International Finance Corporation

FINAL PROCESS AND IMPACT EVALUATION Commercializing Energy Efficiency Finance (CEEF) and Hungary Energy Efficiency Co-Financing Program (HEECP)

Final - February 2010

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February 2010

List of acronyms and abbreviations

BOOT	Build- Own– Operate- and Transfer
CEE	Central and Eastern Europe
CEEF	Commercializing Energy Efficiency Finance
CHP	Combined Heat and Power
Cogen	Cogeneration
CO_2	Carbon Dioxide
DH	District Heating
EC	European Community
EE	Energy Efficiency
EI	Energy Intensity
EFG	Environmental Finance Group
ESCO	Energy Service Company
FI	Financing Institution
FMD	Financial Markets Department
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GFA	Guarantee Facility Agreement
GJ	Giga Joule
HEECP	Hungarian Energy Efficiency Co-Financing Program
HQ	Headquarter
IFC	International Finance Corporation
RE	Renewable Energy
SME	Small and Medium-sized Enterprise
TA	Technical Assistance
VAT	Value Added Tax

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Units

Given the variety and general in-consequence regarding the use of energy units when referring to energy resources and utilisation of resources found in the available literature, we have chosen to use the following units, which in relation to the physical units are based on the SI-system.

Energy content is measured in Joule (J)
Capacity is measured in Watt (W)

Conversion table

	MJ	kWh	koe	Mcal
1 Mega Joule (MJ)	1	0.278	0.034	0.239
1 kilo watt hour (kWh)	3.6	1	0.123	0.86
1 k oil equivalent (koe)	41.91	11.63	1	10.01
1 Mega calorie (Mcal)	4.187	1.163	0.1	1

Prefix

The following prefixes have been used to indicate powers of 10:

Number	Prefix	Abbreviation
10^{15}	Peta	P
10^{12}	Tera	T
10^{9}	Giga	G
10^{6}	Mega	M
10^{3}	Kilo	k

I. EXECUTIVE SUMMARY

1 Program Results

1.1 Summary

The CEEF program has since 2003 issued guarantees to a total of more than 700 projects of which more than 600 are embedded in block house portfolios. The total volume of these guarantees is USD 49.5 million, and these projects represent a total investment of approximately USD 208 million. These projects have been implemented in five of the six target countries - Czech Republic, Slovakia, Latvia, Lithuania and Hungary. There have been no project guarantees in Estonia. The projects have generated CO_2reductions of 145,700 tons per year.

The program has achieved significant progress relative to the objective of expanding the availability of commercial financing for energy efficiency projects in the target markets. It is estimated that the guaranteed projects have led to additional implementation (leveraged projects or indirect effects) of projects by FIs and ESCOs, with total project investments of USD 80 million and CO_2 reductions of 164,800 tons per year. ***Thus, the total guaranteed and leveraged projects resulting from the CEEF program represent USD 330 million and 310,500 tons per year CO_2 reductions.***

A summary of the other CEEF program results is provided below:

- The 10-year CO_2 reductions from guaranteed and leveraged projects are 3.1 million tons and the net GEF cost per ton is USD 1.2 under the Best Case scenario which assumes zero project guarantees called as from end December 2008, and USD 1.9 per ton under the Intermediate Case scenario which assumes 15% of the project guarantees are called. In a GEF perspective the corresponding costs if the results from HEECP is included are USD 0.2 and 0.6
- The guaranteed projects have resulted in CO_2 reductions of about 145,700 tons per year or 1,457,000 tons over the 10-year project life.
- No project guarantees have been called for under CEEF and the GEF cost per ton of CO_2 reduction for the guaranteed projects is USD 2.5 per ton based on the current losses.
- 14 financial institutions (FIs) have signed Guarantee Facility Agreements (GFAs) and are all participating in the programs either by issuing guarantees or receiving capacity building/technical assistance. Some of the FIs have developed a number of new financial products for EE project investments.
- A total of 41 project developers/ESCOs are involved in the implementation of the guaranteed projects.
- The technical assistance provided by the CEEF program has led to substantial capacity building of the FIs as well as ESCOs and project development companies.
- In terms of country-specific results, the program has achieved very good progress relative to the goals defined in the program LogFrame in Hungary, the Czech Republic and Slovakia. However, the progress in Latvia and Lithuania has been limited with 3 GFAs signed. There are no GFAs signed and no guaranteed projects in Estonia.
- The key factors that appear to have influenced the results in the different countries are (i) EE market maturity and acceptance of the guarantee

product; (ii) Attitudes and interests of FIs; (iii) Staff knowledge, experience and contacts; and (iv) Staff capability and enthusiasm. The program results point out that the different country-specific factors listed above have led to different results in the five countries. The Baltic EE market is under developmental stage; Lithuania has well developed ESCOs structures, that need different type of financing, while Latvia is suffering from a less mature EE market and has a very few ESCOs – incubators. The Scandinavian-dominated FIs in the Baltics have high competition among them in comparatively small markets, and have different attitudes and interests than the ones in Hungary and Czech Republic, and staff with less knowledge and contacts in the EE field.

  - Local presence in each market was very important to program success, as continual follow-up was required to ensure take-off. It mostly took at least a year to convince the banks to join the program and to conclude the GFA, and subsequently it would take another year to launch it in the bank.
  - The skills, capabilities and experience of the field staff contributed significantly to the success of the program in Hungary and Czech Republic.
  - The field staff's knowledge and understanding of local market conditions and FI and ESCO characteristics was very useful in program operations.
  - The Technical Assistance component, although performed on an ad hoc basis, was an important element in the program success. The ad hoc element while seeming unstructured, permitted for flexibility and adaptation to market needs in the very different participating countries.
  - The delegation of authority and responsibility to the field was very important for the smooth and effective operation of the program and contributed to the large increase in project volumes in the later years of the program.
  - IFC made program changes to make the program operations more flexible so as to be able to react more effectively and promptly to market changes, to create new products and delivery mechanisms, and develop better relationships with the FIs and other program stakeholders. These changes were appreciated by the field staff and the stakeholders and led to large project volumes.
  - The CEEF program provided important lessons relative to working with small projects.
  - The significant commitment of IFC headquarters management and support provided by them to the field staff was also important in the program results.
- CEEF has provided many important lessons that have helped shape similar IFC programs in other countries.
- The original program design for CEEF5 was well-conceived and the program management has successfully modified the program to take care of market changes and modifications requested by the field staff.
- The original program design for HEECP I and HEECP II in Hungary in 1997 and 2001 respectively subsequently merging with CEEF5 in 2005 was never modified to become specific in which targets to reach but program management has successfully modified the program to take care of market changes and modifications requested by the field staff.
- The program organization and operational procedures have been well-defined and are consistent with program objectives.
- The program appears to have been running efficiently in Hungary, the Czech Republic and Slovakia. However, the efficiency in the 3 Baltic countries has been questionable.

- The program effectiveness has been very good in Hungary, the Czech Republic and Slovakia. However, the effectiveness in the 3 Baltic countries has been poor.
- The program has provided substantial TA to FIs and ESCOs and they appear to have benefited from this TA.
- The assessment of the TA efficiency and effectiveness has been good.

Additional details on the results of the evaluation are provided below. A comparison of the key performance indicators to date relative to the program goals specified in the LogFrames is provided in Section 2.6 below.

1.2 Assessment of Energy Savings and Impact on GHG Emissions

Total of Direct and Indirect Effects

The combined effects (direct and indirect) of the CEEF program are summarized below:

Table ES - 1: Direct and indirect effect of the CEEF program

Investment USD Millions	GHG emissions reduction Ton CO_2/ Year	GHG emissions reduction Ton CO_2Millions	Energy Saved TJ/Year
329.7	310,546	3.1	1,956

The net GEF costs per ton of CO_2 saved including both direct and indirect effects are as follows:

- Best case scenario - USD 1.2 per ton
- Intermediate case scenario - USD 1.9 per ton
- Worst case scenario - USD 6.1 per ton

The Evaluation Team, in cooperation with local consultants, has performed the calculations and verifications of energy savings and CO_2 reductions, project investment per unit for CO_2 savings and energy savings, and GEF investment per ton of CO_2 saved, as well as the total project investment per ton of CO_2 saved.
The results indicate the following:

Table ES - 2: Direct effect of the CEEF program

Investment USD Millions	GHG emissions reduction Ton CO_2 / Year	GHG emissions reduction Ton CO_2 Millions	Energy Saved TJ/Year
207.9	145,714	1.5	846

From the GEF perspective, the total CO_2 reductions over a 10-year project life are about 1.5 million tons for all projects that have been guaranteed to date. The maximum GEF guarantee liability as of December 2008 for the projects is USD 51.4 million[1].

[1] Up to the year 2006 the USD currency was applied to calculate the total guarantees issued and the outstanding liabilities. After 2006 this changed to become the Euro. In order to keep track of the initial

No losses have been incurred to date under CEEF while USD 153,000 was lost under HEECP 1 bringing the total exposure for GEF under CEEF to USD 18.047. Direct exposure under the CEEF portfolio is USD 15.23 million as EUR 2 million of the GEF exposure was committed to a separately agreed large Energy Efficiency project with OTP in Hungary[2], initiated by the CEEF team. GEF has to date committed to CEEF after HEECP merging with CEEF a total of USD 3.65 million for program administration, M&E and technical assistance (TA).

If no further guarantees are called, the net GEF costs (in this "best case" scenario) would therefore be USD 3.65 million and the price of CO_2 avoided from these projects would be $2.5 per ton. If 15% of the project guarantees were called ("intermediate case" scenario) the net costs would be $4.1 per ton. If 100% of the project guarantees were called (an extremely unlikely "worst case" scenario), the net costs would be USD 13.0 per ton. In summary;

- Best case scenario - USD 2.5 per ton
- Intermediate case scenario - USD 4.1 per ton
- Worst case scenario - USD 13.0 per ton

The tables below illustrate these numbers for the entire program. The second part of the table includes the OTP project, to show the total direct impact of the GEF contribution. In chapter 3 the results per country can be seen.

Table ES - 3: CEEF Direct effect of projects with guarantees on CO_2reductions and cost per Ton

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
Scenario	Assumption	GEF Costs (000$)			10 year CO_2 Reductions (000 tons)[3]	Cost per Ton ($ per Ton of CO_2)
	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total		
Best Case	0%	3,650	-	3,650	1,457	2.5
Intermediate Case	15%	3,650	2,285	5,935	1,457	4.1
Worst Case	100%	3,650	15,230[4]	18,880	1,457	13.0

targets of the programme expressed in USD the programme has kept track of both currencies. In EUR the total guarantees issued under the programme became EUR 43.2 million while the outstanding liability is EUR 36.8 million.
By applying the EUR / USD exchange rate as of 31/12/2008 on the EUR amount above, the equivalent figures are USD 60.4 million for guarantees issued and USD 51.4 million as outstanding liability.
The EUR converted 43.2 million to USD 60.4 million can be compared to the actual guarantees issued in USD of 53.7 million if the principle before 2006 had continued. In line with this the outstanding liability becomes USD 51.4 million.

[2] The OTP project is not part of the CEEF portfolio. When the project was developed, IFC decided that it was too large and needed special approval from the Board etc. so IFC made it a separate guarantee, placed outside CEEF, but still initiated by CEEF and having Energy Efficiency as an objective.

[3] It is not possible to predict a loss in CO2 savings if "project" has a default on the down payment and the guarantees have to be called for eventually. We have assumed that the projects most likely will continue and produce the savings (e.g. the savings from blockhouse renovation will still produce CO2 savings but most likely after reconstruction of loans and/or owners). In some cases the loss might also be marginal since the projects to default might be closed half way through the 10 years savings period.

[4] The USD 15.230 million equals the original maximum GEF loss amounting to USD 18.2 million less losses amounting to USD 0.153 million and less EUR 2 million provided to the large energy efficiency OTP school project which is not directly included in the CEEF portfolio.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES, INCL. OTP PROJECT						
	Assumption	GEF Costs (000$)			10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total		
Best Case	0%	3,650	-	3,650	1,509	2.4
Intermediate Case	15%	3,650	2,707	6,357		4.2
Worst Case	100%	3,650	18,047	21,697	1,509	14.4

1.3 Assessment of Impact on FIs Involved

Two results related to the assessment of the impact on Financing Institutions were expected:

- Substantially increased volume of RE and EE investment
- Local capacity building with potential local project developers and FIs improving capacity of FI and project developer industries to develop RE and EE investments in CEEF countries;

Number of participating FIs and project guaranteed

The program has managed to include a great number of FIs during its life time. At the CEEF5 mid-term review the number of participating banks in the market was 6. This has now become 8 FIs which have signed GFAs in CEEF5, and 6 have been using the guarantee facility.

Česká spořitelna has been a very active partner in Czech Republic, with 21 closed deals.

In Slovak Republic, Lithuania and Latvia the number of projects guaranteed totals 6, which is 1 more than at Mid-term review. Two of the 8 projects are blockhouse portfolios, covering a total of 10 renovation projects.

In Hungary the program has successfully attracted 6 financing institutions over the lifetime of HEECP1 (Raiffeisen Leasing), HEECP2 (Raiffeisen Leasing, OTP, ERSTE, Raiffeisen Bank, K&H, and HVB) and CEEF (ERSTE and Raiffeisen Bank).

Table ES - 4: Participating FIs

Country	Number of FI participants	FI	Number of individual projects	Number of projects in portfolios	Guaranteed projects / FI
Czech Republic	3	Česká spořitelna	21[5]	0	21
		CSOB	1	0	1
		GE Money bank	0	0	0
Slovak Republic	2	Dexia	3	0	3
		CSOB[6]	0	0	0
Latvia	1	Hansabanka (Swedbank)	3	6	9
Lithuania	2	SEB Vilniaus Bankas	0	4	4

[5] One of the 21 projects guaranteed with Česká spořitelna was cancelled.
[6] The GFA was signed in Czech Republic, but CSOB in Slovakia became independent from 2008

Country	Number of FI participants	FI	Number of individual projects	Number of projects in portfolios	Guaranteed projects / FI
		Hansabankas	0	0	0
Estonia	0	-	-	-	-
Hungary (HEECP1, HEECP2, CEEF)	6	Raiffeisen Leasing	12	0	12
		Raiffeisen Bank	9	723	732
		OTP	16	0	16
		ERSTE	5	24	29
		K&H	1	0	1
		HVB/ Unicredit Bank	1	0	1
Total	**14**		**72**	**757**	**829**

Total Volume of Investments

The volume of investment projects involving ESCOs, FIs and end-users was expected for the CEEF countries to become at least USD 49.7 mill after 4 years under the guarantee facility. The realized volume amounts to USD 208, thus as much as 408% of the goal, as is shown in Table ES–5 below.

As was also the case in the Mid-Term review, there are considerable differences among the countries. In Czech Republic, the guarantee facility has now contributed to almost USD 55 million in total investments, 6 times more than expected. In Slovakia, no additional investments have been guaranteed since the mid-term review, at which time the target had been reached. In Latvia, 40% of the target is reached, compared with 24% at Mid-term. Since the Mid-term review, some investments have now been guaranteed in Lithuania, but only 12% of the target is realized. Estonia remained at 0%. In Hungary the introduction of the blockhouse portfolio framework with Raiffeisen Bank especially spurred the investment level from USD 0 to USD 140.5 million.

Table ES - 5: Volume of investment projects under the guarantee facility compared with the goal

Volume of investment projects involving ESCOs, FIs and end-users	Outcome Million USD	Goal Million USD	% of Goal / comments
Czech Republic	54.5	8.7	625%
Slovakia	9.0	7.0	129%
Latvia	2.6	7.9	33%
Lithuania	0.9	7.9	12%
Estonia	0.0	7.9	0%
Hungary	140.7	10.4	1353%
Total CEEF	**207.9**	**49.7**	**418%**

New Financial Products Developed

Most of the FI's participating have been active in the development of new financial products. In the case of e.g. Raiffeisen Leasing providing lending to projects developed by Kipszer we notice various types of natural gas projects, for different types of recipients (hospital, railroad station, industrial plant, and private customers) and varying in size from little more than 100,000 USD to over 1,700,000 USD. Here we thus see that the project developer, together with the

same FI (Raiffeisen Leasing) is working with different types of investment projects for different clients, making it worthwhile to use a guarantee.

Blockhouse renovation portfolios were attractive fields to establish new products, as happened in Latvia, Lithuania, and Hungary.

Table ES - 6: New Financial Products developed

FI	Product type[7]
Česká spořitelna (CZ)	Finesa Program – FINancing of Energy Conservation Applications, as well as forfeiting transaction guarantee
GE Money Bank (CZ)	Did not develop new products, but profited from CEEF TA to set up small unit in the bank to support relationship managers
SEB Vilniaus Bankas (LT)	Blockhouse renovation portfolio
Raiffeisen Leasing (HU)	Street lighting projects, gas projects
Raiffeisen Bank (HU)	Blockhouse renovation portfolio
OTP (HU)	Street lightning - Municipalities
ERSTE (HU)	Blockhouse renovation portfolio

Capacity Building of FIs

The TA facility has successfully been providing service within a wide range, which includes: Energy Audit Program; FI support activities; training seminars; product development support; program marketing; workshops and conferences; market surveys; end user seminars; and consultation and financial support.

Local capacity within project developers and FI personnel have improved; at least 1 person per active project development company per country has gained increased knowledge about the EE financing activities and 25% of investment relationship managers in participating banks received training and gained increased knowledge about the EE financing activities. In Hungary, this phase did already take place during the HEECP program. The training and TA led to increased technical understanding of the client's investment plans and not least awareness of the positive economic potential in most EE investments.

With respect to business advisory consultations a target was set of 1-2 per month per country. Except during the last period of the CEEF where the project was slowly being phased out, this target has been largely exceeded in all countries. Business advisory consultations were a large part of the CEEF staff's daily work.

1.4 Assessment of Impact on Country Markets

Market Importance of Participating FIs

It was expected that the participating FIs had a market importance, reflected by the % of markets in terms of balance sheets of 75% by the end of the program. Apart from a successful outcome in Hungary, reaching approximately this goal, this has not been reached as seen in the table.

[7] The table only includes those Financing Institutions where new products have been developed. A complete overview is included in section III.1.2.1

Table ES - 7: Market Importance of Participating FIs

Country and FI	Market importance (% of market in terms of balance sheets)
Czech Republic: Česká spořitelna, CSOB, GE Money Bank	50%
Slovak Republic: Dexia, CSOB	16%
Latvia: SWEDBANK	23%
Lithuania: Hansabankas, SEB Vilniaus Bankas	27%
Hungary: Raiffeisen Leasing, Raiffeisen Bank, OTP, ERSTE, K&H, HVB	73%

Country Assumptions

The CEEF project LogFrame included certain assumptions related to the project development objectives. A summary assessment of these is provided below:

Table ES - 8: Country assumptions

Assumption	Assessment
Macroeconomics favor investments generally	Macro-economic conditions have generally been favorable at the start of programs but recently the business climate in Latvia and the Slovak Republic have been hampered by high interest rates (Latvia) and a volatile currency (Slovak).
Price rationalization continues to improve project economics	True for electricity prices in all countries. Better rationalization of gas prices in the Czech and Slovak Republics
ESCOs and FIs respond to TA and emergence of EE market	True in the Czech and Slovak Republics and Hungary. But in the Baltic countries ESCOs and FIs have responded weakly to the programme initiatives.
EU accession reforms continue in the CEEF countries	All countries are now members of the EU and have to live up to the EU directives

1.5 Assessment of Program Management and Operations

Program Design

The assessment of the program activities and results identified indicates that the overall program concept was well conceived and targeted at encouraging and promoting commercial financing of EE projects. However, the results in the six countries are substantially different. The key factors that appear to have influenced the results in the different countries are:

- EE market maturity and acceptance of the guarantee product
- Government policies and programs
- Energy prices
- Attitudes and interests of FIs
- Staff knowledge, experience and contacts
- Staff capability and relationships with market players

The following are key findings related to the program design:

- The program design should be customized to the country conditions.
- It is important to have skilled and experienced staff in the local offices in each country and to assure that the skills capabilities and experience of the local staff are well-matched to the local conditions and needs.
- The selection of the right partner FIs is critical to program success and, in Hungary and the Czech Republic, led to substantial project volumes.
- The guarantee products offered by IFC need to be competitive in the specific country markets and must be customized to local conditions.
- The decision-making process related to signing GFAs with local FIs, evaluating projects, and modifying/customizing the financial products needs to be flexible and responsive to changing market conditions. Sufficient decision-making authority needs to be delegated to the field staff and to the partner FIs in credit risk assessment as they are closer to the markets and the key stakeholders, and can therefore understand market conditions and needs better than headquarters staff.
- Adequate provision needs to be made in the program design to provide TA to FIs, ESCOs, end users, auditors and other market participants.
- The HEECP and CEEF program design has provided a useful model and important lessons for mainstreaming in IFC's business and is now being replicated in other countries.

