country).</p> <p>Barriers to EE projects cause high fuel usage and inefficient industrial processes, hindering economic development and investment in productive uses.</p> <p>Lack of readily available EE financing restricts EE investment to low level.</p> <p>High unemployment and low EE project development capacity by ESCOs and FIs.</p>	<p>Increased penetration of EE technology improves energy intensity of economy and yields lower environmental and health costs from an active economy.</p> <p>Increased investment in EE enables capital preservation for investment in the productive economy and a more productive energy using sector, including more comfortable housing.</p> <p>Local capacity building through technical assistance results in the development of domestic ESCO businesses and FI expertise with EE project financing. FIs more willing to finance EE.</p> <p>More productive jobs in the domestic service and manufacturing sectors, market development & competitive mrkts for FIs and ESCOs</p>	<p>Less local and regional air pollution</p> <p>Higher competitiveness of the private sector through lower production costs.</p> <p>Increased EE investments and increased capacity for sustained EE investment in the future.</p> <p>Less unemployment and increased capacity to develop EE projects.</p>
Global Benefits	<p>Current level of EE investments in CEEF countries reduce CO₂ emissions from heat and electricity to between 51 to 95 million metric tons of CO₂.</p>	<p>Expanded EE investments yield between 58.4 and 102.4 million metric tons of CO₂ emissions reductions.</p>	<p>An additional 3.4 to 9.9 million metric tons of CO₂ emissions eliminated through additional EE investments; 7.4 million tons is the most likely scenario.</p>

	Baseline	Alternative	Increment
Costs	Investments in EE in CEEF countries of between \$560 million and \$1.04 billion.	Investments in EE in CEEF countries increase to between \$599.3 million and \$1.16 billion. In addition, total Project incremental costs will range from \$3 to \$18 million, depending upon actual losses from the guarantee portfolio. (Most likely case will be \$5.25 million in total Project costs.)	Additional EE investment costs of \$39.3 to \$112.5 million metric result from the Project. Incremental Costs of implementing CEEF expected to be \$5.25 million (\$2.25 million projected losses and \$3 million GEF TA/Admin.) under the guarantee program.

ANNEX V: STAP ROSTER AND TECHNICAL REVIEW AND IA RESPONSE

Comments on "Commercializing Energy Efficiency Finance," IFC/GEF Project
William Chandler, Pacific Northwest National Laboratory
Revised: 5 March 2002

Scientific and Technical Soundness of the Project

This proposal is sound, reasonable, well-planned, and based on solid economic and technical experience. The proposed approach is a thoughtful implementation of an instrument that is justified by and has been recommended in the environmental and economic literature. This reviewer strongly endorses this proposal, after having received clarification of earlier questions.

Global Environmental Benefits of the Project

This proposal targets energy efficiency investments and, as such, promises to support the one set of activities that clearly fits the definition of sustainable energy development in the current economic context. That is because energy efficiency provides cost-saving and productivity benefits to investors while at the same time cutting energy use. Because energy use ranks among the most important sources of environmental pollution, especially greenhouse gas emissions, energy savings measures provide important benefits to the global climate. Moreover, because this project takes a market-based approach to solving the problems of energy-efficiency, it offers a sustainable financial mechanism that can be replicated throughout the world. In addition, it targets a region that ranks among the most energy-intensive and energy-wasteful in the world.

How the Project Fits Within the Context of the Goals of GEF, Its Operational Strategies, and Program Priorities

This project will provide significant, reproducible, and sustainable benefits in area of global climate change, one of the GEF's key missions. This effort will help catalyze the introduction and use of technologies that rank among the top economic priorities of the Central and Eastern European target nations. It will help meet the incremental cost of the dissemination of energy-efficiency technologies by overcoming market barriers. It will help to condition the marketplace to utilize these technologies and to continue to use them through a sustainable financial mechanism.

Replicability of the Project

This proposal address barriers to energy-efficiency investment that have been well-documented in the literature. By demonstrating an approach to overcoming these barriers, the GEF will help to create a sustained market-oriented activity of potential very large scope. The intervention to be provided by this proposed facility can be expected to result in increasing penetration of the market of Central and Eastern Europe by energy-efficiency technologies. Indeed, this proposal

reveals more insight in the barriers to and solutions for energy-efficiency financing than I have seen from any multi-lateral banking institution. The energy end-use technologies this proposed facility addresses represent large shares of the GDP in the target countries and will be the subject of follow-on interest by energy users and by potential investors for decades to come.

