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SMARTLESSONS

International Finance Corporation
World Bank Group

LESSONS IN PROMOTING ENERGY EFFICIENCY

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Over the past ten years, IFC's Environment and Social Development Department has initiated a number of energy efficiency programs in emerging markets designed to promote local financing of energy efficiency projects and to reduce greenhouse gas emissions and consumption of energy. These projects accomplish their objectives by stimulating demand for energy efficient products and services in markets that show a potential for energy efficiency uptake. This paper discusses IFC's experience with three distinct but related energy efficiency initiatives, the last of which is currently under implementation.

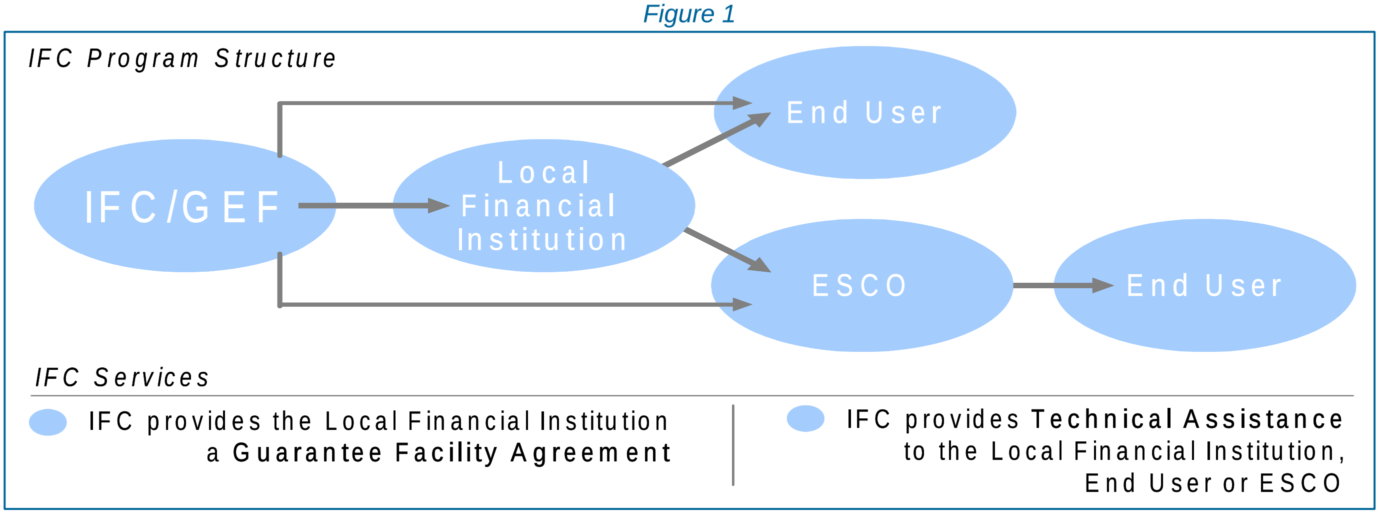
Who is this document intended for? IFC staff developing projects in various business lines and regions---especially those working on energy efficiency projects. The lessons are presented with minimum technical jargon to make the message accessible to as wide an audience of project/ program developers as possible.

Background

The following paragraphs summarize the structure, results, and lessons learned from the Hungary Energy Efficiency Co-financing Program (HEECP), the Hungary Energy Efficiency Co-financing Program 2 (HEECP2), and the Commercializing Energy Efficiency Finance (CEEF) Program. HEECP2 and CEEF were combined into a regional program which focuses on six countries, namely, Hungary, Czech Republic, Slovakia, Lithuania, Latvia, and Estonia.

The goal of each of these programs is to promote and enhance commercial financing of energy efficiency (EE) projects by local banks and leasing companies, thereby reducing greenhouse gas emissions. The project objectives are pursued through the provision of (1) financial products to local financial institutions that make loans for EE projects and (2) advisory services (AS) for capacity building to financial institutions, energy services companies, and project hosts. Figure 1 below shows IFC/GEF interaction with FIs (guarantees and advisory services) as well as energy services companies (ESCOs) and end-users (advisory services)

Figure 1



Technical Assistance/Advisory Services

Although the focus of this paper is on advisory services, the results discussed below encompass both advisory services and investments (financing). The advisory services component is a necessary but nevertheless insufficient condition for success.