Program Organization and Procedures

The program organization was structured appropriately to meet program needs and organizational changes were made to make the program more flexible and responsive. Consolidation of the offices was designed to achieve netter communication and coordination and to make the operations more efficient.

The initial program procedures were deemed by the field staff to be rather cumbersome and time-consuming. However, significant changes were made to streamline the procedures, and these were well-defined and documented in the Operations Manual.

The delegation of authority and responsibility to the field staff for project approval decisions contributed to the larger volume of projects in the latter years of the program.

The TA projects were selected on an ad hoc basis and there appeared to be little documentation on the overall theme and criteria for selection. The field staff reported that the TA contributed substantially to the success of the program. However, there was no formal assessment of the usefulness and effectiveness of the TA from the perspectives of the TA recipients.

1.6 Summary of Key Performance Indicators

Please see the following pages for the summary of the Key Performance Indicators.

Table ES - 9: Summary of Program Outcome and Output Indicators

Performance Indicators	Units	Outcome/Output	Goal	% of Goal/ Comments
Total volume of CO2 (cumulative) emissions avoided with guaranteed and leverages projects	**CEEF**	**310.546**	**1.425.300**	**22%**
• Czech Republic	Tons	162.228	329.000	49%
• Slovakia	Tons	50.546	203.300	25%
• Latvia	Tons	13.502	257.000	5%
• Lithuania	Tons	37.747	239.000	16%
• Estonia	Tons	11.786	307.000	4%
• Hungary	Tons	34.736	90.000	39%
Balance sheet volume of participating FIs as % of total sector				
• Czech Republic	%	50%	75%	67%
• Slovakia	%	16%	75%	21%
• Latvia	%	23%	75%	30%
• Lithuania	%	27%	75%	36%
• Estonia	%	0	75%	0%
• Hungary	%	73%	75%	97%
Active Project Developers seeking project finance from the FIs involved in the facility as % of total				
• Czech Republic	%	3%	75%	3,4%
• Slovakia	%	20%	75%	27%
• Latvia	%	19%	75%	25%
• Lithuania	%	4%	75%	6%
• Estonia	%	0%	75%	0%
• Hungary	%	90%	75%	120%
Volume of investment projects (including leveraged projects) with guarantees involving ESCOs, FIs and end-users	**CEEF**	**329,7**	**162,2**	**203%**
• Czech Republic	Million US$	79,9	33,73	237%
• Slovakia	Million US$	20,4	26,99	76%
• Latvia	Million US$	5,6	30,36	18%
• Lithuania	Million US$	14,1	30,36	47%
• Estonia	Million US$	26,4	30,36	87%
• Hungary	Million US$	183,1	10,4	1761%

New financing products per introduced to the market and marketed by FIs	**#**	**12**	**18**	**67%**
• Czech Republic	#	3	3	100%
• Slovakia	#	1	3	33%
• Latvia	#	2	3	67%
• Lithuania	#	3	3	100%
• Estonia	#	1	3	33%
• Hungary	#	2	3	67%
Volume of investment projects involving ESCOs, FIs and end-users	**CEEF**	**207,9**	**49,7**	**418%**
• Czech Republic	Million US$	54,5	8,7	625%
• Slovakia	Million US$	9,0	7,0	129%
• Latvia	Million US$	2,6	7,9	33%
• Lithuania	Million US$	0,9	7,9	12%
• Estonia	Million US$	0,0	7,9	0%
• Hungary	Million US$	140,7	10,4	1353%
Volume of CO2 emissions avoided due to projects guaranteed	**CEEF**	**145,7**	**434,8**	**34%**
• Czech Republic	Tons/year	88,7	84,9	105%
• Slovakia	Tons/year	21,5	52,4	41%
• Latvia	Tons/year	5,9	66,4	9%
• Lithuania	Tons/year	0,1	61,7	0%
• Estonia	Tons/year	0,0	79,3	0%
• Hungary	Tons/year	29,6	90,0	33%
Maximum relative net GEF cost for avoided CO2 emission for projects covered by guarantees	**CEEF**	**4,1**	**1,46**	**Not met**
• Czech Republic	US$/ton	3,2	1,35	Goal not met
• Slovakia	US$/ton	7,1	2,10	Goal not met
• Latvia	US$/ton	11,3	1,51	Goal not met
• Lithuania	US$/ton	652,1	1,62	Goal not met
• Estonia	US$/ton	n/a	1,26	n/a
• Hungary	US$/ton	10,1	1,26	Goal not met
Levels of maximum claims payments for all guaranteed projects	**%**	**0**	**<25**	**No Claims**

• Czech Republic	%	0	<25	No Claims
• Slovakia	%	0	<25	No Claims
• Latvia	%	0	<25	No Claims
• Lithuania	%	0	<25	No Claims
• Estonia	%	n/a	<25	n/a
• Hungary	%	1,0%	n/a	n/a
Persons in project development (PD) cos. gaining increased knowledge about the EE financing activities.	**#/per PD company**			
• Czech Republic	#	2	1	Met Goal
• Slovakia	#	1 - 2	1	Met Goal
• Latvia	#	1	1	Met Goal
• Lithuania	#	1	1	Met Goal
• Estonia	#	n/a	1	n/a
• Hungary		0-1	1	Did not meet goal
Percentage of investment relation managers in participating FIs trained and gained increased knowledge about the EE financing activities.	**%**			
• Czech Republic	%	Over 25%	25%	Met goal
• Slovakia	%	Over 25%	25%	Met goal
• Latvia	%	Over 25%	25%	Met goal
• Lithuania	%	Over 25%	25%	Met goal
• Estonia	%	n/a	25%	Goal not met
• Hungary		Less than 25%	25%	Goal not met
EE/ESCO/FI business advisory consultations	**#/month**			
• Czech Republic	#	4-5	1-2	Met Goal
• Slovakia	#	2	1-2	Met Goal
• Latvia	#	1	1-2	Met Goal
• Lithuania	#	1-2	1-2	Met Goal
• Estonia	#	0	1-2	Goal not met
• Hungary	#	1-2	1-2	Met Goal

2 Lessons learned in terms of replications of the facility

The lessons learned of the Evaluation Team are summarized below under the following topics:

- Program Objectives and Performance Indicators
- GHG Emission Reductions
- Impact on FIs
- Impact on Country Markets
- Program Management and Operations

Program Objectives and Performance Indicators
A program LogFrame should include performance indicators; which must be based on the specific market and an assessment of potential projects in terms of size and basic key energy figures. Market conditions might change under the implementation of a program and the performance indicators must be reviewed.

GHG Emission Reductions
A new supporting EE and RE program should take systematic advantage of existing subsidy programs by national authorities, which could kick-start the requirement for guarantees in new financing areas, e.g. block housing and/or renewable energy. The CEEF facility could in many cases support a subsidy program and closer liaison with government ministries would be beneficial.

Impact on FIs
Fine-tuning and customization of the RE and EE financing product(s) seems still to be essential in order to cope effectively within different country situations and different end user segments.
Equity constraints with certain ESCO companies seem to be evident and new financing models or tools should be considered – e.g. equity funds tied up for a certain limited period in BOOT (Build-Own-Operate-Transfer) projects.

Impact on Country Markets
The structuring of the guarantee and the risk credit policies should be tailored to match FI demand.
The GFA should be tailored according to each FI and not be based on a master contract. This will increase administrative burden and costs and the local offices should be capable of managing these tasks being provided with the adequate resources.

Program Management and Operations
Local presence in each market, with a field staff having knowledge and understanding of local market conditions and FI and ESCO characteristics is extremely important in program operations.
A Technical Assistance component in important and must be flexible and adapted to market needs.
The delegation of authority and responsibility to the field is very important to the smooth and effective operation of a program. IFC must be able to react effectively and promptly to market changes, to create new products and delivery mechanisms, and develop relationships with the FIs and other program stakeholders.

II. INTRODUCTION, BACKGROUND AND METHODOLOGY

1 The assignment and terms of reference

This is the Final Evaluation of the IFC and GEF funded programs entitled "Hungarian Energy Efficiency Co-Financing Programme" (HEECP I and HEECP II) and "Commercializing Energy Efficiency Finance" (CEEF). A brief description of the program is presented hereafter. The program Logical Framework (LogFrame) is attached as Annex 1.

Specifically the Evaluation includes:

- A concise statement of the avoided GHG emissions stimulated to date by the CEEF and HEECP programs.
- Assessment of the program's broader impact in the (Estonian), Latvian, Lithuanian, Czech, Hungarian and Slovak markets since the start of the program.
- Evaluation of the project's outcomes in relation to its original objectives and documentation of the factors that have most contributed to the CEEF and HEECP program's success and weaknesses including the potential for sustainability.

2 Background

2.1 The CEEF and the HEECP Program

The Commercializing Energy Efficiency Finance Program (CEEF) was launched in April 2003 as a joint program of the International Finance Corporation (IFC) and Global Environment Facility (GEF), both contributing to the program. IFC is acting in its capacity as the Executing Agent for the GEF.

CEEF was initiated, based on the experience from the "Hungarian Energy Efficiency Co-Financing Program" (HEECP), which again was launched in 1997. The rationale for the two programs was that while a large potential had been identified for improvement of energy efficiency in the participating countries, very few energy efficiency projects were being implemented in the 1990s, primarily due to lack of availability of financing resources for such projects. Market conditions during this period indicated that a number of market factors were conducive to the implementation of energy efficiency (EE) projects. The prevailing energy prices were high and increasing, there was substantial inherent inefficiency in energy utilization, a number of energy service providers were entering the market, and financial markets were evolving. However, available financing for EE projects was limited, resulting from the following barriers:

- Weak credit and unfamiliar risk profiles of energy users and energy service companies (ESCOs)
- Extremely cautious financial institution (FI) lending practices
- Lack of collateral value of EE project equipment
- Lack of relevant expertise and capacity in local FIs
- Poor capability on the part of project hosts and ESCOs to prepare "bankable" EE projects
- Relatively high "transaction costs" associated with EE project development and financing
- Lack of medium-to-long term financing needed to allow EE projects to be self-financing through savings
- High interest rates.

To address these barriers, IFC designed HEECP and CEEF to provide two key products – risk-sharing through the provision of partial credit guarantees, and technical assistance (TA) for training and capacity building to FIs, ESCOs/project developers and project hosts.

The first initiative, the HEECP program, started as a pilot phase with HEECP1, in place from 1997 to 2001 in Hungary. An evaluation of HEECP1 conducted in 2000 concluded that the program had developed and utilized innovative financial products to address credit risk barriers and had contributed to the improvement of the knowledge and capability of FIs and project developers, thereby leading to successful mobilization of increased amounts of financing for EE projects. Based on these results, IFC, in cooperation with GEF, launched HEECP2 in 2001, providing additional funding for credit guarantees and technical assistance, as well as the present CEEF program in 2003 based on the same set-up. In 2005 HEECP 2 was merged with the CEEF program.

2.2 Program Objectives

The CEEF was originally designed to meet the objectives of the Global Environment Facility (GEF) by promoting and enhancing commercial financing of energy efficiency projects, thereby leading to reduction of emissions of greenhouse gases (GHG) and creation of a sustainable market in the 5 CEEF countries for energy efficiency project development and financing. The two key tools introduced by CEEF to achieve these objectives were (i) risk-sharing and risk management through partial credit guarantees provided to local financial institutions (FIs) for loans to energy efficiency projects and (ii) technical assistance for capacity building within FIs, energy service companies (ESCOs)/project developers, and project hosts.

The primary short-term measures to achieve the objectives of CEEF are reduction of credit risk, lowering of transaction costs, and development of institutional capacity in the CEEF countries' EE and financial services industries to develop and finance EE investment projects.

Specifically HEECP and CEEF were designed to:

- Reduce credit risk on EE financing for eligible local FIs (making transactions possible and gaining credit approval for use of the FI's own funds)
- Provide targeted technical assistance to stimulate deal flow and uptake of financial products offered under the guarantee facility (in support of both partner FI marketing and delivery of EE financing services and energy

services companies in the preparation of projects and programs for investment)
- Reduce transaction costs borne by project participants
- Enable longer term financing (to lower annual finance payments, finance longer payback "deep retrofit" projects, and make EE projects more attractive to the end-user by allowing them to be self-financing from energy cost savings)
- Help create a sustainable market for financing of EE projects.

HEECP and CEEF were expected to contribute to national and global environmental objectives by creating economic and environmental benefits including:

- Avoided capital costs for new power generation and transmission/distribution capacity
- Reduced foreign exchange costs for fossil fuel imports
- Reduced state deficits from direct and indirect energy costs
- Cost-effective reductions of global greenhouse gas (GHG) emissions and local pollutants.
- Reduction in GHG emissions to assist CEEF countries in fulfilling its commitments under the U.N. Framework Convention on Climate Change (FCCC).

2.3 Rationale for GEF Funding

IFC designed HEECP and CEEF to meet the GEF's objectives of seeking cost-effective means to reduce GHG emissions. The programs were designed to be consistent with and responsive to the mandate of the GEF Operational Strategy, with the following goals:

- Facilitate and leverage private sector capital, applying resources in an incremental fashion to remove existing financing barriers to EE project implementation
- Develop and use innovative non-grant financing modalities which had till then never been demonstrated in the GEF
- Encourage entry of new EE financing players
- Build domestic EE financing capacity and experience
- Accelerate implementation and acceptance of commercial EE technologies and generally promote development of a sustainable EE project and financing market.

3 Methodology

This is the evaluation of the IFC funded programme entitled "Commercializing Energy Efficiency Finance" (CEEF) including the former programme in Hungary called "Hungarian Energy Efficiency Co-Financing Programme I & 2 (HEECP I & 2) and the merger of Hungary from 2005 into the CEEF programme. A brief description of the programs is presented hereafter. The CEEF program's Logical Framework (LogFrame) is attached as Annex 1.

The Evaluation Team visited the 6 CEEF countries before the closure of the offices in mid 2008 and selected countries in 2009 as well as Washington IFC HQ. After final closure local consultants during spring and summer 2009 monitored all projects in the 5 CEEF countries while for Hungary an assessment was performed by the local company DUNA – originally initiated by IFC – on a sample basis of the portfolio. In some countries guarantees have been issued close up to 31 December 2008.

The evaluation task ties in with the monitoring and evaluation of the HEECP and CEEF programs. For HEECP I and II this is a supplemental Evaluation from May 2005 and for CEEF a Mid-term Review from December 2006. The objective of the evaluation is to assess the performance, operation and results to date of the programs. Specifically the evaluation includes:

- A concise statement of the avoided GHG emissions stimulated to date by the CEEF program for the 5 countries under CEEF and also later for Hungary under CEEF and the HEECP program in Hungary.
- Assessment of the program's broader impact in the (Estonian), Latvian, Lithuanian, Czech, Slovak and Hungarian markets since the start of the programs.
- Evaluation of the project's outcomes in relation to its original objectives and documentation of the factors that have most contributed to the program's success and weaknesses including the potential for sustainability.

The approach used for the evaluation of the CEEF program included the following:

- Preparation of Interview Guides for IFC Headquarters staff, IFC local (local refer to IFC employees in the countries Estonia, Latvia, Lithuania, Czech and Slovak Republics and Hungary) staff, FIs, and ESCOs.
- In-person interviews with key individuals involved in program management at IFC headquarters, all of the staff in IFC local offices, all participating FIs, selected non-participating FIs, and ESCOs.
- Telephone interviews with IFC individuals where in-person meetings could not be arranged
- Review of project documents, including individual project evaluation reports
- Calculation of the direct energy and carbon savings from the projects implemented using the CEEF program guarantees based on in-field information obtained by local consultancy companies on all guaranteed projects for all countries except for Hungary where a sample has been applied due to numbers of the portfolio.
- Assessment of program impacts on the FIs and on the energy markets
- Assessment of program management and operations
- Development of lessons learned.

III. CEEF FINAL EVALUATION - MAJOR FINDINGS AND CONCLUSIONS

1 Programme Results

This section of the report is describing Programme Results.

The Programme has been under implementation since 2003 and outputs have been delivered within 2 main areas; guarantees issued to energy efficiency projects and the provision of technical assistance to various stakeholders to enhance programme objectives.

In order to assess the programme it is necessary to compare the quantitative and qualitative information collected with the programme's objectives and outputs. During the implementation of the programme the logical framework (Log Frame) was revised basically to establish clarity on measurable indicators. It is against this Log Frame that the programme is assessed.

In the following discussion the assessment is divided into 4 areas:

- Assessment of Impact on GHG Emissions, i.e. CO_2 reductions
- Assessment of Impact on FIs Involved
- Assessment of Impact on Country Markets
- Assessment of Programme Management and Operations

1.1 Assessment of Impact on GHG Emissions

The CEEF programme had from its very start no particular focus on specific operational goals in terms of e.g. loan arrangement or actual GHG/CO_2reductions but focused on the process and the introduction of the guarantee facility. Once the HEECP programme was completed by end 2005 and Hungary merged into CEEF, goals were not introduced either. The evaluation team has sought to compare the Hungarian results with the results in the 5 CEEF countries and has also redefined the CEEF LogFrame including comparable goals for Hungary[8] after Hungary joined CEEF. We thus have the following goals:

(b) GEF Operational Program Goal Greenhouse gas emissions reductions via removal of barriers to implementation of energy efficiency projects.

(d)((ii) GHG/CO2 reductions achieved through efficient use of GEF funds

INDICATORS:

- **Volume of CO_2 emissions avoided after 4 years to become at least 1,425,300 tons/year due to leveraged and guaranteed projects.**
  - Czech Republic 329,000 t/year
  - Slovakia 203,300 t/year
  - Latvia 257,000 t/year
  - Lithuania 239,000 t/year
  - Estonia 307,000 t/year
  - Hungary 90,000 t/year[9]

- **Volume of CO_2 emissions avoided after 4 years to become at least 434,752 tons/year due to projects guaranteed under the facility.**
  - Czech Republic 84,912 t/year
  - Slovakia 52,432 t/year
  - Latvia 66,352 t/year
  - Lithuania 61,712 t/year
  - Estonia 79,344 t/year
  - Hungary 90,000 t/year

- **Relative net GEF cost for avoided CO_2emission is after 4 years below USD1.46 / ton CO_2 under the facility.**
  - Czech Republic USD1.35 / ton CO_2
  - Slovakia USD2.10 / ton CO_2
  - Latvia USD1.51 / ton CO_2
  - Lithuania USD1.62 / ton CO_2
  - Estonia USD1.26 / ton CO_2
  - Hungary USD1.26 / ton CO_2

- **Levels of claims payments is below 25% for all guaranteed projects**

[8] The Hungarian CEEF goals have been established by comparing various country specific figures like population, GDP and GDP/ capita, total energy consumption and distribution.

[9] For Hungary the volume of expected CO2 saving only includes projects implemented based on guarantees issued since the it could not be expected that the CEEF programme would generate leveraged projects due to the fact that these were already established during the HEECP programme.

1.1.1 Direct Impacts

Guarantees Issued

During the evaluation it has been established that the CEEF programme I has issued 30 guarantees in Czech Republic, Slovak Republic, Lithuania and Latvia. The tables below show the details of the 30 guarantees.

These have been issued to small as well as big projects within the boundaries of the programme and they all cover individual projects besides two block housing projects in Latvia and Lithuania.

The table below shows further the details of the guarantees approved under CEEF5 by the end of the programme.

After the inclusion of Hungary in 2005 in the CEEF programme further projects and guarantees were added to the portfolio and in total Hungary CEEF contributed with especially 2 block housing framework (covering 694 block houses) plus a number of individual guarantees and projects bringing CEEF6 up to a total amount of approved guarantees of USD 49.5 millions.

HEECP: As for HEECP I and II the number of guarantees added up 43 including 3 blockhouse portfolios and a gashouse portfolio with a total amount of approved guarantees of USD 4.2 millions.