Sustainability of the project (see attached STAP guidelines for reference).

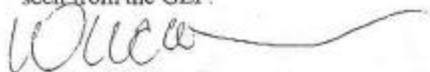
This proposed facility will provide sustained global environmental benefits because it will create capacity—technical and financial—that should develop into a sound market-oriented set of businesses. Provision is made for helping create the skill sets required to overcome the barriers to utilization of energy-efficiency technology. Provision is also made to provide technical assistance and outreach to enhance public understanding and participation in the mechanisms for mitigating the impacts of excessive energy consumption, a particularly severe problem in the target nations.

Additional Comments

This reviewer would like to point out that the benefits of this climate-oriented proposal strongly converge with local environmental and economic benefits. Energy waste is directly related to emissions of sulfur, nitrogen, and other noxious wastes and the energy savings that will be generated by this project will reduce those emissions. Energy waste is also a primary obstacle to energy-sector liberalization in Central and Eastern Europe, and to the extent that this facility provides a tool—and it provides an important one—to reduce energy costs, it will ease the pain of reform.

The scale of effort indicated for this project is not overwhelming, and thus is manageable, and is large enough to mount a serious attempt at overcoming the market barriers to energy-efficiency finance in the region.

The proposal is highly innovative, ranking among the most creative and serious this reviewer has seen from the GEF.



William U. Chandler
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Battelle Memorial Institute, Pacific Northwest National Laboratory

IFC Response to STAP Reviewer Comments:

The IFC Project Brief submission reflects comments provided by the reviewer on the early review draft. IFC's response includes subsequent modifications of the Project to provide greater focus within the technical assistance program and to clarify implementation roles of local NGOs operating in the CEEF countries. In response to early stage comments, IFC also extended its analysis of the energy sector rationalization process underway in the CEEF countries.

ANNEX VI: LESSONS LEARNED FROM HUNGARY ENERGY EFFICIENCY CO-FINANCING PROGRAM

The Hungary Energy Efficiency Co-Financing Program (HEECP) began operations in March, 1997. The mid-term evaluation for HEECP was conducted in mid-2000. The HEECP experience has provided many lessons in how to conduct guarantee and technical assistance programs. A summary of key lessons learned, and changes in program operations recommended from these lessons, are described below; these lessons are being incorporated into HEECP2 operations and into planning CEEF programs.

1. Development of Niche Financial Products and Underwriting Guidelines

a) Use Niche Financial Products. The EE market spans a range of end-user sectors. It is important to take a "financial product" approach to development of various financing structures to meet the needs and specific credit characteristics of each target sector. HEECP has grown most effectively by defining, with partner FIs, the credit structure and guarantee underwriting guidelines for financing projects in several niche sectors. For example, financing products have been developed for EE financing for multi-family housing, municipal streetlighting, district heating, industrial cogeneration implemented pursuant to energy sales agreements, and hospitals, with financing offered both direct to end-users and to ESCOs. Selection of the financial products to be offered, and the priority for rolling out each product, will be made in new CEEF countries based on priorities and opportunities of participating FIs and the assessment of the EE finance market requirements and project pipeline. TA program resources will be devoted to designing financial products to meet the needs of priority sectors, e.g., for SMEs.

b) Develop Underwriting Guidelines. The underwriting guidelines, negotiated with participating FIs, provide prescriptive guidance to FIs that helps upgrade the quality of the information they submit for TGs. The underwriting guidelines have also allowed use of streamlined procedures by IFC for review and approval of transaction guarantees; they target essential information for review and reduce administrative burdens in the approval process.

2. Managing Relationships with Participating FIs

a) In its second generation GFAs, IFC requires FIs to appoint two senior managers, one responsible for credit, the other for marketing and origination, to oversee the FI's participation in the guarantee program. This requirement is intended to assure that, first, the value of the guarantee as a reliable credit risk management tool is recognized in credit committee decision processes, and, second, that the guarantee product, and EE finance methods, are disseminated throughout the FI.

b) A related requirement is for the FI to prepare an EE finance marketing plan that includes a training program for branch loan officers and outlines the steps the FI will take to market its financial services in the EE sector. The TA program design has been expanded to include FI marketing and training more explicitly.

c) Legal documents in the underlying financings will also have provisions strengthened that commit program participants (including ESCOs and end-users) to share information necessary for post-installation project monitoring. FIs commit to this provision in the GFA but the commitment needs to devolve to parties to the underlying loan/lease and energy services agreements.