The advisory services provided through each project were designed to strengthen or build the capacity of financial institutions, energy end-users, and energy services companies. They assisted financial institutions in developing specialized financial products, helped end-users and EE companies build "bankable" EE projects, and developed institutional capacity in the Hungarian EE and financial services industry. They also provided support to end-users interested in conducting energy audits to help determine if EE would be a viable option. With regard to content, the advisory services often involve skilled personnel (either IFC staff or outside consultants) who provide support for market research, due diligence, investment appraisal, and training services.

Services of the IFC Implementation Team	Recipients of Services
• Develop strategy for EE.	Financial institutions.
• Assist in preparing/creating "bankable" projects.	Developers/FIs.
• Conduct market assessment and awareness raising.	Individual EE investments
• Capacity building/training/external consultant engagement.	ESCO/FIs
• Monitoring legal, regulatory, and institutional environment to identify barriers to investment.	

Results

Collectively, HEECP, HEECP2, and CEEF have directly influenced the operations of 14 financial institutions, two of which are nominees for the 2007 Financial Times Emerging Markets Sustainable Bank of the Year award. The programs have also resulted in the creation of several hundred energy efficiency projects and significant energy savings. The CEEF Program has generated energy savings of 1080 tera joules annually or dollar savings of $30 million/yr assuming $0.1/kWh in average electricity prices. The CEEF initiative has led to direct CO2 reductions of 52,800 tons per year. These guarantee projects are estimated to have led to the implementation of an additional 144 projects valued at $79.6 million with CO2 reductions of 159,649 tons per year. Over the estimated 10-year life of these efficiency improvements, they will generate more than 2 million tons of CO2 reductions.[1]

In spite of the successes recorded above, IFC's EE experience has not been without implementation challenges. First, the projects have not been successful in every country of intervention—two of the five target countries for CEEF (six target countries, if we include Hungary) have yet to generate traction because of the characteristics of these markets. Second, each of the programs had difficulties tracking the level of EE transactions completed without IFC guarantees and the associated energy savings. Third, though the ESCOs and FIs interviewed indicated that the advisory services provided under HEECP1, HEECP2, and CEEF have been very valuable, an assessment of the effectiveness and efficiency of the technical assistance is impossible because there is not sufficient information available on the actual results of many of the advisory services activities.

Lessons Learned

Due to the evolution of IFC's EE experience and the fact that the above three programs were implemented in sequence, the lessons that were generated in HEECP1 were built into HEECP2 and CEEF. Most of these lessons apply to almost any program within the World Bank Group. The following paragraphs will focus on the lessons from the advisory services components of these projects.

Necessary conditions for success: There are certain conditions without which a favorable outcome for market-based EE initiatives is unlikely. First, the energy pricing should not be subsidy intensive, or where subsidies exist, they should be very selective. Energy subsidies tend to dull the incentive to use energy efficiently or conserve it. Second, project developers need to be active in these markets. They are the vehicle for identifying opportunities to improve efficiency in factories or homes, can be used to retrofit existing inefficient systems, and have access to equipment suppliers. Third, loan financing stimulates energy efficiency investments because, though EE improvements generally have short payback periods, consumers may not be able to afford the upfront costs of these systems. For this reason, high interest rates and unsophisticated financial intermediation will tend to hurt the growth of EE. Finally, economic sectors that are extremely energy intensive also tend to provide opportunities for energy efficiency improvements.

[1] Mid-Term Review: Commercializing Energy Efficiency Finance, Dec. 2006. p.3

Tracking advisory services results: Although an integral component of each program, the success of advisory services was not rigorously tracked. The monitoring efforts were devoted to the overall goals of the project and the degree to which environmental benefits are achieved. To directly assess the impact of advisory services, appropriate tracking systems that capture the importance of these activities to the clients on the one hand and the outcome of the project on the other must be established. Where rigorous tracking is not implemented, the value of advisory services, which may be apparent to direct project participants, cannot be communicated to relevant stakeholders. Furthermore, since the advisory services efforts cannot be independently assessed, potential improvements in project design may be lost.