New glass furnace at Ruckl Crystal, Czech Republic

Table 1: Guarantees issued for CEEF and HEECP

Country	Project Description	Project Type	Project Developer/ ESCO	FI	Total Project Costs (US$)	Loan Amount (US$)	Guarantee Value (US$)	Guarantee %
Czech Republic	Fitmin Biomass Boilers	Biomass Crop	Fitmin a.s.	CS	390,669	269,747	134,874	50%
Czech Republic	Biopellets Plant Zlate Hory	Wood Pellets Production Plant	Jesenicka Biopaliva Ltd.	CS	408,789	302,858	151,429	50%
Czech Republic	Drop-Press System Upgrade	Industrial heating upgrade	Drop-Press Ltd.	CS	202,462	202,462	101,231	50%
Czech Republic	BOSS Eng. Wood Cogen	Biomass Cogen Plant	Boss Engineering Ltd.	CS	223,288	178,971	89,485	50%
Czech Republic	SAVAS Hyskov System upgrade	Industrial heating upgrade	SAVAS jsc.	CS	153,404	136,359	68,179	50%
Czech Republic	SVEP Wind Power Plant	Wind Power Plant 2MW	SVEP Ltd.	CS	2,704,966	1,797,945	898,973	50%
Czech Republic	Libocany SHPP	Small Hydro Power Plant	RenoEnergie jsc.	CS	2,056,295	1,209,338	604,669	50%
Czech Republic	Zelena louka SHPP	Small Hydro Power Plant	MVE Sestidomi Ltd.	CS	861,883	773,134	309,253	40%
Czech Republic	Delta Bakery	Forfaiting of ESCo rec., SME EE	Siemens Ltd.	CS	299,397	293,604	146,802	50%
Czech Republic	HT Energo	Wind Generator 250 kW	HT Energo	CS	425,382	152,489	76,244	50%
Czech Republic	Martinak Joinery - Boss II	Biomass Cogen Plant 100 kW	Martinak	CS	0	0	0	0%
Czech Republic	RenoEnergie 2	Small Hydro Power Plant	Renoenergie	CS	3,176,479	1,838,320	919,160	50%
Czech Republic	SVEP 2	Wind Generators	SVEP	CS	6,390,719	2,831,580	1,415,790	50%
Czech Republic	Photovoltaic Power Plant Bušanovice I	PV solar	Korowatt	CS	3,868,979	2,103,878	1,051,939	50%
Czech Republic	Building biogas station for electricity generation - Suchohrdly	Biogas	Renergie	CSOB	2,056,295	1,209,338	543,637	45%
Czech Republic	Photovoltaic Power Plant Homole I	PV solar	In-Power	CS	1,428,980	464,323	232,162	50%
Czech Republic	Natur Energo	Wind	Natur Energo	CS	3,083,412	1,574,661	781,250	50%
Czech Republic	S&M	Wind	S&M	CS	10,278,917	9,004,502	2,974,817	33%
Czech Republic	Winding WE	Wind	Winding WE	CS	8,923,666	8,031,299	2,521,587	31%
Czech Republic	HT Wind	Wind	HT Wind	CS	2,648,248	2,378,706	1,189,353	50%
Czech Republic	Ruckl Crystal, Inc.	New glass furnace	Ruckl Crystal, Inc.	CS	1,681,513	1,681,513	840,757	50%
Czech Republic	Komterm, Ltd.	Biomass	Energetika Koprivnice	CS	3,270,722	3,270,722	1,635,361	50%
Czech Republic	**Czech Republic**				**54,534,465**	**39,705,749**	**16,686,952**	**42%**
Slovakia	Snina n/v DH	District heating upgrade	Tenergo	Dexia	2,781,486	1,947,040	389,408	20%
Slovakia	Devinska n/v DH	District heating upgrade	Tenergo	Dexia	1,140,409	1,091,231	545,616	50%
Slovakia	Termonova Nova Dubnica	Biomass Boiler conv.	Termonova	Dexia	5,118,550	3,963,206	1,981,603	50%
Slovakia	**Slovakia**				**9,040,446**	**7,001,478**	**2,916,627**	**42%**
Latvia	Greenhouse cogeneration station in Livbereze Energija I	Co-generation	Berzes Darzeni	HB-LA	613,805	409,204	359,626	50%
Latvia	Greenhouse cogeneration station in Livbereze Energija II	Co-generation	Berzes Darzeni	HB-LA	619,710	495,768	399,884	50%
Latvia	Installation of co-generation units in a meat processing factory FOREVERS	Co-generation/Industrial	SIA FOREVERS	Hansabanka	586,924	563,053	232,422	40%
Latvia	6 block houses in Riga	Blockhouse renov.		Hansabanka	790,289	526,859	273,967	50%
Latvia	**Latvia**				**2,610,728**	**1,994,883**	**1,265,899**	**63%**
Lithuania	4 block houses in Vilnius	Blockhouse renov.		SEB	940,051	229,422	117,005	51%
Lithuania	**Lithuania**				**940,051**	**229,422**	**117,005**	**51%**
Estonia	**Estonia**				**0**	**0**	**0**	**0**
All 5	**GRAND TOTAL CEEF5**				**67,125,689**	**48,931,532**	**20,986,483**	**43%**

Country	Project Description	Project Type	Project Developer/ ESCO	FI	Total Project Costs (US$)	Loan Amount (US$)	Guarantee Value (US$)	Guarantee %
Hungary	Gas Retail Portolio	Natural gas	-	Raiff Lease	1.739.130	1.500.000	170.573	11%
Hungary	Hospital gas-fired heating system	Natural gas	Kipszer	Raiff Lease	115.707	115.707	57.854	50%
Hungary	Meat packing plant gas boiler system	Natural gas	Kipszer	Raiff Lease	150.917	114.679	57.339	50%
Hungary	MAV Railroad station gas heating system	Natural gas	Kipszer	Raiff Lease	825.903	825.903	412.951	50%
Hungary	SEETEK Hospital heating project	Natural gas	Kipcalor	Raiff Lease	1.205.210	518.370	259.185	50%
Hungary	BUDAKESZI Block housing gas heating system	Natural gas	Slant-Fin	Raiff Lease	37.522	36.741	18.371	50%
Hungary	BEKES Block housing gas heating system	Natural gas	Slant-Fin	Raiff Lease	74.502	69.466	34.733	50%
	Hungary HECCP I				**4.148.891**	**3.180.865**	**1.011.006**	**32%**
Hungary	Dunaharaszti Municipality Streetlighting	Electricity	Okolux-2000	OTP	14.428	11.543	5.771	50%
Hungary	Vertesszolos Municipality Streetlighting	Electricity	Okolux-2000	OTP	27.335	21.868	10.934	50%
Hungary	Sarud Municipality Streetlighting	Electricity	Okolux-2000	OTP	17.121	13.697	6.848	50%
Hungary	Cserepfalu Municipality Streetlighting	Electricity	Okolux-2000	OTP	14.351	11.481	5.741	50%
Hungary	Onga Municipality Streetlighting	Electricity	Okolux-2000	OTP	8.955	7.164	3.582	50%
Hungary	Adacs Municipality Streetlighting	Electricity	Okolux-2000	OTP	36.081	28.865	14.432	50%
Hungary	Alsotelkes Municipality Streetlighting	Electricity	Okolux-2000	OTP	2.441	1.953	976	50%
Hungary	Malyi Municipality Streetlighting	Electricity	Okolux-2000	OTP	24.608	19.687	9.843	50%
Hungary	Gyongyoshalasz Municipality Streetlighting	Electricity	Okolux-2000	OTP	10.991	8.793	4.396	50%
Hungary	Gyongyostarjan Municipality Streetlighting	Electricity	Okolux-2000	OTP	9.755	7.804	3.902	50%
Hungary	Tibolddaroc Municipality Streetlighting	Electricity	Okolux-2000	OTP	19.540	15.632	7.816	50%
Hungary	Tornaszentjakab Municipality Streetlighting	Electricity	Okolux-2000	OTP	5.309	4.247	2.124	50%
Hungary	Hernadkak Municipality Streetlighting	Electricity	Okolux-2000	OTP	15.651	12.521	6.260	50%
Hungary	Hollohaza Municipality Streetlighting	Electricity	Okolux-2000	OTP	20.833	16.667	8.333	50%
Hungary	Bukkzserc Municipality Streetlighting	Electricity	Okolux-2000	OTP	17.820	14.256	7.128	50%
Hungary	Karancskeszi Municipality Streetlighting	Electricity	Okolux-2000	OTP	33.398	26.718	13.359	50%
Hungary	Sarisap Municipality Streetlighting	Electricity	TIVI	Raiff Lease	36.132	32.519	16.259	50%
Hungary	Kesztolc Municipality Streetlighting	Electricity	TIVI	Raiff Lease	26.582	23.923	11.962	50%
Hungary	Tokodaltaro Municipality Streetlighting	Electricity	TIVI	Raiff Lease	25.903	23.313	11.656	50%
Hungary	Uny Municipality Streetlighting	Electricity	TIVI	Raiff Lease	10.415	9.373	4.687	50%
Hungary	Nyergesujfalu Municipality Streetlighting	Electricity	TIVI	Raiff Lease	85.322	76.789	38.395	50%
Hungary	Caloretas Radisson SAS Hotel Cogeneration Project	Cogen	Caloretas	ERSTE	1.415.775	1.224.019	94.249	8%
Hungary	Eger Hotel Park Cogeneration Project	Cogen	EHPE	ERSTE	2.631.327	2.368.194	263.133	11%
Hungary	Sopron Swedwood Furniture Cogeneration Project	Cogen	SSBE	ERSTE	4.180.884	3.762.796	430.150	11%
Hungary	HUMAN Tri-generation Project*	Cogen	Human Co.	ERSTE	16.463.091	14.816.782	1.646.309	11%
Hungary	Hotel Ramada Balaton CHP Project	Cogen	Calorinvest	ERSTE	1.328.622	1.195.794	132.862	11%
Hungary	105 Epitok Block House Window Change Project	Renovation	Ablakcentrum	Raiff Bank	222.022	59.090	20.682	35%
Hungary	Lajta Block House Window Change Project	Renovation	Ablakcentrum	Raiff Bank	165.370	55.123	19.293	35%
Hungary	Distherm District Heating Reconstruction Project	DH	Prometheus	K&H	681.481	253.507	88.727	35%
Hungary	Kőgaz Block house heating	DH	Apathy and trs	Raiff Bank	61.472	47.286	16.550	35%
Hungary	Bonyhád Municipality Streetlighting Project	Electricity	Lux-Invest	HVB	658.316	658.316	230.411	35%
Hungary	#01 Építők, Győr	Renovation	n/a	Raiff Bank	217.746	72.582	25.404	35%
Hungary	#02 Kodály Z., Paks	Renovation	n/a	Raiff Bank	117.191	33.105	11.587	35%
Hungary	#03 Kodály Z., Sopron	Renovation	n/a	Raiff Bank	69.020	21.276	7.446	35%
Hungary	#11 Szinyei u. 10, Miskolc	Renovation	n/a	ERSTE	215.927	70.951	14.190	20%
Hungary	**Hungary HEECP II**				**28.891.214**	**25.027.633**	**3.195.399**	13%

Country	Project Description	Project Type	Project Developer/ ESCO	FI	Total Project Costs (US$)	Loan Amount (US$)	Guarantee Value (US$)	Guarantee %
Hungary	#07 Landorhegyi u. 34, Zala	Renovation	n/a	ERSTE	104.181	104.181	15.242	15%
Hungary	#09 XII. Housing Assoc., Zal	Renovation	n/a	ERSTE	255.508	255.508	42.159	17%
Hungary	#10 Varoskapu Block House	Renovation	n/a	ERSTE	56.794	55.374	11.075	20%
Hungary	674 Block House PPG Frame	Renovation	n/a	Raiffeisen	116.959.982	44.984.608	22.875.200	51%
Hungary	20 Block House PPG Frame	Renovation	n/a	ERSTE	7.419.998	2.853.845	1.481.199	52%
Hungary	KŐBÁNYA Somfa köz 11. Block House, Budapest	Renovation	Lagross	Raiff Bank	499.022	330.926	165.463	50%
Hungary	KŐBÁNYA Somfa köz 2.-12. Block House, Budapest	Renovation	Lagross	Raiff Bank	1.424.003	885.247	442.624	50%
Hungary	KŐBÁNYA Kékvirág 2.-16. Block House, Budapest	Renovation	Lagross	Raiff Bank	1.971.299	1.339.123	669.561	50%
Hungary	KŐBÁNYA Bihari u. 3.-5. Block House, Budapest	Renovation	Lagross	Raiff Bank	1.988.349	1.357.070	678.535	50%
Hungary	ETELE u. 2-24. Block House, Budapest	Renovation	n/a	Raiff Bank	2.129.259	732.700	366.350	50%
Hungary	#04 Sárbeki 105-106, Tatabanya	Renovation	n/a	Raiff Bank	24.774	24.774	8.671	35%
Hungary	#05 Sárbeki 107-108, Tatabanya	Renovation	n/a	Raiff Bank	19.465	19.465	6.813	35%
Hungary	#06 Sárbeki 110, Tatabanya	Renovation	n/a	Raiff Bank	30.083	30.083	10.529	35%
Hungary	#07 XXII. Block House, Zalaegerszeg	Renovation	n/a	Raiff Bank	96.330	88.131	30.846	35%
Hungary	#08 Kabar, Budapest	Renovation	n/a	Raiff Bank	73.879	73.879	25.858	35%
Hungary	#11 Banhidai 303-304, Tatbanya	Renovation	n/a	Raiff Bank	35.928	35.928	12.575	35%
Hungary	#09 Moricz Zsigmond, Nyiregyhaza	Renovation	n/a	Raiff Bank	87.833	54.262	8.745	16%
Hungary	#10 Teleki u.15, Nagyk	Renovation	n/a	Raiff Bank	66.705	66.705	23.347	35%
Hungary	#12 Zemplen Gyozo u.	Renovation	n/a	Raiff Bank	186.188	186.188	65.166	35%
Hungary	#16 Verebély 16, Tatab	Renovation	n/a	Raiff Bank	7.762	7.762	2.717	35%
Hungary	#15 Sárbeki 301, Tatabanya	Renovation	n/a	Raiff Bank	31.376	31.376	10.982	35%
Hungary	#13 Csengettyű u. 7, Budapest	Renovation	n/a	Raiff Bank	74.449	74.449	26.057	35%
Hungary	#14 Csengettyű u. 9, Budapest	Renovation	n/a	Raiff Bank	80.778	80.778	28.272	35%
Hungary	#17 Verebély 24-26, Ta	Renovation			14.995	14.995	5.248	35%
Hungary	#18 Vitalis 29-31, Tatabánya	Renovation	n/a	Raiff Bank	8.655	8.655	3.029	35%
Hungary	#05 Kodály Zoltán u. 19-29, Győr Block House	Renovation	n/a	Raiff Bank	434.198	133.499	13.350	10%
Hungary	#29 Fillér út 78-82., Budapest	Renovation	n/a	Raiff Bank	92.972	39.576	7.915	20%
Hungary	#06 Soproni u. 22, Győr Block House	Renovation	n/a	Raiff Bank	53.567	16.819	1.682	10%
Hungary	#19 Szt. István Krt. 31-39., Jászberény	Renovation	n/a	Raiff Bank	45.226	44.864	8.973	20%
Hungary	#22 Újpalota 16. Housing Assoc I., Bp.	Renovation	n/a	Raiff Bank	250.788	221.642	44.328	20%
Hungary	#23 Újpalota 16. Housing Assoc II., Bp.	Renovation	n/a	Raiff Bank	151.047	151.047	30.209	20%
Hungary	#27 Bercsényi u. 2-8., Ercsi	Renovation	n/a	Raiff Bank	97.245	86.440	17.288	20%
Hungary	#28 Horváth József u. 13-15., Sopron	Renovation	n/a	Raiff Bank	40.186	13.395	2.679	20%
Hungary	#30 Makó u. 5., Sopron	Renovation	n/a	Raiff Bank	115.648	38.562	7.712	20%
Hungary	#31 Füredi tér 8. Housing Assoc., Bp.	Renovation	n/a	Raiff Bank	90.547	90.547	18.109	20%
Hungary	#34 Sólyi u. 2., Veszprém	Renovation	n/a	Raiff Bank	28.789	26.366	5.273	20%
Hungary	#17 Kelemen u. 14-20, Székesfehérvár	Renovation	n/a	Raiff Bank	24.969	24.969	4.994	20%

Country	Project Description	Project Type	Project Developer/ ESCO	FI	Total Project Costs (US$)	Loan Amount (US$)	Guarantee Value (US$)	Guarantee %
Hungary	#24 IV. László u. 65, Sopron	Renovation	n/a	Raiff Bank	66.717	13.389	2.678	20%
Hungary	#25 Juharfa u. 22, Sopron	Renovation	n/a	Raiff Bank	112.730	15.872	3.174	20%
Hungary	#35 Május 1 u. 49., Tata	Renovation	n/a	Raiff Bank	23.501	23.501	4.700	20%
Hungary	#13 Földes Gábor u. 4, Győr	Renovation	n/a	Raiff Bank	220.390	61.212	12.242	20%
Hungary	#14 Földes Gábor u. 6, Győr	Renovation	n/a	Raiff Bank	249.016	69.837	13.967	20%
Hungary	#18 Jutasi u. 75, Veszprém	Renovation	n/a	Raiff Bank	32.502	32.502	6.500	20%
Hungary	#32 Tolnai u. 8-22., Székesfehérvár	Renovation	n/a	Raiff Bank	235.945	43.619	8.724	20%
Hungary	#21 Zombor u. 9-13, Győr	Renovation	n/a	Raiff Bank	100.510	27.846	5.569	20%
Hungary	#01 Sziget u. 33-45, Székesfehérvár Block House	Renovation	n/a	Raiff Bank	680.086	249.932	49.986	20%
Hungary	#02 Rákóczi u. 31-33, Székesfehérvár Block House	Renovation	n/a	Raiff Bank	115.656	35.936	7.187	20%
Hungary	#08 XXX. Housing Association, Győr	Renovation	n/a	Raiff Bank	280.462	78.124	15.625	20%
Hungary	#12 Szabolcska u. 25-29, Győr	Renovation	n/a	Raiff Bank	109.821	27.761	5.552	20%
Hungary	#20 XXX. Housing Association II., Győr	Renovation	n/a	Raiff Bank	372.415	104.359	20.872	20%
Hungary	#03 Arany János 2-8, Nyíregyháza Block House	Renovation	n/a	Raiff Bank	317.402	211.601	37.030	18%
Hungary	#04 Árpád u. 60-62, Nyíregyháza Block House	Renovation	n/a	Raiff Bank	83.384	60.784	11.546	19%
Hungary	#15 Lomnic 30-32 Housing Assoc., Győr	Renovation	n/a	Raiff Bank	81.604	27.226	5.445	20%
Hungary	#16 Horizont Housing Assoc., Budapest	Renovation	n/a	Raiff Bank	120.860	120.860	24.172	20%
Hungary	#26 Rácz Aladár u. 7, Budapest	Renovation	n/a	Raiff Bank	65.950	65.950	12.241	19%
Hungary	#33 Eperjesi u. 3., Kistarcsa	Renovation	n/a	Raiff Bank	31.009	29.985	5.997	20%
Hungary	Belvarosi	Renovation	n/a	Raiff Bank	611.909	611.909	305.955	50%
Hungary	Bekasmegyer	Renovation	n/a	Raiff Bank	1.049.783	1.049.783	524.892	50%
Hungary	Cothec	Renovation	n/a	Raiff Bank	696.304	535.619	267.809	50%
	Total CEEF Hungary only				**140.730.735**	**58.081.347**	**28.530.640**	**49%**
	Total HEECP & CEEF Hungary only				**173.770.840**	**86.289.845**	**32.737.045**	**38%**
	Total CEEF				**207.856.424**	**107.012.879**	**49.517.124**	**46%**
	Total HEECP				**33.040.105**	**28.208.498**	**4.206.405**	**15%**
	TOTAL CEEF & HECCP				**240.896.529**	**135.221.377**	**53.723.529**	**40%**

The total volume of the guarantees under CEEF has been USD 49.5 million and represents a total volume of investment of approximately USD 208 million and approved loans of USD 107 million.

On top of the USD 49.5 million the former HEECP contributed with USD 4.2 million bringing the total guarantees up to US 53.7 million.

Up to the year 2006 the USD currency was applied to calculate the total guarantees issued and the outstanding liabilities. After 2006 this changed to become the Euro. In order to keep track of the initial targets of the programme expressed in USD the programme has kept track of both currencies. In EUR the total guarantees issued under the programme became EUR 43.2 million while the outstanding liability is EUR 36.8 million.

By applying the exchange rate from 31-12-2008 between EUR and USD on the EUR figures above the equivalent figures in USD are 60.4 million for guarantees issued and 51.4 million as outstanding liability.