3. Guarantee Structure

a) Phase out the subordinated recovery structure and replace it with a parity guarantee structure in more mature EE finance market sectors. The parity guarantee approach is easier to manage and provides clearer risk sharing and incentives to the FI for good finance origination and post-closing management. With the addition of IFC resources as part of guarantee reserves, GEF funds can be adequately leveraged without using subordinated recovery guarantees.

b) More aggressive "claw back" provisions have been added to the GFA which allow IFC to reduce the Facility Liability Limit in a GFA in the event the FI fails to meet target levels of guarantee facility use. This provision allows IFC to reallocate and hence make better use of its program guarantee capacity. Further, IFC will preserve some FLL capacity to be allocated case-by-case to larger projects. These resources will be made available on a "first-come-first-served" basis to engender competition amongst FIs for available guarantee capacity. To engender competition amongst participating FIs, multiple FIs will be engaged immediately in the guarantee program in new CEEF countries and guarantee capacity will be preserved to allocate to those FIs which make best use of the program.

c) The maximum allowable individual transaction guarantee will be geared to the overall country guarantee program size, not the individual GFA FLL. This change will allow larger projects to be covered by guarantees, while still maintaining prudent portfolio diversification guarantee size limits, and will allow IFC greater flexibility in managing allocation of guarantee capacity amongst participating FIs.

d) Research will also be performed on relevant country central banking regulations to determine the extent to which the proposed guarantee can substitute for an FIs normal loss provisioning/reserve requirements; if participating FIs' reserve requirements can be reduced in proportion to the guarantee loss coverage, then the FI can enjoy lower provisioning requirements and therefore a higher return on equity for financing extended with guarantee support. This higher return on equity can be an important added motivation for FI participation in the program and may also translate to lower interest rates for borrowers.

e) On FI loans to ESCOs, IFC is still considering structuring the guarantee to cover end-user default to the ESCO. At present, the guarantee only covers ESCO default to the FI, so, the guarantee is not effective in mitigating end-user credit risk exposure assumed by the ESCO. Possible methods to address this issue include: (i) FI makes limited- or non-recourse loan, and the guarantee shares FI risk; (ii) the FI lends full recourse to ESCO but the guarantee is modified to define Event of Loss to include end-user default to ESCO; or (iii) the ESCO becomes a guarantee claim beneficiary.

4. Technical Assistance Program: Support for ESCOs

a) The TA program has been expanded to assist selected ESCO project developers in their own business planning and in raising corporate and project equity for their companies. This work is intended to build the capacities of ESCOs and hence the pipeline of projects for financing support via the guarantee. This program also addresses a concern that the guarantee program has reached prudent exposure limits on multiple loans to certain ESCOs; by increasing the ESCO equity base, the program can prudently expand its guarantee operations covering project loans to that ESCO. In

addition, TA can be provided to ESCOs to assist them in structuring multi-project debt finance facilities with participating FIs.

b) SMEs interact with the guarantee and TA program in two ways: as energy users, SMEs receive financing supported by the program; and, as EE businesses many SMEs are involved in delivering EE equipment, projects and services. As EE businesses, SMEs are particularly involved in the residential thermo-modernization EE market. The TA program is being expanded to target these EE SMEs with business and finance training and to link them with participating FIs for project finance.

ANNEX VII: APPRAISAL GUIDELINES

Issues to be Addressed during Appraisal

Appraisal of the CEEF program will be conducted simultaneously for both the GEF grant and the IFC investment. The main business methods for CEEF have been developed through HEECP. Therefore, CEEF appraisal activities can focus on final design and adaptation of these methods to country conditions and to developing relationships with the key cooperating partners -- FIs, EE/ESCO companies, government, energy and NGO agencies, TA contractors -- with whom IFC will work to make the program operational. Appraisal activities can be categorized as follows.

1. Continued country research
2. FI appraisal: financial, EE marketing and investment demand
3. Guarantee structure issues and Guarantee Facility Agreement preparations
4. Technical assistance program design
5. Program operations and management planning
6. Preparation of GEF and IFC appraisal documents

1. Continued research. The process of getting to know a country's EE market will be is advanced through continued research. Priority topics in the appraisal stage include:

* Complete inventory and assessment of EE/ESCO businesses operating in country, including current project pipeline, project economics and finance needs.

* Complete inventory and detailed assessment of all current and historic EE and EE-related (e.g., for SMEs, multi-family housing, municipal infrastructure) programs operated by government, international and NGO agencies.