The EUR converted 43.2 million to USD 60.4 million can be compared to the actual guarantees issued in USD of 53.7 million if the principle before 2006 had continued. In line with this the outstanding liability in USD becomes 51.4 million.

This volume covers projects where the loans have been repaid and others were the loan amount is very close to the original amount.

In terms of investment volume the most important **types of projects** approved under the facilities are projects for block house renovations and so-called individual energy projects covering cogeneration, wind projects, gas fired boilers and hydro power. They cover about 99% of the value of the total investments in the ratio 3 to 2. The remaining 1% is covered by street lightning projects and a gas retail portfolio project. In terms of issued loans the ratio between the two big groups is 2 to 3 and representing 98% of all loans and 1.2:1 in terms of issued guarantees.

In terms of **numbers,** most guarantees have been issued for blockhouses. They represent almost 95% of all guarantees issued almost all of them issued in Hungary under the CEEF programme.

End users besides the blockhouses have to a large extent been industries but also a large group of wind farms and hydro power stations have addressed the electricity grid directly.

Country wise the Czech Republic and Hungary hold the largest number of projects and guarantees followed by the Slovak republic, Latvia, and finally Lithuania with only 1 project (portfolio). In Estonia there has been no booking of deals.

In Estonia a national guarantee scheme was already in place in 2003 and with a low premium and favorable conditions it never allowed the CEEF guarantee to get foot hold; while in Lithuania the Banks working under a GFA had difficulties in accepting the level of the premium compared to the risk sharing. Furthermore the

ESCO markets in the Baltics turned out to be less developed than in the Slovak and Czech Republics and in Hungary.

Individual projects are not described here, but background information is kept in individual questionnaires for the ESCOs involved in the evaluation. All of the projects fulfill the criteria of addressing energy efficiency. The stand-alone wind farms and hydropower systems create fossil fuel savings.

Energy Savings and CO_2 Reductions

The table 2 below shows for all the guaranteed projects the investment volume and the corresponding yearly energy- and CO_2 reductions. The Evaluation Team, assisted by local consultants, has performed the calculations and verifications of these savings and CO_2 calculations. Estimates of the project investment relative to CO_2 reductions and energy savings have been added to the individual projects to show the $ of investment per unit of CO_2 and energy reductions in order to be able to benchmark projects individually, by country and regionally.

In the Czech Republic the verification process showed that the avoided CO_2 verified under the 2006 review in total had declined by 28% - one project with a guarantee signed never materialized - and also the projects added since have in total led to less CO_2 reductions than planned when approved. Still; the programme has in the Czech Republic has been able to produce many and very good and rather big individual projects mainly within the renewable energy sector. Some of latest projects are still in the very beginning of the production and have not completed a full year's production. In the Slovak Republic no new projects have been added and the data collection at the 3 sites showed that the calculated savings back in 2006 have been maintained.

In Latvia the original project at Livberze has been implemented with very good results and second project has been implemented during 2009. The cogen project at Meat factory Forevers has resulted in a small decrease of CO_2 emission due to the special mix of imported electricity to the country e.g. from the nuclear power plant Ignalina in Lithuania. Further to this a blockhouse project was implemented although in a reduced size as originally planned. A project at a paper mill which originally was planned to take place and was included in the 2006 review never materialised.

For Hungary a special review was initiated by the local IFC office in 2008 through a local consultancy company – Duna. The review has focused on sampling the blockhouse portfolio and based on 6 different types of projects assessed the planned reductions with the actual reductions. Based on these results the Evaluation Team has applied the actual energy savings and compared those with the actual investments and calculated the following indexes:

- Obtained CO_2 reductions: 0,21 ton/USD (1000)
- Obtained energy saving: 3,39 GJ/USD (1000)

These indexes have been applied throughout the portfolio on the block house portfolio.

Table 2: Investment volume and corresponding yearly energy and CO2 reductions

Country	Project Description	Project Type	Total Project Costs (US$)	Savings / Year GJ	CO2 ton/year	Total Project Costs US$/ton CO2	Total Project Costs US$/GJ
Czech Republic	Fitmin Biomass Boilers	Biomass Crop	390,669	-	441	887	n/a
Czech Republic	Biopellets Plant Zlate Hory	Wood Pellets Production Plant	408,789	n/a	(322)	(1,270)	n/a
Czech Republic	Drop-Press System Upgrade	Industrial heating upgrade	202,462	6,250	347	583	32
Czech Republic	BOSS Eng. Wood Cogen	Biomass Cogen Plant	223,288	-	34	6,610	n/a
Czech Republic	SAVAS Hyskov System upgrade	Industrial heating upgrade	153,404	2,898	290	529	53
Czech Republic	SVEP Wind Power Plant	Wind Power Plant 2MW	2,704,966	-	4,635	584	n/a
Czech Republic	Libocany SHPP	Small Hydro Power Plant	2,056,295	-	3,770	545	n/a
Czech Republic	Zelena louka SHPP	Small Hydro Power Plant	861,883	-	1,605	537	n/a
Czech Republic	Delta Bakery	Forfaiting of ESCo rec., SME EE	299,397	5,469	304	985	55
Czech Republic	HT Energo	Wind Generator 250 kW	425,382	-	*218*	1,953	n/a
Czech Republic	Martinak Joinery - Boss II	Biomass Cogen Plant 100 kW	-	-			
Czech Republic	RenoEnergie 2	Small Hydro Power Plant	3,176,479	-	3,947	805	n/a
Czech Republic	SVEP 2	Wind Generators	6,390,719	-	5,902	1,083	n/a
Czech Republic	Photovoltaic Power Plant Bušanovice I	PV solar	3,868,979		838	4,618	n/a
Czech Republic	Building biogas station for electricity generation - Suchohrdly	Biogas	2,056,295		*2,733*	752	n/a
Czech Republic	Photovoltaic Power Plant Homole I	PV solar	1,428,980		*195*	7,336	n/a
Czech Republic	Natur Energo	Wind	3,083,412		*4,583*	673	n/a
Czech Republic	S&M	Wind	10,278,917		*3,087*	3,329	n/a
Czech Republic	Winding WE	Wind	8,923,666		*10,697*	834	n/a
Czech Republic	HT Wind	Wind	2,648,248		*18,525*	143	n/a
Czech Republic	Ruckl Crystal, Inc.	New glass furnace	1,681,513	10,000	*556*	3,027	168
Czech Republic	Komterm, Ltd.	Biomass	3,270,722	134,092	*26,367*	124	24
Czech Republic	**Czech Republic**		**54,534,465**	**158,709**	**88,749**	**614**	**35**
Slovakia	District heating upgrade	Snina DH	2,781,486	72,353	4,753	585	38
Slovakia	District heating upgrade	Devinska n/v DH	1,140,409	15,600	1,025	1,113	73
Slovakia	Biomass Boiler conv.	Termonova Nova Dubnica	5,118,550	22,574	15,691	326	227
Slovakia			**9,040,446**	**110,526**	**21,469**	**421**	**82**
Latvia	Greenhouse cogeneration	Livbereze Energija I	613,805	40,898	2,425	253	15
Latvia	Greenhouse cogeneration	Livbereze Energija II	619,710	44,755	2,654	234	14
Latvia	Installation of co-generation	Meat factory FOREVERS	586,924	10,220	606	969	57
Latvia	Blockhouse renov.	6 block houses in Riga	790,289	2,070	182	4,342	382
Latvia*1)	**Latvia*1)**		**2,610,728**	**97,942**	**5,866**	**445**	**27**
Lithuania	Blockhouse renov.	4 block houses in Vlnius	940,051	1,375	76	12,308	684
	Lithuania		**940,051**	**1,375**	**76**	**12,308**	**684**
Estonia	**Estonia**			-	-	-	-
All 5	**ALL CEEF5**		**67,125,689**	**368,553**	**116,160**	**578**	**49**

Project Description	Project Type	Total Project Costs (US$)	Savings / Year GJ	CO2 ton/year	Total Project Costs US$/ton CO2	Total Project Costs US$/GJ
Gas Retail Portolio	Natural gas	1.739.130	32.105	5.404	322	54
Hospital gas-fired heating system	Natural gas	115.707	1.564	97	1.193	74
Meat packing plant gas boiler system	Natural gas	150.917	9.225	450	335	16
MAV Railroad station gas heating system	Natural gas	825.903	20.156	2.307	358	41
SEETEK Hospital heating project	Natural gas	1.205.210	24.390	1.510	798	49
BUDAKESZI Block housing gas heating system	Natural gas	37.522	605	34	1.104	62
BEKES Block housing gas heating system	Natural gas	74.502	1.560	87	856	48
Hungary HEECP I		**4.148.891**	**89.605**	**9.889**	**420**	**46**
Dunaharaszti Municipality Streetlighting	Electricity	14.428				
Vertesszolos Municipality Streetlighting	Electricity	27.335				
Sarud Municipality Streetlighting	Electricity	17.121				
Cserepfalu Municipality Streetlighting	Electricity	14.351				
Onga Municipality Streetlighting	Electricity	8.955				
Adacs Municipality Streetlighting	Electricity	36.081				
Alsotelkes Municipality Streetlighting	Electricity	2.441				
Malyi Municipality Streetlighting	Electricity	24.608	1.494	488	571	10
Gyongyoshalasz Municipality Streetlighting	Electricity	10.991				
Gyongyostarjan Municipality Streetlighting	Electricity	9.755				
Tibolddaroc Municipality Streetlighting	Electricity	19.540				
Tornaszentjakab Municipality Streetlighting	Electricity	5.309				
Hernadkak Municipality Streetlighting	Electricity	15.651				
Hollohaza Municipality Streetlighting	Electricity	20.833				
Bukkzserc Municipality Streetlighting	Electricity	17.820				
Karancskeszi Municipality Streetlighting	Electricity	33.398				
Sarisap Municipality Streetlighting	Electricity	36.132				
Kesztolc Municipality Streetlighting	Electricity	26.582				
Tokodaltaro Municipality Streetlighting	Electricity	25.903	1.360	444	81	27
Uny Municipality Streetlighting	Electricity	10.415				
Nyergesujfalu Municipality Streetlighting	Electricity	85.322				
Caloretas Radisson SAS Hotel Cogeneration Project	Cogen	1.415.775	74.378	6.720	211	19
Eger Hotel Park Cogeneration Project	Cogen	2.631.327	97.625	8.692	303	27
Sopron Swedwood Furniture Cogeneration Project	Cogen	4.180.884	204.303	16.988	246	20
HUMAN Tri-generation Project*	Cogen	16.463.091	291.470	7.468	2.204	56
Hotel Ramada Balaton CHP Project	Cogen	1.328.622	59.546	5.348	248	22
105 Epitok Block House Window Change Project	Renovation	222.022	41	3	74.007	5.415
Lajta Block House Window Change Project	Renovation	165.370	243	19	8.704	681
Distherm District Heating Reconstruction Project	DH	681.481	16.879	1.350	505	40
Kőgaz Block house heating	DH	61.472	722	45	1.366	85
Bonyhád Municipality Streetlighting Project	Electricity	658.316	2.585	845	779	255
#01 Épitők, Győr	Renovation	217.746	738	46	4.762	295
#02 Kodály Z., Paks	Renovation	117.191	397	25	4.762	295
#03 Kodály Z., Sopron	Renovation	69.020	234	14	4.762	295
#11 Szinyei u. 10, Miskolc	Renovation	215.927	732	45	4.762	295
Hungary HEECP II		**28.891.214**	**752.748**	**48.540**	**595**	**38**
#07 Landorhegyi u. 34, Zalaegerszeg	Renovation	104.181	353	22	4.762	295
#09 XII. Housing Assoc., Zalaegerszeg	Renovation	255.508	866	54	4.762	295
#10 Varoskapu Block House, Baja	Renovation	56.794	193	12	4.762	295
674 Block House PPG Framework	Renovation	116.959.982	396.494	24.562	4.762	295
20 Block House PPG Framework	Renovation	7.419.998	25.154	1.558	4.762	295
KŐBÁNYA Somfa köz 11. Block House, Budapest	Renovation	499.022	1.692	105	4.762	295
KŐBÁNYA Somfa köz 2.-12. Block House, Budapest	Renovation	1.424.003	4.827	299	4.762	295
KŐBÁNYA Kékvirág 2.-16. Block House, Budapest	Renovation	1.971.299	6.683	414	4.762	295
KŐBÁNYA Bihari u. 3.-5. Block House, Budapest	Renovation	1.988.349	6.741	418	4.762	295
ETELE u. 2-24. Block House, Budapest	Renovation	2.129.259	7.218	447	4.762	295
#04 Sárbeki 105-106, Tatabanya	Renovation	24.774	84	5	4.762	295
#05 Sárbeki 107-108, Tatabanya	Renovation	19.465	66	4	4.762	295
#06 Sárbeki 110, Tatabanya	Renovation	30.083	102	6	4.762	295
#07 XXII. Block House, Zalaegerszeg	Renovation	96.330	327	20	4.762	295

Country	Project Description	Project Type	Total Project Costs (US$)	Savings / Year GJ	CO2 ton/year	Total Project Costs US$/ton CO2	Total Project Costs US$/GJ
Hungary	#08 Kabar, Budapest	Renovation	73.879	250	16	4.762	295
Hungary	#11 Banhidai 303-304, Tatbanya	Renovation	35.928	122	8	4.762	295
Hungary	#09 Moricz Zsigmond, Nyiregyhaza	Renovation	87.833	298	18	4.762	295
Hungary	#10 Teleki u.15, Nagykanizsa*	Renovation	66.705	226	14	4.762	295
Hungary	#12 Zemplen Gyozo u. 1-2, Budapest*	Renovation	186.188	631	39	4.762	295
Hungary	#16 Verebély 16, Tatabánya*	Renovation	7.762	26	2	4.762	295
Hungary	#15 Sárbeki 301, Tatabanya	Renovation	31.376	106	7	4.762	295
Hungary	#13 Csengettyű u. 7, Budapest	Renovation	74.449	252	16	4.762	295
Hungary	#14 Csengettyű u. 9, Budapest	Renovation	80.778	274	17	4.762	295
Hungary	#17 Verebély 24-26, Tatabánya	Renovation	14.995	51	3	4.762	295
Hungary	#18 Vitalis 29-31, Tatabánya	Renovation	8.655	29	2	4.762	295
Hungary	#05 Kodály Zoltán u. 19-29, Győr Block House	Renovation	434.198	1.472	91	4.762	295
Hungary	#29 Fillér út 78-82., Budapest	Renovation	92.972	315	20	4.762	295
Hungary	#06 Soproni u. 22, Győr Block House	Renovation	53.567	182	11	4.762	295
Hungary	#19 Szt. István Krt. 31-39., Jászberény	Renovation	45.226	153	9	4.762	295
Hungary	#22 Újpalota 16. Housing Assoc I., Bp.	Renovation	250.788	850	53	4.762	295
Hungary	#23 Újpalota 16. Housing Assoc II., Bp.	Renovation	151.047	512	32	4.762	295
Hungary	#27 Bercsényi u. 2-8., Ercsi	Renovation	97.245	330	20	4.762	295
Hungary	#28 Horváth József u. 13-15., Sopron	Renovation	40.186	136	8	4.762	295
Hungary	#30 Makó u. 5., Sopron	Renovation	115.648	392	24	4.762	295
Hungary	#31 Füredi tér 8. Housing Assoc., Bp.	Renovation	90.547	307	19	4.762	295
Hungary	#34 Sólyi u. 2., Veszprém	Renovation	28.789	98	6	4.762	295
Hungary	#17 Kelemen u. 14-20, Székesfehérvár	Renovation	24.969	85	5	4.762	295
Hungary	#24 IV. László u. 65, Sopron	Renovation	66.717	226	14	4.762	295
Hungary	#25 Juharfa u. 22, Sopron	Renovation	112.730	382	24	4.762	295
Hungary	#35 Május 1 u. 49., Tata	Renovation	23.501	80	5	4.762	295
Hungary	#13 Földes Gábor u. 4, Győr	Renovation	220.390	747	46	4.762	295
Hungary	#14 Földes Gábor u. 6, Győr	Renovation	249.016	844	52	4.762	295
Hungary	#18 Jutasi u. 75, Veszprém	Renovation	32.502	110	7	4.762	295
Hungary	#32 Tolnai u. 8-22., Székesfehérvár	Renovation	235.945	800	50	4.762	295
Hungary	#21 Zombor u. 9-13, Győr	Renovation	100.510	341	21	4.762	295
Hungary	#01 Sziget u. 33-45, Székesfehérvár Block House	Renovation	680.086	2.305	143	4.762	295
Hungary	#02 Rákóczi u. 31-33, Székesfehérvár Block House	Renovation	115.656	392	24	4.762	295
Hungary	#08 XXX. Housing Association, Győr	Renovation	280.462	951	59	4.762	295
Hungary	#12 Szabolcska u. 25-29, Győr	Renovation	109.821	372	23	4.762	295
Hungary	#20 XXX. Housing Association II., Győr	Renovation	372.415	1.262	78	4.762	295
Hungary	#03 Arany János 2-8, Nyíregyháza Block House	Renovation	317.402	1.076	67	4.762	295
Hungary	#04 Árpád u. 60-62, Nyíregyháza Block House	Renovation	83.384	283	18	4.762	295
Hungary	#15 Lomnic 30-32 Housing Assoc., Győr	Renovation	81.604	277	17	4.762	295
Hungary	#16 Horizont Housing Assoc., Budapest	Renovation	120.860	410	25	4.762	295
Hungary	#26 Rácz Aladár u. 7, Budapest	Renovation	65.950	224	14	4.762	295
Hungary	#33 Eperjesi u. 3., Kistarcsa	Renovation	31.009	105	7	4.762	295
Hungary	Belvarosi	Renovation	611.909	2.074	129	4.762	295
Hungary	Bekasmegyer	Renovation	1.049.783	3.559	220	4.762	295
Hungary	Cothec	Renovation	696.304	2.360	146	4.762	295
	Total CEEF Hungary only		**140.730.735**	**477.077**	**29.553**	**4.762**	**295**
	Total HEECP & CEEF Hungary only		**173.770.840**	**1.319.430**	**87.982**	**1.975**	**132**
	Total CEEF		**207.856.424**	**845.630**	**145.714**	**1.426**	**246**
	Total HEECP		**33.040.105**	**842.353**	**58.429**	**565**	**39**
	TOTAL CEEF & HECCP		**240.896.529**	**1.687.983**	**204.143**	**1.180**	**143**

HEECP: As for HEECP I and II the number of generated CO_2 reductions has been 58,429 tons while total energy savings add up to 846 TJ (235 GWh). Costs are USD 585 per ton CO_2 close to what CEEF5 produced.

The total volume of the generated avoided CO_2 under CEEF has been 145,714 tons. The total energy savings under CEEF amounts to 846 TJ (235 GWh). The investment volume for generating the CO_2 reductions varies quite much between the countries and programs. Under CEEF5 the costs are slightly below USD 600 per

ton CO_2 while the blockhouse portfolio in Hungary under CEEF has costs of more than USD 4,700 per ton CO_2.

In the table below the achievements in terms of avoided CO_2, investments and guarantees have been listed per country per year and been compared to the goals at completion stage.

Table 3: GHG emission reductions achieved under the facility

Outcome Indicators	Unit	Baseline	2004	2006	2008	Goal Y4	Realised
Volume of CO_2 emissions avoided due to projects guaranteed under the facility	Ton CO_2	0		52,804	145,714	434,752	34%
· Czech Republic	Ton CO_2	0		29,025	88,749	84,912	105%
· Slovakia	Ton CO_2	0		21,429	21,469	52,432	41%
· Latvia	Ton CO_2	0		2,350	5,866	66,352	9%
· Lithuania	Ton CO_2	0		-	76	61,712	0%
· Estonia	Ton CO_2	0		-	-	79,344	0%
· Hungary	Ton CO_2	0		-	29,553	90,000	33%

Czech Republic made remarkable progress since the mid-term review in 2006 and has produced more than 75% of the CO_2 reductions. It is in fact the only country achieving the goal. The other countries are far from reaching their goals and in total for CEEF 1/3 of the goal have been realized.

Table 4: Total volume of investment projects

Outcome Indicators	Unit	Baseline	2004	2006	2008	Goal Y4	Realised
Volume of investment projects involving ESCOs, FIs and end-users	Million US$	0		27.2	207.9	49.7	418%
· Czech Republic	Million US$	0		16.7	54.5	8.7	625%
· Slovakia	Million US$	0		8.6	9.0	7.0	129%
· Latvia	Million US$	0		1.9	2.6	7.9	33%
· Lithuania	Million US$	0		-	0.9	7.9	12%
· Estonia	Million US$	0		-	-	7.9	0%
· Hungary	Million US$	0		-	140.7	10.4	1353%

In terms of volume of investment the Czech Republic is again way above the goal but also the Slovak Republic has achieved their goals and in total these two countries bring the CEEF5 countries to perform by 170%. Also again Hungary is performing extremely well with more than 13 times reaching the goal.

Table 5: Volume of guarantees issued

Outcome Indicators	Unit	Baseline	2004	2006	2008	Goal Y4
Volume of guarantees issued	Million US$	0		9.6	49.5	n/a
· Czech Republic	Million US$	0		5.9	16.7	n/a
· Slovakia	Million US$	0		2.9	2.9	n/a
· Latvia	Million US$	0		0.8	1.3	n/a
· Lithuania	Million US$	0		-	0.1	n/a
· Estonia	Million US$	0		-	-	n/a
· Hungary	Million US$	0		-	28.5	na

The remarkable development in Hungary once introducing the portfolio guarantee within the building block sector can also be viewed in the above table taking the guarantees up to USD 28.5 million and now covering almost 60% of the total CEEF issued guarantees.

Based on the generated CO_2 emission reductions - assuming a 10-year project life - the net GEF costs can be established. This has been done for each country participating splitting the costs for TA and administration and actual guarantees. For Hungary under HEECP we have not been able to obtain the final costs for administration and TA and have assumed these based on the previous accounts and the records from 2006 bringing it to a total of USD 1.650 million.

From the GEF perspective, the maximum guarantee liability has been established as the outstanding as per December 2008 including losses in Hungary of USD 153,000 under HEECP and no losses at all under CEEF. If no additional project guarantees are called, the net GEF costs (in this "best case scenario") would therefore be total costs for TA and administration plus actual losses.

Table 6 below illustrates these numbers for both the entire programme and the countries where guarantees have been issued.

Table 6: Direct effect of all guaranteed projects on CO2 reductions and cost per Ton

CEEF Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	3.650	-	3.650	1.457	2,5
Intermediate Case	15%	3.650	2.285	5.935	1.457	4,1
Worst Case	100%	3.650	15.230	18.880	1.457	13,0

Czech Republic - Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	765	-	765	887	0,9
Intermediate Case	15%	765	2.074	2.839	887	3,2
Worst Case	100%	765	13.827	14.592	887	16

Slovak Republic - Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	1.217	-	1.217	215	5,7
Intermediate Case	15%	1.217	302	1.519	215	7,1
Worst Case	100%	1.217	2.013	3.229	215	15

Latvia - Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	486	-	486	59	8
Intermediate Case	15%	486	179	665	59	11
Worst Case	100%	486	1.193	1.679	59	29

Lithuania - Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	489	-	489	0,8	640
Intermediate Case	15%	489	9	498	0,8	652
Worst Case	100%	489	62	550	0,8	721

Hungary CEEF- Direct effect of projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	694	-	694	296	2
Intermediate Case	15%	694	2.285	2.978	296	10
Worst Case	100%	694	15.230	15.924	296	54

For CEEF5 a 15% loss would bring the net GEF costs up to USD 4.8 from the now low of USD 4.1. This is still higher than the objective of USD 1.46 at a 15% loss but very acceptable. One of the recommendations in the mid-term review was in fact to seek projects in the portfolio with a CO_2 reduction rather than aiming at projects with very high ratios of achieved avoided CO_2 per invested USD.

Under this chapter the results from the previous HEECP due to the merger with CEEF of Hungary are also repeated in order to show the full picture towards GEF of their contribution and risks. Please also consult table 8a in the next chapter where the GEF costs are calculated taking into account leveraged projects from both CEEF and HEECP.

Hungary HEECP- Direct effect projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	1.650	153	1.803	584	3,1
Intermediate Case	15%	1.650	425	2.075	584	3,6
Worst Case	100%	1.650	2.832	4.482	584	7,7

Hungary HEECP&CEEF-Direct effect projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	2.344	153	2.497	880	2,8
Intermediate Case	15%	2.344	2.709	5.053	880	5,7
Worst Case	100%	2.344	15.230	20.406	880	23,2

CEEF6 & Hungary HEECP -Direct effect projects with guarantees on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)				
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total	10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Best Case	0%	5.994	153	6.147	2.041	3,0
Intermediate Case	15%	5.994	2.709	8.703	2.041	4,3
Worst Case	100%	5.994	15.230	21.224	2.041	10,4

HEECP: As for HEECP I and II the GEF costs ended at USD 3.1 per ton CO2 based on the best scenario where the losses would be kept at the present level of USD 153,000. If the level of a 15% loss should be reached the costs would increase to USD 3.6 per ton CO2.

1.1.2 Indirect Impacts

During the review in 2006 and the supplement evaluation from 2004 efforts were made to assess the indirect impact from the facility. The reliability of these studies might be difficult to rate and in this evaluation a further 2 to 4 years ahead from these previous studies the Evaluation Team has declined from assessing further indirect impacts. With the programs being in place for so many years it is no longer possible to assess whether a project has materialized because of the facility or due to other circumstances. Further it was established during the interviews with the local IFC offices that no systematic registration of possible indirect impacts has taken place at any of the local IFC offices.

In order to at least assess if the goal has been achieved the Evaluation Team has applied the volumes for leveraged projects once established in 2004 and 2006 and added in the actual projects generated with the guaranteed. This would then make up the total volume of CO_2 (cumulative) emissions avoided with guaranteed and leveraged projects.

The table below shows the indirect impact for CEEF5 excluding Hungary. As for Hungary the leveraged projects are assumed to have been generated during the HEECP I and II, apart from the OTP school renovation project, which during CEEF was processed as a separate individual IFC mainstream project, and thus not counted formally in the CEEF portfolio. Thus it is here considered as an important leveraged project. Besides this project, Hungary CEEF is due to long presence of the facility not assumed to generate any leveraged projects. Please refer to the text box for the findings for the leveraged projects during HEECP.

Table 7: Projects financed without the CEEF Guarantee – CEEF5 and HEECP

Projects financed without the CEEF guarantee in CEEF5 from start to 2006				
	Number of projects	Investment US$ Millions	GHG emissions reduction Ton CO2 / Year	Energy Saved GJ/Year
Czech	6	25.4	73,479	662,062
Slovak	6	11.4	29,077	61,183
Latvia	11	3.0	7,636	9,850
Lithuania	10	13.3	37,671	162,540
Estonia	110	26.4	11,786	74,250
Total	**143**	**79.588**	**159,649**	**969,885**

Hungary OTP Project - under CEEF as leveraged project				
Hungary OTP	n/a	42.4	5,183	140,920

Projects financed under HEECP without the guarantee (20%) start to 2004				
Hungary	n/a	43.2	157,656	1,854,400

Total GHG emission reductions	**322,488**

HEECP: As for HEECP I and II the assessment has been previously that 20% of the calculated savings from a portfolio that could be considered linked to the facility would generate approx. 158,000 tons CO2 savings.

Projects financed under HEECP without the guarantee (20%) start to 2004

	Nunber of projects	Investment US$ Millions	GHG emissions reduction Ton CO2 / Year	Energy Saved GJ/Year
Hungary	n/a	43,2	157.656	1.854.400

In Estonia the programme developed a new concept financed by the TA means in 2004 targeting the blockhouse market. At that time the block houses had difficulties in obtaining loans for renovations persuading the banks to include the energy savings in the credit risk. By introducing energy audits and financing 50% of the audits IFC succeeded in involving Hansabank in the financing of 50 projects without applying a guarantee. The audit scheme was later adopted by the Ministry of Economy for grant programs and has turned out to increase the lending volume by a factor 2-3.

The log frames do not have any target towards net GEF costs when adding in leveraged projects but the figures below gives an indication of the efficiency of the programme in a broader perspective than the costs only associated to the guarantees. The combined results of the guaranteed projects and the projects without guarantees that have been leveraged by the programme are provided in the Table below.

Table 8: GHG reductions achieved under the facility including leveraged projects

#	Outcome Indicators	Unit	Baseline	2004	2006	2008	Goal Y4	Realised
1	Total volume of CO2 (cumulative) emissions avoided with guaranteed and leveraged projects	Ton Co2	0		**212.453**	**310.546**	**1.425.300**	22%
1.1	· Czech Republic	Ton Co2	0		102.504	162.228	329.000	49%
1.2	· Slovakia	Ton Co2	0		50.506	50.546	203.300	25%
1.3	· Latvia	Ton Co2	0		9.986	13.502	257.000	5%
1.4	· Lithuania	Ton Co2	0		37.671	37.747	239.000	16%
1.5	· Estonia	Ton Co2	0		11.786	11.786	307.000	4%
1.6	· Hungary	Ton Co2	0		-	34.736	90.000	39%

Table 8a: Combined effect of direct and leveraged projects on CO2 reductions and cost per Ton

CEEF6 Combined effect of direct and leveraged projects on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)			10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total		
Best Case	0%	3,650	-	3,650	3,105	1.2
Intermediate Case	15%	3,650	2,285	5,935	3,105	1.9
Worst Case	100%	3,650	15,230	18,880	3,105	6.1

CEEF6 & HECCP Combined effect of direct and leveraged projects on CO2 savings and cost per Ton.

DIRECT EFFECT OF ALL PROJECTS WITH GUARANTEES						
	Assumption	GEF Costs (000$)			10 year CO2 Savings (000 tons)	Cost per Ton ($ per Ton of CO2)
Scenario	% of the Guarantees Called	Administration +Technical Assistance	Guarantees	Total		
Best Case	0%	765	153	918	5,266	0.2
Intermediate Case	15%	765	2,285	3,049	5,266	0.6
Worst Case	100%	-	18,047	18,047	5,266	3.4

1.2 Assessment of Impact on FIs Involved

The CEEF program LogFrame defines the following goals:

d (i) Substantially increased volume of EE investment is yielded by the FI participation in the Guarantee Facility along with the TA

d (ii) Local capacity building with potential local project developers and FIs improves capacity of FI and project developer industries to develop EE investments in CEEF countries

INDICATORS:

- **Volume of investment projects involving ESCOs, FIs and end-users to become at least USD 49.7 mill after 4 years under the guarantee facility**
  - Czech Republic USD 8.73 mill.
  - Estonia USD 7.86 mill.
  - Latvia USD 7.86 mill.
  - Lithuania USD 7.86 mill
  - Slovakia USD 6.99 mill
  - Hungary USD 10.4 mill
- **At least 1 person per active project development company per country has gained increased knowledge about the EE financing activities.**
- **25% of investment relationship managers in banks signed a GFA trained and have gained increased knowledge about the EE financing activities**
- **1-2 EE/ESCO/FI business advisory consultations per month per country**

1.2.1 Impact on FI investment

The volume of investment projects involving ESCOs, FIs and end-users was expected to become at least USD 49.7 mill after 4 years under the guarantee facility. The realized volume amounts to USD 207.9 mill, thus as much as 418 % of the goal, as is shown in Table 9 below.

Table 9: Volume of investment projects under the guarantee facility compared with the goal

Volume of investment projects involving ESCOs, FIs and end-users	Outcome Million USD	Goal Million USD	% of Goal / comments
Czech Republic	54.5	8.7	625%
Slovakia	9.0	7.0	129%
Latvia	2.6	7.9	33%
Lithuania	0.9	7.9	12%
Estonia	0.0	7.9	0%
Hungary	140.7	10.4	1353%
Total CEEF	**207.9**	**49.7**	**418%**

As was also the case in the Mid-Term review, there are considerable differences among the countries. In Czech Republic, where the target was already reached (191% achievement) at mid-term, the guarantee facility has now contributed to almost USD 55 mill in total investments, 6 times more than expected. In Slovakia, no additional investments have been guaranteed since the mid-term review, at which time the target had been reached. In Latvia, 33% of the target is reached, compared with 24% at Mid-term. Since the Mid-term review, some investments have now been guaranteed in Lithuania, but the target is still far from being reached, with only 12% of the target realized. Estonia remained at 0%. In Hungary the CEEF programme contributed to as much as USD 140.7 mill investment, thus a target achievement of 1353.

HEECP: During HEECP II the volume of investment projects in Hungary reached USD 28.9 mill, also far above the target set for the later CEEF period.

Turning to the number of participating banks in the market, 6 were participating in CEEF at mid-term. Now, a total of 14 FIs have signed GFAs, but only 6 have been using the guarantee facility. Since Mid-term, GE Money Bank in Czech Republic and Hansabankas in Lithuania had signed, but not made use of the guarantee. CSOB has signed for both Czech and Slovak Republic.

SHPP Libočany, Czech Republic – one of the RE projects guaranteed for Česká spořitelna

"Based on this important contribution of IFC to Česká spořitelna, CS is Number 1 in financing Energy Efficiency projects in the Czech Republic"
Ladislav Dvorak, Head of Business development department, Česká spořitelna

Česká spořitelna has been an active partner in Czech Republic, with 21 closed deals. CSOB joined the program, but has only used the guarantee for one project. GE Money Bank was preparing a EUR 1 M project using CEEF advice, on solar PV, foreseeing an IFC guarantee for 8 years, 50-50%, as the bank found it important

to have construction and high risk covered in the beginning. This project guarantee was finally not issued[10]. Although GE Money Bank has not used the guarantee facility, they have found the TA provided very useful.

In Slovak Republic, Lithuania and Latvia the number of projects guaranteed totals 8, which are 3 more than at Mid-term review. Two of the 8 projects are blockhouse portfolios, covering a total of 10 renovation projects.

In Hungary the program has successfully attracted 6 financing institutions over the lifetime of HEECP1 (Raiffeisen Leasing), HEECP2 (Raiffeisen Leasing, OTP, ERSTE, Raiffeisen Bank, K&H, and HVB) and CEEF (ERSTE and Raiffeisen Bank), adding up to a total of 791 guaranteed projects in Hungary, of which 747 were guaranteed during CEEF.

Table 10: Number of FIs with signed GFAs and guaranteed projects by country – CEEF

Country	Number of FI partici-pants	FI	Number of individual projects	Number of Portfolios	Number of projects in portfolios	Guaranteed projects / FI	Guaranteed projects / country
Czech Republic	3	Česká spořitelna	21[11]	0	0	21	22
		CSOB	1	0	0	1	
		GE Money bank	0	0	0	0	
Slovak Republic	2	Dexia	3	0	0	3	3
		CSOB[12]	0	0	0	0	
Latvia	1	Hansabanka (Swedbank)	3	1	6	9	9
Lithuania	2	SEB Vilniaus Bankas	0	1	4	4	4
		Hansabankas	0	0	0	0	
Estonia	0	-	-	-	-	-	-
Hungary (HEECP1, HEECP2, CEEF)	6	Raiffeisen Leasing	12	0	0	12	791
		Raiffeisen Bank	9	3	723	732	
		OTP	16	0	0	16	
		ERSTE	5	2	24	29	
		K&H	1	0	0	1	
		HVB/ Unicredit Bank	1	0	0	1	
Total	**14**		**72**	**7**	**757**	**829**	**829**

[10] According to table made by Milan Rusnak, summarizing all the booked transactions under CEEF
[11] One of the 21 projects guaranteed with Česká spořitelna was cancelled.
[12] The GFA was signed in Czech Republic, but CSOB in Slovakia became independent from 2008

1.2.2 Impact on Local Capacity Building

Participation by ESCOs / Project developers

41 different ESCOs / project developers have been involved in the implementation of the 72 individual projects. Of the 41 project developers, 25% have found it relevant to use the guarantee for at least a second project, as 10 project developers have been implementing 2 projects or more using the guarantee facility. Over the years, 4 have implemented more than 2 individual projects using the guarantee: Kipszer (3); Lagross (4); Okolux-2000 (16); and TIVI (5). These 4 project developers are all from Hungary.

> *"The Libocany small hydropower plant was a new kind of project to us and we did not know RenoEnergie (the project developer). That is why we asked IFC to guarantee. Now we know RenoEnergie, and would not require the guarantee again. We would require the guarantee for a similar type of project in another company that we do not know."*
> Ing. Karel Ryska, Česká spořitelna, Czech Republic

In those cases where the guarantee is only used for one project with a specific project developer it appears that the FI has subsequently become confident enough in either the type of project / technology used or knows better the Project Developer.

Where a project developer has used the guarantee more than once, it has always been with the same FI. Does the revisit of same project developer, same FI and continued use of guarantee mean that capacity is not being built? Or does it mean that a package / deal has been set up, based on a common understanding of the possibilities presented by a specific type of energy projects and a helpful facility? Okolux and TIVI both used the facility for street lighting projects in a range of municipalities – with relatively small investment amounts, whereas Lagross concentrated on blockhouse renovation projects of a larger size. We can thus consider that in some cases some 'packages' are established between project developer and FI.

HEECP: During HEECP1, Raiffeisen Leasing provided lending to projects developed by Kipszer for various types of natural gas projects, for different types of recipients (hospital, railroad station, industrial plant, and private customers) and varying in size from little more than 100,000 USD to over 1,700,000 USD. Thus, the project developer, together with the same FI was working with different types of investment projects for different clients, profiting from a guarantee.

When investigating the CEEF blockhouse portfolio in Hungary, several project developers are also using the facility more than twice, including Lagross (4 projects), Windstrip (12 projects), Dunabau (3 projects), Bajkor 24 (4 projects), Spidi Bau (3 projects).

Development of New Products

Blockhouse renovation portfolios were new product fields which were very attractive, as seen in Latvia, Lithuania, and Hungary. In Lithuania, the CEEF helped structure the blockhouse renovation project, pulling all market players together, including FIs, housing associations, homeowners associations and the governmental subsidy system. Awareness was created.

> *"The investment need is around 60 Bio Litas – 24000 buildings need renovation, in Vilnius alone it is 3600 buildings. For each building renovation costs 1.5 – 2 M Litas"*
> Kestutis Nénius Director, "Renew the City", Vilnius City Municipality, Lithuania

Table 11: New products developed and marketed by FIs

FI	Product type
Česká spořitelna (CZ)	Finesa Program – FINancing of Energy Conservation Applications as well as forfeiting transaction guarantee
CSOB (CZ)	No specific product developed
GE Money Bank (CZ)	Did not develop new products, but profited from CEEF TA to set up small unit in the bank to support relationship managers
Dexia (SK)	No specific product developed
CSOB (SK)	No specific product developed
HB-LA (LV)	No specific product developed
Hansabanka (SWEDBANK) (LV)	No specific product developed, the blockhouse portfolio was not a new area, the guarantee was just used to lower the banks risks in the market
SEB Vilniaus Bankas (LT)	Blockhouse renovation portfolio
Raiffeisen Leasing (HU)	Street lighting projects
Raiffeisen Bank (HU)	Blockhouse renovation portfolio
OTP (HU)	Street lightning - Municipalities
ERSTE (HU)	Blockhouse renovation portfolio
K&H (HU)	No specific product developed
HVB (HU)	No specific product developed

In Czech Republic CEEF also tried to explore the opportunities for a blockhouse renovation program, but unlike the other CEEF countries, FIs already found renovation in the blockhouse sector very profitable. With a good legal framework in place for lending to housing associations, the need for a CEEF guarantee was

less. Raiffeisen Bank had a default rate of 1.4% clearly illustrating the low risk. A government subsidizing program was and is still in place.

"In the Housing renovation sector we are already number 2 in the Slovak market, and do not need an IFC guarantee. There is sufficient legal guarantee. We have developed a special product; a package approach"
Mr. Roman Lauko, CSOB, Slovak Republic

Among the FIs interviewed, there was general agreement that the CEEF guarantee would be used for loans presenting the following concerns:

- Un-known/little known technology
- Un-known contractors
- Complicated ownership structures
- Projects without a recourse

However, in some of these cases CEEF may also be reluctant to provide the guarantee, when the investment is considered too risky.

"We started with IFC guarantee to cover a risk. In the PV sector the guarantee is no longer needed – there are smaller projects - EUR 2-3 M. We use IFC guarantee only for wind projects now"
Jan Heřman, Head of Product Management Department, Česká spořitelna

Below a range of the EE and RE projects requiring FI lending are shown, both those using the CEEF guarantee and those not using it.