* Complete research on energy sector background (power, thermal, and gas) including prices & tariffs (current and future outlook), energy sector structure & restructuring and regulatory factors.

* Gather further information on the economics of representative EE projects and integrate and assess key market background factors as they affect economics and commercial finance and development of specific EE project niche markets.

* Complete research on relevant country financial institution regulation, specifically on loss reserve/provisioning requirements and value of the guarantee to substitute for required reserves.

2. FI Appraisal. FI appraisal is a main task for appraisal and preparing the program to be operational. In pre-appraisal, many FIs have been interviewed and priority candidates for participation in the guarantee program have been identified. In appraisal, selected FIs will make formal application on an invitation basis. Interviews will be conducted and FIs will be asked to complete applications requesting information on several topics: (i) financial condition of the FI, (ii) FI credit procedures, (iii) FI EE marketing and staffing plan, and (iv) EE finance investment and guarantee demand estimate. This information will be used for several purposes. FI's must be qualified as being in sound financial condition. The FI credit decision procedures must be understood to design the interface with the guarantee program. An initial investment and guarantee demand estimate is made to size the specific guarantee facility and characterize the specific EE markets, finance needs and characteristics of projects the FI will pursue. Finally, the FI appraisal information is used to begin development of the EE finance marketing plan and to identify TA needs of the FI. A complete EE finance marketing plan will be prepared by the FI with technical assistance

from the program as a first step after a Guarantee Facility Agreement is signed. IFC has developed detailed questionnaires and selection criteria for conducting both the financial and EE marketing aspects of the FI appraisals.

3. Guarantee Structure Issues and Guarantee Facility Agreement (GFA) Preparations. FI and EE market appraisal information will be used by IFC to address final issues in the structuring of the guarantee and GFA provisions. These issues include: (i) sizing of the initial tranche IFC guarantee investment and determination of the appropriate initial IFC:GEF guarantee funding ratio; (ii) guarantee risk assessment, including estimates of base case default rates for key target markets and critical default rate analysis for IFC; (iii) allocation plan for guarantee resources amongst initial set of FIs and between guarantee products; (iv) sizing of maximum transaction guarantee liability limits; (v) determination of the appropriate "gearing ratio" (ratio of the maximum total outstanding TGLs to the Facility Liability Limit for individual GFAs); (vi) pricing of guarantee fees, origination fee, and commitment fees; (vii) legal review, with local counsel, of standard Guarantee Facility Agreement (GFA) language and local standard lease and loan documents; (viii) further research into local leasing and banking regulation; (ix) further research into credit issues associated with particular target priority EE niche markets; and, (x) assessment and structuring for how the program guarantee may be combined with available concessional finance programs in ways consistent with IFC's private sector mandate.. From this information, a country-specific GFA document and the plans for launching the guarantee program will be prepared.

In the later stages of FI appraisal, form GFA documents will be presented to selected FIs for FI legal review. Key issues will be identified at this stage for negotiation. Final negotiations and execution of the GFAs will be done after GEF and IFC approvals are obtained.

4. Technical Assistance Program Design. Further assessment of capacities of specific EE/ESCO companies and their existing project pipelines will be conducted. Initial TA program activities will be designed, drawing on and adapting the menu of TA activities and methods already developed and tailored to the immediate needs of EE/ESCO businesses and their project opportunities. An initial project pipeline will be developed and the finance structure needs of these projects assessed.

From this information, IFC will prepare budgets for the initial set of TA programs and prepare formal application to its Trust Funds Division for TA program financial support. TA contractors will be identified but will be selected only after Trust Fund monies are committed, as the governments which support these Trust Funds often require use of consultants from the donor country. Some re-allocation of GEF funding from guarantee reserves to TA program activities may be made at this point.

Relationships with domestic government agencies and organizations will be further developed in this stage and terms for cooperation will be prepared. This work readies the program to become operational rapidly once final approvals from GEF and IFC are obtained. Formal agreements with cooperating partners and TA consultants will be executed after the program becomes operational.

5. Program Management. Detailed plans for program management -- including staffing, hiring country program managers, detailed budgets, selection of IFC personnel to serve on relevant Supervisory Committees -- will be prepared. An upgraded transaction guarantee origination procedures and underwriting guidelines manual will be prepared. Office arrangements, including a

final determination of location for the two subregional offices, will be concluded based on cost-effectiveness criteria.

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