Table 12: EE and RE projects with FI lending

Bank	Project type	Number of projects with IFC	Number of projects without IFC
Česká spořitelna (CZ)	Renewable energy (biomass crop, wood pellets production, wind power, small hydropower)	15	At least 10, adding to a total of approx EUR 20 M
	Cogeneration	2	
	Industrial heating upgrade	2	
	ESCO – SME EE projects	2	
CSOB (CZ)	Biogas power station	1	
	RE: Wind, biogas, PV		4
Dexia (SK)	Biomass boiler conversion	1	Over 65
	District heating upgrade / Energy efficiency in municipal sector	2	
	Renewable energy		24 (~ EUR 1 M each)
CSOB (SK)	Housing renovation		"Hundreds of millions SKK"
Hansabanka (SWEDBANK) (LV)	Industry	1	
	Cogeneration	2	
	Blockhouse renovation	6	142 (worth EUR 8.8 M)
	Boiler conversion		1

Bank	Project type	Number of projects with IFC	Number of projects without IFC
Hansabankas (LT)	Heat substations and Energy savings	0	2 or more
	Renewable energy (Hansa Leasing)	0	2
	Blockhouse renovation		40
SEB Vilniaus Bankas (LT)	Blockhouse renovation	4	3
Raiffeisen Leasing (HU)	Natural gas	7	
	Electricity - street lighting	5	
Raiffeisen Bank (HU)	Blockhouse renovation	8 individual 532 in portfolio	At least 6
	Blockhouse heating	1	
	Renewable energy		Several small and bigger projects
OTP (HU)	Electricity - street lighting	16	At least 19
ERSTE (HU)	Cogen	4	
K&H (HU)	District Heating reconstruction	1	At least 60
HVB (HU)	Electricity - street lighting		

1.2.2.1 Impact on capacity building

The CEEF program has provision for USD 3.65 M to provide Technical Assistance, TA (IFC, and trust funds) and administration. Of this amount USD 3.26 M have been spent or committed till date. TA is provided by local FC staff, international consultants (financed by the trust funds) and local consultants.

The TA service has been provided within a wide range, which includes: Energy Audit Program; FI support activities; training seminars; product development support; program marketing; workshops and conferences; market surveys; end user seminars; and consultation and financial support.

1.2.2.2 Direct impact on Capacity Building

When assessing the impact on Financing Institutions the second expected result from the CEEF program is that local capacity building with local project developers and FIs improves capacity of FI and project developer industries to develop EE investments in CEEF countries.

"It is good to have the technical support from IFC – IFC stimulated the provision of loans to housing corporations"
Mr. Kestutis Nénius Director, "Renew the City", Vilnius City Municipality, Lithuania

The indicators that will be firstly examined are the following:

- At least 1 person per active project development company per country has gained increased knowledge about the EE financing activities.
- 25% of investment relationship managers in banks signed a GFA trained and have gained increased knowledge about the EE financing activities
- 1-2 EE/ESCO/FI business advisory consultations per month per country

Below some information is provided regarding the activities aiming at increasing the knowledge in project development companies about the EE financing activities.

Table 13: Local capacity building with potential local project developers

Number of persons per active project development company who have gained increased knowledge about the EE financing activities		
	Estimated number	**Explanatory details**
Czech Republic	2 persons per active company	15 seminars and conferences have been held on financing of Energy Efficiency and Renewable Energy projects – targeting a total of 985 persons, including a.o. people from SEVEN, EEBW, Association of DH, Aquaterm, Enviros, Promoscene, and GAS.
Slovakia	At least 1 person per active company	During 12 events not directly organized by CEEF, but where the CEEF program was presented, over 1300 persons, incl. representatives from project development companies were informed about the EE financing activities. No events have been specifically organized for project development companies.
Latvia	n.a.	Approximately 7 active project developers. No information on training sessions.
Lithuania	1-2 persons per active company	2 Seminars held for project development companies: 1 on EE for 16 persons - 1 Seminar on RE for 18 persons. 36 Project Developers/ESCOs are "participating" in facility
Estonia	n.a.	n.a.
Hungary	0-1	During the CEEF program there was not much emphasis on training project developers

An indicator of achievement is that at least 1 person per active project development company gains increased knowledge about the EE financing activities. Based on the above estimations, the table of outcome indicators is consequently provided as follows in Table 14. From the figures it seems obvious that the goal of increasing knowledge is achieved in these companies.

Table 14: Indicator of achievement on local capacity building with potential local project developers

Persons in project development (PD) companies gaining increased knowledge about the EE financing activities	Outcome #/per PD company	Goal #/per PD company	% of Goal / comments
Czech Republic	2	1	Met goal
Slovakia	1 - 2	1	Met goal
Latvia	1	1	Met goal
Lithuania	1	1	Met goal
Estonia	N/A	1	N/A

For Hungary local capacity building with potential local project developers was carried out during the HEECP program, and there was no emphasis on this during CEEF. Therefore Hungary is not included in the above table.

For Financing Institutions, it is expected that investment relationship managers or staff in similar functions, depending on individual bank functions, gain an increased knowledge about EE financing activities, leading to increased technical understanding of the client's investment plans and not least awareness of the positive economic potential in most EE investments. Below, the table summarizes the foreseen impact on the FI staff knowledge as based on the training activities performed vis-à-vis those FIs having signed a GFA.

Table 15: Local capacity building within FIs having signed a GFA

%-age of investment relationship managers in banks trained in RE and EE financing activities		
	Estimated percentage	**Explanatory details**
Czech Republic	60 % N/A	Česká spořitelna: 107 persons in 5 training sessions – supposedly covering 60% GE Money bank: 73 staff in 3 training sessions, with the Ecoenergy Sector Manager present at both sessions in Prague
Slovakia	100 % N/A	Dexia: 50-200 persons in 3 seminars. All 3 EE specialists within the project finance department trained CSOB: 30 persons trained (by CEEF Czech republic)
Latvia	99 % 50 %	SEB Unibanka: 90 trained during 5 seminars. Hansabanka: 40 persons trained during one seminar.
Lithuania	40% ?%	Hansabankas: 1 seminar: 28 trained + 2 seminars: 7 loan officers and 6 credit managers SEB Vilniaus Bankas: 1 seminar: 18 trained + 2 seminars[13]: 17 loan officers and 10 credit managers
Estonia	n.a.	n.a.
Hungary	0%	No emphasis on TA during CEEF

[13] EU Intelligent Energy For Europe Program, CF-SEP Project, seminars for SEB and Hansabankas

The indicator of achievement is that at least 25% of investment relationship managers in banks signed a GFA have been trained and have gained increased knowledge about the EE financing activities.

Based on the above figures on the absolute number of persons trained in the banks in relation to some rough estimates of the total number of people at the relevant level in the bank (loan officers, credit managers, client relationship managers), the table of outcome indicators is consequently provided as follows in Table 16. Despite the non-availability of some exact figures showing the total target audience we find that the goal of building the capacity of the FIs in the EE and RE financing sector has been met.

HEECP: During the HEECP programs there was more emphasis on training and TA to the relevant investment relationship managers, thus the CEEF program benefited from this already achieved level of knowledge about EE financing activities.

Table 16: Indicator of achievement on local capacity building with FIs

Percentage of investment relation managers in participating FIs trained and gained increased knowledge about the EE financing activities.	Outcome	Goal	% of Goal / comments
Czech Republic	Over 25%	25%	Met goal
Slovakia	Over 25%	25%	Met goal
Latvia	Over 25%	25%	Met goal
Lithuania	Over 25%	25%	Met goal
Estonia	N/A	25%	Did not meet goal

In Lithuania, one of the persons who had been trained through the CEEF TA, whilst working with one bank, has now moved to another bank, and made 40 loans there in the energy field.

The TA provided in this area developed over the years. Instead of training a large number of investment relation managers such that they would be able to process loan requests for EE or RE projects, it was deemed better to convey the basic message to the managers, and then promote the establishment in the FIs of central units that through more in-depth training would have the necessary knowledge and be able to provide assistance to the relationship-managers upon request.

In Czech Republic for example, CEEF was part in this development, by providing training material and analyses. IFC requested that 2-3 persons in each department help with the process. As the client often would be located in remote areas, it is important to possess accessible know-how in the head office.

> *"We have contact with IFC staff depending on need. Sometimes every day. The IFC staff's high technical expertise forms a useful combination with our well educated risk analysts."*
> Ladislav Dvorak, Head of Business development department, Česká spořitelna

Česká spořitelna now has a 7-person energy team, and a fully approved lending policy for RE projects.

In CSOB the project finance department is responsible for dealing with energy projects. Before the training these projects would not have first priority due to lack of sufficient expertise in the area. They have now increased their processing of renewable projects.

> *"The training provided on risks of renewable energy projects, legislation, case studies got a very good feedback; on a 5 point scale with 1 as the best the average was 1.2"*
> Eva Dubovska, Ecoenergy Sector Manager, GE Money Bank

GE Bank – after three training sessions targeting 73 people in total - is creating a small unit to support relationship managers in the branch offices.

Finally, as a third measurement of the local capacity building we investigate the number of business advisory consultations per month that the CEEF offices have had both with ESCOs as well as with Financing Institutions.

Table 17: Local capacity building related to the business advisory consultations

	Number of EE/ESCO/FI business advisory consultations per month	
	Calculated number	**Explanatory details**
Czech Republic	~ 3-4 / month	Consultations on over 180 projects in the 60 months period
Slovakia	More than 1 / month	No statistics available but clear indications from interviews with CEEF and FIs that at least 4-5 meetings per month
Latvia	More than 1 / month	No statistics available but interviews clearly indicate that at least 4-5 meetings /month when CEEF office was present in the country. Slow-down, when Latvia was handled from Prague. After February 2008 CEEF did not go to the country

	Number of EE/ESCO/FI business advisory consultations per month	
	Calculated number	**Explanatory details**
Lithuania	More than 1 / month	No statistics but clear indications from interviews that at least 4-5 meetings / month. When Lithuania was handled from Prague, FIs and Project developers were still visited on a regular basis, and consultations could be held via phone and email
Estonia	n.a.	
Hungary	More than 1 / month	No statistics but clear indications from interviews with CEEF and FIs that there were 5-10 meetings / month during HEECP, to about 1/month during CEEF[14]

The indicator of achievement is that at least 1-2 business advisory consultations are taking place each month. Based on the above estimations, the table of outcome indicators is consequently provided as follows in Table 18. We see that the goal is reached, although the number of consultations has faded out during the last 1-2 years of the CEEF.

Table 18: Indicator of achievement on local capacity building upon business advisory consultations

EE/ESCO/FI business advisory consultations #/month	Outcome #	Goal #	% of Goal / comments
Czech Republic	4-5	1-2	Met Goal
Slovakia	2	1-2	Met Goal
Latvia	1	1-2	Met Goal
Lithuania	1-2	1-2	Met Goal
Estonia	0	1-2	Goal not met
Hungary	1-2	1-2	Met Goal

1.2.3 Conclusions – Impact on FIs involved

Two results related to the assessment of the impact on Financing Institutions were expected:

- Substantially increased volume of EE investment
- Local capacity building with potential local project developers and FIs improving capacity of FI and project developer industries to develop RE and EE investments in CEEF countries;

[14] The business advisory consultations were reducing in intensity during CEEF, as CEEF in Hungary mainly consisted of 2 portfolios which were managed by the FIs. With the reduced manpower at CEEF Hungary (From 4 persons to 2 persons, not working full-time with CEEF), there was no emphasis on business advisory consultations.

With respect to the first result, the impact on the volume of RE and EE investments is varying among the participating countries, with very significant results in Czech Republic, Slovakia, and in Hungary compared to the expected volumes of investment, whereas the three Baltic Countries are far from reaching the target.

However, it should be noted, that the remarkable results in Czech and Slovak Republic are based on singular GFAs with three banks, one only using the IFC guarantee once. Furthermore, whereas 21 guarantees issued in Czech Republic is with one of the banks, only 3 guarantees have been issued in Slovakia, of which one was for an already approved project, where implementation had started.

When only one bank per country is involved in the Program work, the impact of the CEEF may remain limited. A more significant impact would have been achieved with a larger number of participating FIs allowing more ESCOs and SMEs to be reached and involved. Česká spořitelna has reached an important (maybe even dominant) position on the renewable energy financing market in Czech Republic based on IFC financing. This position is recognized by the other financing institutions.

Photovoltaic power plant – Bušanovice, Czech Republic

The large increase in investment volume in Hungary from the USD 12 M at the end of HEECP 2 to the USD 171 M at the end of CEEF is based on two large blockhouse renovation portfolios. However, compared with the CEEF achievements in the two other central European countries, more FIs have been involved since the start of the HEECP program and have gained knowledge and experience working with energy projects.

Overall, the rate of achievement of the expected volume of investment projects is over 400%, a successful outcome.

With respect to capacity building, when examining the indicators, capacity definitely seems to have been built. IFC has provided valuable technical assistance with respect to product development. Numerous training seminars and workshops have been carried out, both in FIs, with project developers, as well as with end-use clients. The FIs interviewed have expressed their large satisfaction and underline that the knowledge and awareness among those FI employees being trained has indeed increased. The Czech CEEF has assisted building capacity in Česká spořitelna and GE Money Bank for setting up specialized small units which can provide support on request.

> *"IFC supported technically some studies [on housing renovation solutions]. It was possible to base a campaign on these studies. Designers created projects for houses. It was very useful"*
> Kestutis Nénius, Director, "Renew the City", Vilnius City Municipality, Lithuania

Equity constraints are prohibitive for more energy financing. EU Structural Funds or IFC products such as the RE equity mezzanine will be an important tool for fostering more FI financing of energy projects.

1.3 Assessment of Impact on Country Markets

The CEEF program LogFrame defines the following goals:

(c) Accelerate the development of the EE finance market in participating countries.

INDICATORS: ·

- **FIs participating in the facility represent after 3 years more than 75% of the balance sheet volume of the banking sector (for each country)**
- **75% of all Project Developers active in each country receive loans from the FIs involved in the facility after a 3 year period**
- **Volume of investment projects involving ESCOs, FIs and end-users to become at least USD 49.7 mill. after 4 years based on guarantees adding up to USD 162.2 mill incl. projects leveraged by the program**
- **As a result of the TA provided: 3 new financing products introduced to the market for each of the countries and marketed by FIs after a 3 year period**

It is expected that the IFC program does not only have a direct impact on the FIs involved but on the energy financing market in the target countries as well. We will therefore investigate some of the above mentioned indicators, as well as look at some macroeconomic trends.

1.3.1 The indicators

The FIs holding or having held a GFA are:

- Czech Republic: Česká spořitelna, CSOB, GE Money Bank
- Slovak Republic: Dexia, CSOB
- Latvia: SWEDBANK
- Lithuania: Hansabankas, SEB Vilniaus Bankas
- Hungary - HEECP: Raiffeisen Leasing, Raiffeisen Bank, OTP, ERSTE, K&H, HVB
- Hungary - CEEF: Raiffeisen Bank, ERSTE

These FIs are – besides Dexia - among the largest and most important banks in their respective countries, however the objective was to reach a balance sheet volume of 75% after 4 years in each country and for the CEEF countries, apart from Hungary, this did not happen as shown in the table below.

For Hungary the figures include all FIs having held GFAs under HEECP/CEEF, to show the coverage of the market which has been obtained over the years.

Table 19: Financing institutions, market importance and deals

Balance sheet volume of participating FIs as % of total sector	End of program	Goal	Achievement
Czech Republic	50%	75%	67%
Slovakia	16%	75%	21%
Latvia	23%	75%	30%
Lithuania	27%	75%	36%
Estonia	0	75%	0%
Hungary (HEECP and CEEF)[15]	73%	75%	97%

Furthermore, it was expected that 75% of all Project Developers active in each country receive loans from the FIs involved in the facility after a 3 year period. The development in the number of project developers in the countries has been more important than the development in number of project developers involved in the program, actually leading to a decrease in achievement in some cases, as shown in the below table.

The term 'project developer' can be more widely understood than 'ESCO'. A project developer can be a well established company, working with implementation of EE projects, or Greenfield RE projects. Or it can be an entity, which is just developing one or a few renovation projects. In Czech Republic, even though a high number of project developers have been involved in the facility, the rate of achievement is very low, due to a very high reported number of project developers, Only in Latvia and Hungary the target as it stands now, has been reached, although these two countries differ considerably with respect to actual number of project developers involved.

[15] Total Balance sheet as per 31.3.2008, according to HFSA, is HUF 24,475,240 mill. The 5 banks from HEECP if including complete Raiffeisen activities in Hungary have a total balance sheet in 2008 of approx. HUF 18 mill, thus 73.4 %. The two FIs participating in CEEF programme have a total balance sheet of HUF 4.7 mill, thus 19% of total sector.

Table 20: Project developers receiving loans from the FI involved in the facility[16]

Country of Project developer (PD)	Number of PDs joining facility	Total number of PDs in country	Percentage
Czech Republic 2005	7	56	13%
2006	3	10-15 ESCOs + about 90 other project developers	3%
2007	8	314	3%
2008	2	314	1%
Cumulative total	19	314	**3%**
Czech Republic - Achievement of 75% goal:			**3.4%**
Slovakia 2005	0	20-30	0%
2006	0	20-30	0%
2007	0	30	0%
2008	0	40	0%
Cumulative total	5 (in 2004)	Avg. 25	**20%**
Slovakia - Achievement of 75% goal:			**27%**
Latvia 2005	1		
2006	4	2 ESCOs	
2007	1		
2008			
Cumulative total	6	2 ESCOs + approx 30 other project developers	**19%**
Latvia - Achievement of 75% goal:			**25%**
Lithuania 2005	0	75	0%
2006	0	6 ESCOs + approx 80 other project developers	0%
2007	0	90	0%
2008	4	90	0%
Cumulative total	4	90	**4%**
Lithuania - Achievement of 75% goal:			**6%**
Estonia	0	1-2 in 2006	**0%**
Estonia - Achievement of 75% goal:			**0%**
Hungary 2005 (HEECP2)	11		
2006	28	30 ESCOs	93%
2007	244 (FI dealing directly with blockhouses)		
2008	25		
Cumulative total	62 (+244 blockhouses)	Above 30 ESCOs	**90%**
Hungary - Achievement of 75% goal:			**120%**

The below table shows the volume of investments for the facility, including leveraged projects[17].

[16] Source for all numbers of ESCOs in 2006: "Latest developments of the ESCO industry across Europe", by Kiss, Bertoldi, Rezessy. 2007.

[17] As the program has now operated for over 5 years, it is hard to trace a new project being developed but not using the IFC guarantee to the impact of the CEEF/HEECP programme. The figures for leveraged projects have thus been set as the value of the leveraged projects established during the mid-terms review plus the actual guaranteed investments. In Hungary where CEEF is preceded by HEECP – which generated at least USD 43.2 mill in leveraged investment - the TA efforts have since

The indirect effect of the IFC guarantee? BIG
Kestutis Nénius, Director, Renew the City, Vilnius Municipality, Lithuania

While the investment volume under the facility has exceeded expectations by reaching 418% of the cumulative target for CEEF – Czech and Slovak Republics and Hungary being well beyond the target – the high level of investment reached in Hungary under the CEEF program means that also the total goal for investment volume for both guaranteed and leveraged projects has been exceeded – 203% of target reached. Excluding Hungary, the target would have been just reached (97%), the Baltics being below the targets.

Table 21: Volume of investments for the facility including leveraged projects

Volume of investment projects (including leveraged projects) with guarantees involving ESCOs, FIs and end-users	Million USD	Goal Million USD	Realized
Czech Republic	79.9	33.73	237%
Slovakia	20.4	26.99	76%
Latvia	5.6	30.36	18%
Lithuania	14.1	30.36	47%
Estonia	26.4	30.36	87%
Hungary	183.1	10.4	1761%
CEEF Total	**330**	**162.2**	**203%**

In Hungary the OTP school renovation project which was processed as a separate individual IFC mainstream project, and thus viewed as a leveraged project has by December 2009 reached a total amount of investment = total amount of loans of $42.4 m.

In Estonia, the Baltic CEEF office staff helped develop a 75 MW windmill project, worth EUR 75 M. It was not financed using the guarantee, but handed over to the IFC Infrastructure Department, which provided equity and guarantee.

In the previous section we investigated the development of new products by FIs. The goal was that three new products be developed and marketed in each country. This goal has not been reached. The most important products developed are:

been minimized, leading to the assumption that leveraged investments be minimal. Thus, the target for leveraged investments is equal to that set for guaranteed investments: USD 10.4 mill.

- Czech Republic: FINesa and forfeiting transaction guarantee - Česká spořitelna
- Slovak Republic: Some pilot projects – Dexia
- Latvia: Blockhouse renovation - Hansabanka
- Latvia: modernization of DH network – SEB Unibanka
- Lithuania: Blockhouse renovation – Hansabankas and SEB Vilniaus Bankas

3 years ago there was no need for a guarantee; it was easy to get loans. Energy projects were considered safe. Now it's a different story. Maybe there is a need for risk coverage.
Mr. Striogas, Eenergia, Lithuania

- Estonia: Blockhouse renovations based on standardized Energy Audit Scheme and 2nd mortgage financing
- Hungary: Blockhouse renovation and street lighting portfolios – various banks
- Furthermore, a mezzanine financing facility has been developed by CEEF staff and CEEF participating FIs in Czech Republic and Lithuania (and outside CEEF in Bosnia). The project itself is implemented outside of CEEF.

Table 22: New financing products compared with targets

New financing products per introduced to the market and marketed by FIs	Number	Goal	Realised
Czech Republic	3	3	100%
Slovakia	1	3	33%
Latvia	2	3	67%
Lithuania	3	3	100%
Estonia	1	3	33%
Hungary	2	3	67%
Total	**12**	**18**	**67%**

1.3.2 The assumptions

When examining the extent of achievement of objectives and results an assessment must be made of the related assumptions made of conditions beyond the control of the program perceived critical for the program.

In the log frame these assumptions are:

1. Macroeconomics favor investment generally
2. Price rationalization continues to improve economics of EE investment
3. ESCOs and FIs respond to TA and emergence of EE market

4. EU accession reforms continue in the CEEF countries

As for assumption 3) we have experienced that the number of FIs responding to the TA has been limited. We have also seen during the implementation of the program all 6 countries accessing the EU (Assumption 4).

The legal and regulatory framework is important. For example in Slovak Republic, during the evaluation, the legislation on renewable energy appeared to be less supportive than in the other CEEF countries. Tariffs for electricity based on renewable energy were only valid for a year. In September 2009 the "Act on the Promotion of Renewable Sources of Energy and High-Efficiency Cogeneration" went into effect. The Act provides for a feed-in tariff scheme to promote the production of electricity from renewable energy sources and high-efficiency cogeneration (RHEC Electricity). Till then, the lack of a supportive regulatory framework, as well as the uncertainty regarding the long-term tariff made it difficult to ascertain the economic viability of investments in renewable energy projects. Also, in Slovak Republic there was little governmental support for wind projects, furthermore aggravated by the fact that the utility transmission company stopped connections to the grid, claiming that wind power electricity could have detrimental impact on the stability of the whole system.

"The regulatory environment has become safer. 5 years ago non-one knew about Energy Efficiency."
Martin Dasek, CEEF, Czech Republic

In the Czech Republic a legal and regulatory framework enhancing investment was in place and a national requirement on environmental improvements forced industries early to reduce emissions. This was not the case in the other countries and in the Slovak Republic the legislation allowing ESCOs to generate revenues became a constraint.

1.3.2.1 Macro-economic Indicators

The assumptions related to this type of program are to a certain extent related to the development trends at the macroeconomic level but also within business strategies developed with the actors on the energy scene. In order to be able to explain cause and relation effects in changes within the assumptions the Evaluation Team has assessed various macroeconomic indicators.

Below we present a number of macroeconomic indicators for each country in order to assess the local market conditions for EE and RE investments.

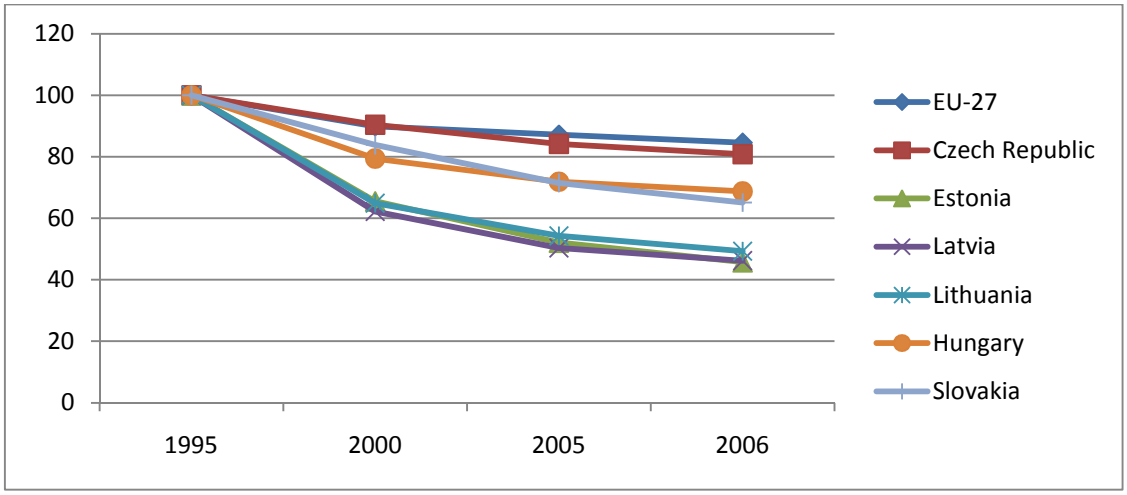
"My expectations to the energy efficiency market is that the potential is large – around 11 billion Litas"
Mr Robertas Braskys, SEB, Lithuania

The countries at the verge of the program all made good progress on decreasing high Energy Intensity figures. All five countries had yearly decreases from 1995 to 2007 of 1% - 10%. All countries have managed to produce more goods and services with less energy input. Generally speaking this shows that the macro economic conditions have been favorable.

Table 23: Energy intensity of the economy - Gross inland consumption of energy divided by GDP (kilogram of oil equivalent per 1000 Euro)[18]

Year	2003	2004	2005	2006	2007
European Union (27 countries)	187.28	184.88	181.51	176.06	169.39
Czech Republic	685.77	660.22	613.25	587.73	553.16
Estonia	718.72	692.93	624.08	551.25	580.71
Latvia	409.36	387.01	356.71	328.18	306.60
Lithuania	577.19	547.40	478.30	434.00	432.50
Hungary	460.23	430.93	437.67	416.50	400.76
Slovakia	769.40	727.77	680.32	619.73	538.64

Figure 1: Total energy intensity 1995-2006 (index 1995=100)[19]

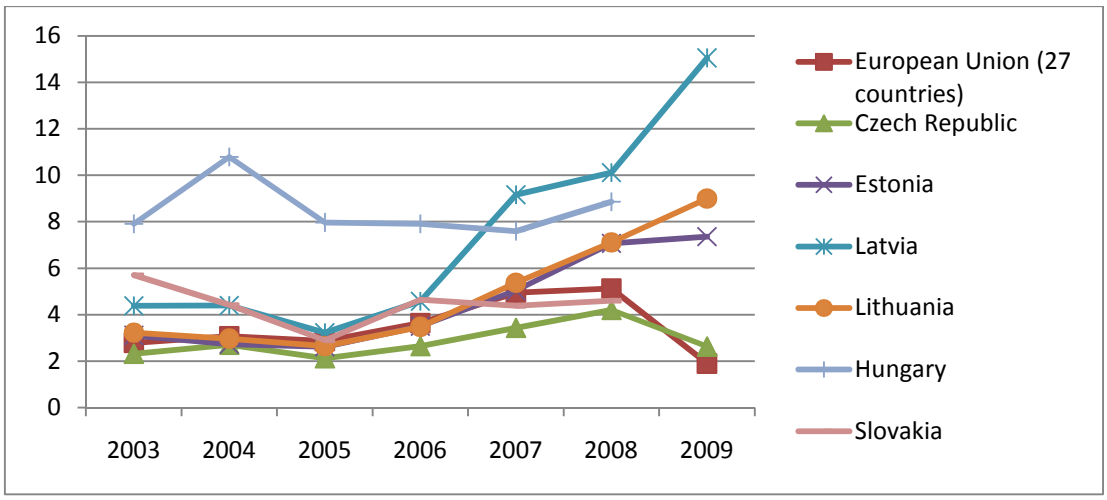


[18] Source: Eurostat
[19] Source: European Environment Agency

This is further confirmed when assessing interest levels and development, inflation rates and currency developments.

Latvia has opposite to the other countries had increasing interest rates under rather high inflation rates which all things being even is not stimulating investments.

Figure 2: Money market interest rates - Annual data - 12-month rates



Private business opportunities have been more favorable in the Czech Republic, Lithuania and Hungary while investments in EE and RE have been combined with a higher degree of uncertainty in Latvia and the Slovak Republic.

In addition to these developments at the economic and financial level the conditions on the energy market – especially in terms of prices and laws and regulations – influence decision making. The figures below show the development in gas prices and electricity prices in current price levels.

In Hungary, the Czech Republic and the Slovak Republic the market created better conditions than in the Baltics for introducing EE and RE projects in industries. From 2004 to 2005 one unit of gas saved would create almost 50% more monetary savings in these countries and this would be further supported by increasing gas prices. Since 2007 the prices have surged, also in the Baltics but in fact this did not really spur the development of projects.

Figure 3: Gas prices in EUR / GJ by type of user

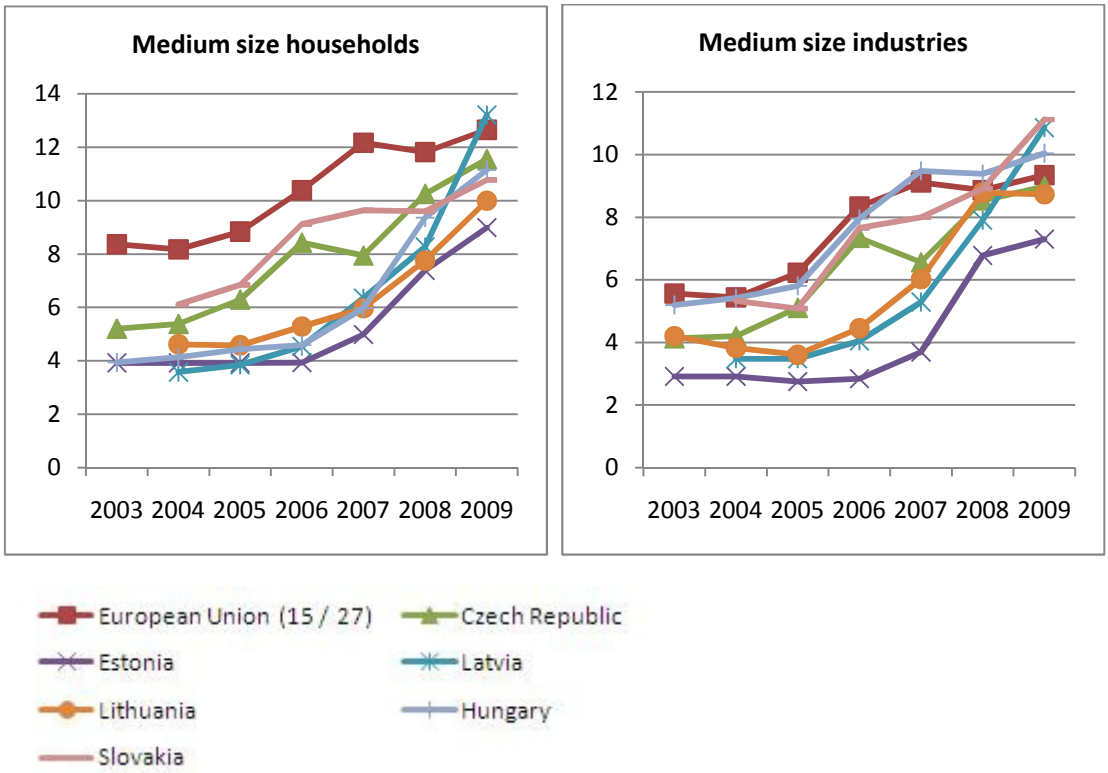
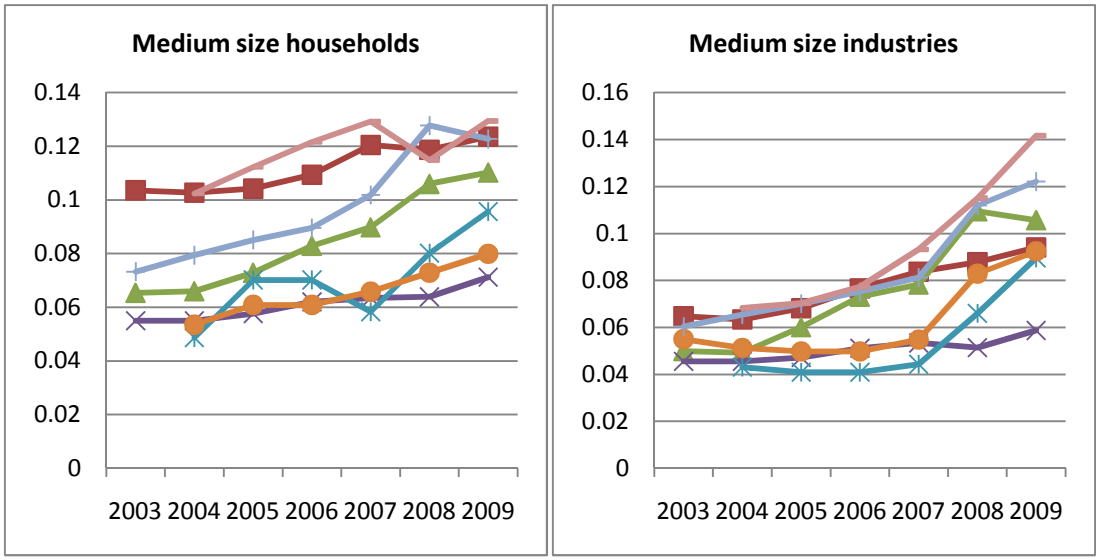


Figure 4: Electricity prices in EUR / kWh by type of user



Electricity prices show the same picture. Households in CEEF countries have traditionally had fewer incentives to make energy savings than in the EC[20], e.g. evidenced in the electricity prices which are considerably higher than in the CEEF countries, except in Slovakia. However with recent rising electricity prices, the

[20] Data till 2007 are for EU 15, in order to better show the difference from the 'old' EU countries. For 2008 and 2009 data are for EU 27. Source: Eurostat.

incentive for blockhouse renovations in e.g. Lithuania and Latvia, both having a large part of blockhouses with electric heating, has increased considerably.

The lack of success in the Baltics can be attributed to the above conditions but also a mindset of being less adaptive to the ESCO concept. Furthermore, following strong competition within the financial sector, the Banks have been reluctant to accept the IFC premium for the guarantee and been willing to accept higher risks.

It seems evident that the countries all have been able to improve their Energy Intensity which all things been even would imply that EE investments have been implemented and financed by developers, end users and FIs.

1.4 Assessment of Program Management and Operations

Our assessment of HEECP and CEEF program management and operations addresses issues related to program design, program organization and procedures, program efficiency, and program effectiveness.

1.4.1 Program Design and Objectives

1.4.1.1 Original design of program

The CEEF Program was originally designed to meet the objectives of the Global Environment Facility (GEF) to reduce emissions of greenhouse gases through implementation of EE projects directly supported by the guarantee and TA programs. Parallel objectives were to: (i) promote entry of domestic FIs into the EE financing market; (ii) build greater experience and capacity of domestic FIs to provide EE project finance; (iii) provide more favorable credit conditions to borrowers; (iv) 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; (v) build capacities of the commercial EE/ESCO industry to market, structure, and finance EE projects, and to accelerate development of the EE market generally; (vi) expand deployment of non-grant contingent finance tools for the GEF, thus achieving greater leverage of GEF funds while mainstreaming EE finance within IFC; and (vii) refine and streamline administrative and management procedures earlier 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.

The two key tools introduced by HEECP and CEEF were:

- A flexible TA program that is responsive to the needs of *individual* FIs and ESCOs active in the market and that engages quality expertise in the structuring intensive process of preparing projects for investment, coupled with
- 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.

The program was originally conceived because the market in the HEECP and CEEF target countries indicated a large potential for energy efficiency projects. At the inception of the program, there were a number of conditions deemed to be favorable to support increased implementation of EE projects:

- Prevailing energy prices were low
- There was inherent inefficiency in energy utilization
- Project agents with capacity to develop EE projects were present in the markets
- Financial markets and financial institutions were evolving
- The impending EU accession was leading to aggressive schedules for energy price rationalization and environmental emission regulations.

But the implementation of EE projects was limited due to a number of barriers that created a general lack of access to financing on terms that were well-matched to EE projects and business methods that were attractive to end-users.

Example from Lithuania. Blockhouse before and after renovation.

The CEEF Project Brief cited the following reasons for the lack of EE project financing in the five countries:

- Lack of debt financing experience and capacity deficit
- High perceived risk for borrowers and EE projects on the part of FIs
- Lack of collateral value associated with EE projects and equipment
- Excessive collateral requirements imposed by the FIs.
- Extraordinarily risk-averse financial markets resulting from historical experience with poor credit procedures
- Lack of well-prepared projects.

To address these needs, CEEF and HEECP were designed to help build a sustainable market-based commercial lending approach for energy efficiency investments.

Inputs and activities planned

The CEEF Project planned to use the 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 were to be used to leverage GEF funds for each purpose. GEF funds used as guarantee reserves were to be combined with IFC funds for each country guarantee facility. Key assumptions underlying the design were:

- To achieve success, substantial TA activity was needed to prepare investment projects in newly emerging markets;
- careful stewardship of the facility and marketing of the guarantee product required a locally based expert Project team to actively manage the facility and cultivate relationships with FI and ESCO partners;
- operational costs of the Project could not be supported by fees on guarantees; and
- there was 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.

IFC also sought to leverage GEF funds for the TA program with IFC Trust Fund support, as it has done successfully with HEECP; the availability of GEF funds was considered essential to obtaining additional IFC Trust Fund support. Finally, GEF funds supported a 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 was designed to 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).

The resource inputs are summarized in Table 24 below:

Table 24: Distribution of CEEF Funding

Item	GEF	IFC	Total
Direct project support (Partial Guarantees)	$18.2 million	$30-75 million	$48.2-93.2 million
TA, Project Management & Administration and M&E	$3.65 million	$3.65 million	$7.30 million
Total	**$21.85 million**	**$33.65-78.65 million**	**$55.50-100.50 million**

Assumptions and risks

Based on the CEEF LogFrame an overview of the assumptions/risks, results, and activities is provided below. It should be noted that the LogFrame was established at a quite late stage, when the project had already been started.

Table 25: Verification of assumptions and risks

No.	Assumption at CAS Goal Level	Evaluation
1	Stable or growing national economies (including moderate interest rates and continued liquidity in the FI sector).	True – see section 1.3.2.1: Assessment of impact on country markets – Macroeconomic indicators.
2	Accelerated pace of energy price rationalization in the CEEF countries.	True in the face of EU accession.
3	Active ESCO market growth in target countries	True in all countries (no information from Latvia) - see Assessment of impact on FIs involved (section 1.2) and on country markets (section 1.3)

No.	Assumptions at Project Development Objective Level	Evaluation
4	Macroeconomics favors investment generally.	True.
5	Price rationalization continues to improve economics of EE investment.	True.
6	ESCOs and FIs respond to TA and emergence of EE market	True - see section 1.2
7	EU Accession reforms continue in the CEEF countries	True

No.	Assumptions at Project Development Objective Level	Evaluation
8	Existence of local private sector actors interested in pursuing EE projects (ESCOs, local FIs, etc.)	True in Hungary, Czech Republic, Slovakia and Latvia; unclear in Estonia and Lithuania

9	Competitive dynamic markets drive banks' interest in new markets also without guarantee facility and without preferences for any EE equipment.	Same as above

No.	Assumptions at Project Components Level	Evaluation
10	TA is effective in developing EE projects	True
11	TA is effective in catalyzing ESCO businesses.	Partly true.
12	Pipeline and TA are effective in catalyzing local FI interest in the market	True - The interviews with the FI support this link clearly
13	TA supports FI institutional development	True. Many technical, legislative and financing EE and RE workshops have been held in FIs to train the staff. This has helped building capacity in the banks and increase knowledge about the financial advantages in lending to EE and RE investment. CEEF has also been instrumental in assisting FIs establishing specific Energy Advisory Units in the FIs to support the staff.

Summary of Findings

The assessment of the program activities and results identified above indicates that the overall program concept was well conceived and targeted at encouraging and promoting commercial financing of EE projects. However, the results in the six countries are substantially different. The key factors that appear to have influenced the results in the different countries are:

- EE market maturity and acceptance of the guarantee product
- Government policies and programs
- Energy prices
- Attitudes and interests of FIs
- Staff knowledge, experience and contacts
- Staff capability and relationships with market players

Country-Specific Conditions

It is very important to note that while the overall conditions in the energy and financial markets in the target countries appeared to be somewhat similar and

conducive to the success of CEEF, there were significant differences among the countries that led to substantially varying degrees of program success in the different countries.

For example, in Hungary, where the original HEECP program was initiated, the housing renovation market provided an attractive opportunity for the guarantee program. Interest rates in Hungary were higher than the other countries, energy prices were rising, and the government was providing subsidies (grants) for housing renovation. These factors led to a large uptake of guarantee projects in the housing sector in Hungary. This large participation led to the transition in Hungary from individual guarantees to a portfolio guarantee product.

In the Czech Republic and Slovakia, blockhouse renovation could happen without subsidies and the local banks were willing to provide 100% financing for such projects. As a result, the guarantee product was not popular in this market. On the other hand, favorable government policies towards cogeneration and renewable energy led to the use of the guarantees for many such projects.

In the Baltic countries, interest rates were low, the EE market was less mature, and there was very little interest on the part of the banks in energy efficiency or renewable energy. Also, the banks, which were mainly Scandinavian-owned, were very cautious and risk averse, and did not respond favorably to the guarantee concept.

Skills and Capabilities of Local Program Staff

The program design included the establishment of local offices staffed with experienced individuals who could work with the FIs to develop the GFAs and provide TA to the FIs and ESCOs related to EE project development and financing. The establishment of such local capacity was an important feature of the program. However, the skills, capabilities and experience of the team members varied substantially from one country to another, and these differences appear to have influenced the program success in the different countries. Some of the program staff were bankers while others were "energy people" who were more knowledgeable of EE project development issues. It is difficult to assess how much influence these differences had in shaping the country-specific results, but the general consensus among the program staff is that the skill and capability differences did have some impact in shaping the programs in different countries.

Competitiveness of the Guarantee Product

An important element of the program design was the competitiveness of the guarantee product offered by the IFC. In some of the countries, such as Estonia and Latvia, the IFC program was not competitive with other existing programs in the market. In Estonia, there was an existing government subsidy program that made the IFC guarantee product totally ineffective as there was no market for any commercial lending. In Latvia, while the CEEF guarantee product was not competitive with the product offered by the State Insurance Company, the program completed some demonstration projects that contributed significantly to actions by the government, and led to a major impact on the market. In Lithuania, a government financed guarantee product was significantly improved upon the emergence of the CEEF guarantee, almost squeezing the latter out of the market.

One of the problems pointed out by the field staff was that the initial program design specified "one price for all" in the six countries rather than creating competitive pricing in each country.

"The EUR 2 M maximum was not really limiting. Several times though we were approached by project developers with larger projects."
Martin Dasek, CEEF, Czech Republic

A number of FIs interviewed found that the product is too in-flexible. Maximum loan amounts were too small considered that the guarantee is supposed to cover a risk. Some find it not worth preparing all the required documentation for small projects. Other FIs though find that the maximum limit for loan amounts was reasonable.

Selection of Partner FIs

The operation of the program in the various countries has clearly pointed out the importance of selecting the right partner FIs. The objectives and approach of the FIs need to be aligned with those of the program. With the selection of the appropriate partners, project volumes were increased substantially. This is illustrated by the fact that about 90% of the project volume was concentrated in 3 FIs (Raiffeisen Bank in Hungary for housing, Česká spořitelna in the Czech Republic for renewable energy, and Erste Bank in Hungary for cogeneration).

Program Decision-Making

The initial program design required all GFAs, project approvals, and other program decisions to be made in the IFC headquarters in Washington, DC. The process of decision-making was cumbersome and time-consuming and lacked flexibility to quickly adapt to changing market conditions. The decision-making process was changed during the program implementation phase to allow more authority for decision-making to the field staff. This change streamlined the processing of individual projects and facilitated the development of larger numbers of projects.

Technical Assistance

A key element of the program design was the technical assistance (TA) component. The importance of the TA was clearly recognized during the program implementation and IFC leveraged its available TA resources with those from the EU and other donors. As discussed further below, the TA was instrumental in the success of the program.

Mainstreaming of the Guarantee Program on IFC Operations

The CEEF program (along with its predecessor HEECP) was the first attempt by IFC to develop financial products to create commercially viable and sustainable markets for energy efficiency financing. The program was different from past IFC program designs and experiences, and did not quite fit into the IFC operations. CEEF was different in objectives, structure, organization, and clients than the conventional IFC programs. As an example, traditionally IFC has separate programs for financial products and advisory or technical services, while CEEF combined both in a single program. Traditionally IFC has worked with large project sizes while many of the CEEF projects were relatively much smaller. As a result, there was initially a perception on the part of IFC management that the CEEF program was not consistent with IFC's structure and operations. This perception was further enhanced by the fact that CEEF had a number of field offices and relatively large number of field staff for what appeared to be a small aggregate project volume.

However, as the program progressed, it became clear to IFC that it provided a "model" for application to other areas. The CEEF model has now been "mainstreamed" in IFC's operations and is being implemented in a number of

other countries. Some of the key lessons from CEEF related to working with financial intermediaries, attractiveness of energy efficiency (EE) financing as a business area, and the potential role of EE in infrastructure projects, are now being recognized and applied in other IFC programs.

It is also important to point out that within the region, CEEF led to the creation of a separate guarantee to OTP Bank for a large project in Hungary ($250 million) for energy efficiency retrofit in schools. Also Raiffeisen Bank has negotiated a separate IFC guarantee program for blockhouse renovation with ESCO implementation.

Summary of Findings

The following are key findings related to the program design.

- The program design should be customized to the country conditions.
- It is important to have skilled and experienced staff in the local offices in each country and to assure that the skills capabilities and experience of the local staff are well-matched to the local conditions and needs.
- The selection of the right partner FIs is critical to program success and, in Hungary and the Czech Republic, led to substantial project volumes.
- The guarantee products offered by IFC need to be competitive in the specific country markets and must be customized to local conditions.
- The decision-making process related to signing GFAs with local FIs, evaluating projects, and modifying/customizing the financial products needs to be flexible and responsive to changing market conditions. Sufficient decision-making authority needs to be delegated to the field staff who are closer to the markets and the key stakeholders, and can therefore understand market conditions and needs better than headquarters staff.
- Adequate provision needs to be made in the program design to provide TA to FIs, ESCOs, end users, auditors and other market participants.
- The CEEF program had led to two other large guarantee projects in Hungary.
- The CEEF program design has provided a useful model and important lessons for mainstreaming in IFC's business and is now being replicated in other countries.

1.4.1.2 Program design adjustment in view of market changes

External market changes

Since the inception of CEEF, many important changes have occurred in the markets in the target countries:

- Interest rates have changed in most markets
- Energy prices have increased
- There are several more ESCOs in the market in some of the countries (Hungary, Czech Republic and Slovakia)
- The FIs have obtained more understanding of and experience with EE projects, their risks, risk mitigation strategies, and financing approaches

In the Baltic countries, the EE markets have not matured to the same extent as in the Czech Republic and Slovakia and the FIs have been less receptive to the products offered by the CEEF program.

These market conditions and changes have resulted in a need for modification and adaptation of the program design to meet the new market realities.

Management Response to Changes

According to program management, the field staff were in a continuous and close contact with FIs and ESCOs to investigate the market needs and to identify the demand for financial products as well as the appropriate design of the products. This was reflected in the Review Team's interviews with FIs and ESCOs.

A very important aspect of the CEEF program was the adaptation of the program design to changing market conditions. Examples of such adaptation include the following:

- Streamlining the guarantee approval process to simplify the decision process
- Delegation of authority and responsibility to the field to facilitate responsiveness to market needs
- Development of customized financial products targeted at specific markets
- Modification of GFA to meet some of the needs expressed by participating FIs

- Structuring and providing customized TA to increase the knowledge and understanding of stakeholders and to help develop new products

It was stated by the field staff that it took a significant amount of time for IFC to understand and adapt to the market conditions and changes. The field staff pointed out the needs for customizing the GFAs, developing special products for each market, making the guarantee product more competitive, and streamlining the decision process. In the first two years of the project, it was difficult to get headquarters to make the appropriate changes to the program to adapt to the market.
Likewise the original program design had high guarantee fees that discouraged many projects from being financed. In some cases, such as in Czech Republic and Slovakia, the guarantee fees were reduced to make the product more competitive but perhaps it was too late to have a major impact on the project flow.

However, the program management did demonstrate their willingness and ability to adapt to changing market conditions. The program developed new products to meet the changing needs of the markets, and was responsive to the needs of the FIs and ESCOs. Both headquarters and field staff responded and adapted to changing market conditions and needs.

IFC delegated more authority and responsibility to the field and designated a CEEF field manager (located in Bratislava) for all of the field staffs. The rationale was to reduce Washington's involvement and increase field decision-making, and the decision was made in response to field staff requests. The headquarters staff also made a decision to try to consolidate some of the field offices into a single large office in Bratislava to facilitate improved communication and coordination of staff activities.

The changes made by IFC, particularly those related to making the program more flexible, delegating authority and responsibility to the field, increased headquarters interest and support to the field staff, and improved and increased access to other IFC resources, led to substantial increases in project volumes in Hungary and the Czech Republic. In Hungary, for example, 80% of the guarantee volume was booked in the last 3 years of the program (i.e., after IFC made the program changes)

Summary of Findings

It is important to recognize the need for customization and adaptation of the financial products to the market needs and to develop the capacity to be flexible and responsive to the market needs.

1.4.1.3 Understanding of program objectives by all staff

The program objectives were generally been clearly stated in the various program documents. However, since the program was a cooperative effort between IFC and GEF, and the objectives of the two organizations were somewhat different, there was a potential issue relative to the program management and operations to meet both IFC and GEF objectives.

A key internal design issue was the potential for some conflict between the GEF objective of developing sustainable markets for EE financing products (represented by EFG - Environmental Finance Group) versus the FMD objectives of developing commercially viable and replicable IFC products and earning a return on IFC investment. The Evaluation Team concluded that:

- The objectives of the EFG were very much aligned with the GEF objectives. EFG clearly believes that the primary objective of CEEF is to develop the commercial markets for EE financing.
- EFG also strongly believed that these objectives could be aligned with those of the FMD, which was interested in developing new IFC products that could provide a return to IFC and would be likely to be marketable in other countries.
- When CEEF was organizationally moved to report to the FMD the staff was incited to become more volume focused, instead of market transformation focused.
- Based on the earlier experience of HEECP and a review of some of the issues identified in the HEECP evaluation, IFC management took steps to minimize any potential conflicts between GEF and IFC objectives. A Program Operations Manual was developed and provided to all staff. This Manual clearly defined the CEEF program objectives and operational procedures.
- It was stated by the representatives of both EFG and FMD that the primary goal was to stimulate EE financing, regardless of how much of

the guarantee was used. And they felt that because of this, there should have been no conflict between the GEF vs. IFC objectives.

Summary of Findings

It appears that there were initially some potential conflicts between the GEF and IFC objectives, but these conflicts were addressed and the issues resolved by program management. IFC headquarters issued clear guidelines regarding the relative emphasis on market development activities versus commitment of guarantee funds, so that there was no ambiguity between the GEF and IFC objectives.

1.4.2 Program Organization and Procedures

1.4.2.1 Organizational set-up in view of program objectives

The program organization of CEEF was structured differently from the earlier HEECP organization with the field staff reporting to the Financial Markets Department (or Financial Markets Sustainability) and not to the Environmental Finance Group (EFG). There is however, still a "dotted line" reporting responsibility to EFG (with Russell Sturm as the overall manager addressing the strategic issues and Ian Crosby as the field manager responsible for day to day operations).

The main field office was located in Bratislava with smaller offices in Prague and Budapest. Originally, CEEF also had offices in Estonia, Latvia, and Lithuania, but these offices were closed and a staff member managed the Latvia and Lithuania work from the Prague Office.

Based on the interviews with headquarters (HQ) and field staff, as well as interviews with the FIs and ESCOs and a review of the program results, the Evaluation Team has concluded that the program organization has been adequate to meet the operational needs. Also IFC has shown a willingness to change the program organization to improve the operational aspects of the program. For example:

- Since IFC's funds for this program came from FMD, the staff found it more appropriate for them to report to FMD rather than to EFG. The reporting relationships were changed to accommodate this need.
- The field staff and some of the FIs expressed the need to improve the processing time for project guarantees as it was felt that it was taking too long for HQ staff to review and approve the applications, and for staff to respond to requests for information from HQ. Program management changed and stream-lined the guarantee approval process to allow for a number of decisions to be made in the field.
- The consolidation of the offices into a regional office in Bratislava and offices in Prague and Budapest led to some efficiencies and better communication/coordination, but resulted in the staff from the field being more remote from the markets and stakeholders. It was difficult to assess whether the management of the work in the Baltics from Prague may have contributed to the low level of project activities in these countries with an impact on the limited success here.

Summary of Findings

The program organization was structured appropriately to meet program needs and organizational changes were made to make the program more flexible and responsive. Consolidation of the offices was designed to achieve netter communication and coordination and to make the operations more efficient.

Roles and responsibilities of all of the program staff (Supervisory Committee, Headquarters Staff, Field Staff, Advisory Committee)

The roles and responsibilities of the Headquarters staff and field staff were well-defined and changes were made to delegate more authority and responsibility to the field staff as discussed above. The Headquarters Staff worked very closely with the field staff and conducted regular conference calls and e-mail communications. Periodic visits to the countries were also undertaken by the headquarters staff. There appeared to be a very good working relationship among the headquarters and the field staffs.

The roles and responsibilities of the Advisory Committees, on the other hand, were not well-defined. The Advisory Committees were established to contribute to awareness building among the various stakeholders. These committees included representatives of governments, FIs, ESCOs, Chambers of Commerce, etc. and

were established to facilitate the staff's access to the stakeholders. However, it was not very clear what the field staff expected from the Advisory Committees, and it appears the program did not make effective use of these Advisory Committees.

Very few meetings of the Advisory Committee were held and these were not scheduled on a regular frequency. Some of the staff did meet informally with individual members of the Advisory Committees to take advantage of their knowledge and experience with the country-specific markets and issues, but such interactions were of an ad hoc nature.

In the later years of the program, the field staffs were asked by program management to devote some time to activities other than CEEF. It is estimated that they may have spent 10 to 15% (or even up to 33%) of their time on other work in the Financial Markets Department. This was perhaps good for their "career development" in that they gained experience related to other IFC activities for potential re-assignment after the termination of CEEF. These "non-CEEF" staff activities were funded completely separately by IFC and not from GEF funds. It was not clear whether such non-CEEF activities may have adversely affected their work on CEEF (the field staff assert that there were no such adverse effects). The headquarters staff was also unanimous in their opinion that these other activities did not unduly influence their performance on CEEF and that the staffs understand that their primary responsibility was to CEEF.

1.4.2.2 Tools and Procedures

The program procedures were well-defined and documented in the Operations Manual. These procedures addressed selection of financial institutions to participate in the program, approval of projects for guarantees and provision of technical assistance.

Selection of financial institutions for participating in the program

The identification and selection of FIs for participating in the program was performed by the field staff. The approval of the FIs was the responsibility of the Headquarters staff. The procedures of how to identify and select FIs were documented in the form of well-defined questionnaires and due diligence, risk assessment, and credit approval procedures. The Operations Manual provided a detailed description of the procedures for selection of the FIs.

Processing of GFAs and individual project guarantees

A number of issues and concerns were identified by the field staff, FIs and ESCOs regarding the efficiency of the processing of the GFAs and individual project guarantees. Most of these issues and concerns were addressed by IFC and subsequently the processing was conducted efficiently. However, the total number of GFAs signed in the 6 countries was only 14, and the participating FIs and the balance sheet volume of the participating FIs is far short of the target of 75% of the entire banking sector.

During the early stages of the program, all project approvals were the responsibility of headquarters staff. These procedures led to delays in project approvals, and the field staff recommended changes in the procedures. The procedures were changed to delegate responsibility and authority to the field staff.

Originally a standardized GFA was being used for all countries. In view of the comments from staff and FIs it was found important to customize the GFAs to the specific local needs and conditions. IFC changed its procedures to allow such customization and provide the field staff with more discretion to structure customized GFAs in accordance with the revised IFC procedures. This resulted in a slight increase in the number of GFAs signed.

Technical assistance (TA) activities

TA projects were identified and evaluated by field staff and presented to Headquarters Staff for approval on a case-by-case basis. The TA activities were designed and funded in cooperation with other donors and the focus and rationale of these activities was documented in the individual application documents. However, the decisions on selection of the TA projects and the allocation of TA resources appeared to have been made on an ad hoc basis in response to specific market conditions and needs, and there did not appear to be sufficient and well-organized documentation regarding the overall criteria and procedures for definition and selection of these TA projects. Also, while there was documentation for TA activities in the form of energy monitoring by external companies and some presentation material for workshops and seminars, there was no real ex-post assessment of the TA projects, such as can be obtained from interviews with the recipients of the TA.

The TA activities have included the following:

- Energy Audit Program
- FI support activities
- Training seminars
- Product development support
- Program Marketing
- Workshops and conferences
- Market Surveys
- End User Seminars
- Consultation and financial support

The seminars and training conducted as a part of the TA activities was reported by the program staff as being successful and effective and appreciated by the participants in these events. However, it is difficult for the Evaluation Team to assess the contributions and effectiveness of these activities as insufficient information is available from the recipients of the TA to assess how they benefited from the activities - apart from satisfaction with the training activities to create more awareness - and what use they may have made of the TA results.

IFC was successful in leveraging TA funds with funds from a number of other donors (such as EU, USTDA, Spanish, Finish and Austrian Trust Funds).

Summary of Findings

The initial program procedures were deemed by the field staff to be rather cumbersome and time-consuming. However, significant changes were made to streamline the procedures, and these were well-defined and documented in the Operations Manual.

The delegation of authority and responsibility to the field staff for project approval decisions contributed to the larger volume of projects in the latter years of the program.

The TA projects were selected on an ad hoc basis and there appeared to be little documentation on the overall theme and criteria for selection. The field staff reported that the TA contributed substantially to the success of the program. However, there was no formal assessment of the usefulness and effectiveness of the TA from the perspectives of the TA recipients.

Procedures for recordkeeping and reporting

Discussions with the field staff indicated that the program recordkeeping, monitoring and reporting procedures are adequate for the requirements of program management. However, it was also pointed out by the field staff that the IFC's internal systems for information processing, accounting, and monitoring were not set up for handling a large number of small projects that CEEF generated and it took the staff a substantial amount of time to learn how to work with the IFC systems. In particular, the IFC information system could not easily handle the financial reporting, environmental reporting and development impact assessments needed for the CEEF program. Such reporting had to be done manually as the IFC systems could not provide adequate and timely information. Also, the IFC accounting systems initially were not set up to handle guarantee fees in a "user-friendly" manner, and the field staff had to handle some of the processing manually outside of the IFC systems.

1.4.3 Concluding Remarks

The success of the CEEF program in Hungary and the Czech and Slovak Republics in terms of the GFAs, the number of projects, project investments and project results, points out that the products and tools developed by the CEEF program were appropriate for these countries. However, the limited success in Latvia and Lithuania and the lack of any GFAs and projects in Estonia indicates that the specification of standardized products and tools in the initial program design failed to take into account the special conditions in the Baltic countries where the products were not appropriate or competitive.

With respect to program management and operations, the Evaluation Team has drawn the following conclusions:

- Local presence in each market was very important to program success, as continual follow-up is required to ensure take-off. It takes at least a year to convince the banks to join the program and to conclude the GFA, and subsequently it may take another year to launch it in the bank.
- The skills, capabilities and experience of the field staff contributed significantly to the success of the program in Hungary and Czech Republic.
- The field staff's knowledge and understanding of local market conditions and FI and ESCO characteristics was very useful in program operations.
- The Technical Assistance component, although performed on an ad hoc basis, was an important element in the program success. The ad hoc

element while seeming unstructured, permitted for flexibility and adaptation to market needs in the very different participating countries

- The delegation of authority and responsibility to the field was very important to the smooth and effective operation of the program and contributed to the large increase in project volumes in the later years of the program.
- IFC made program changes to make the program operations more flexible so as to be able to react more effectively and promptly to market changes, to create new products and delivery mechanisms, and develop better relationships with the FIs and other program stakeholders. These changes were appreciated by the field staff and the stakeholders and led to large project volumes.
- The CEEF program provided important lessons relative to working with small projects.
- The significant commitment of IFC headquarters management and support provided by then to the field staff was also important in the program results.
- CEEF has provided many important lessons that have helped shape similar IFC programs in other countries.