Building flexibility into advisory activities: For advisory services that are expected to be administered over several years, it is valuable to build flexibility into the project structure. This will allow for changes to the content of the program as market conditions change. In certain markets, IFC's EE program was adjusted to take advantage of opportunities to market to Block House renovation initiatives, an unanticipated opportunity. In others, the program closed operations because deal flow was limited due, in part, to unfavorable market conditions.

There are limits to what training alone can accomplish: Advisory services should go beyond training the client/financial institution to perform new tasks or introduce new services. Businesses need to be assisted in changing their behavior and deploying the new knowledge. A degree of hand-holding is often warranted to broker partnerships between financial institutions, project developers, and equipment suppliers. It should also include structuring actual transactions involving these parties. For example, our advisory services team (a) sensitizes financial institutions about EE opportunities through market studies, (b) teaches them how to assess EE credit risks, and (c) works with project developers, equipment suppliers, and financial institutions to structure and deliver on individual investments. After these practical interactions, the financial institutions, project developers and others would gain the confidence to independently pursue similar business initiatives, thereby embedding the learning from the advisory services into routine business practices.

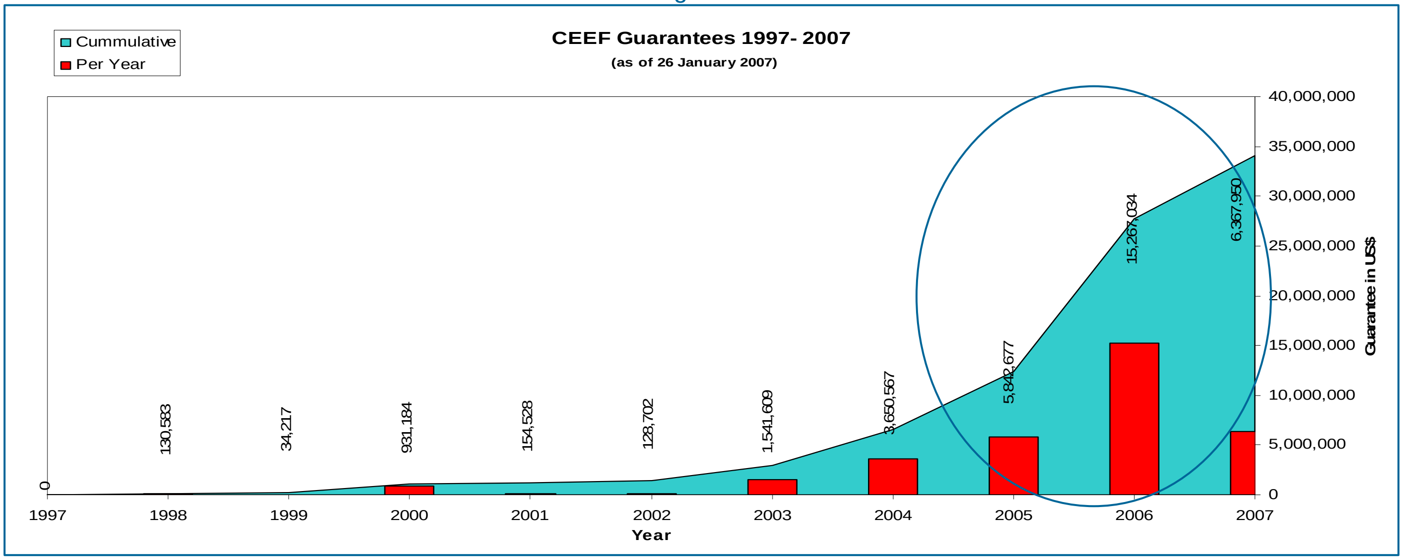
Clients may value a menu of advisory services: As advisory service providers, we are often tempted to offer potential clients one or two advisory services that we believe are best suited to their needs. However, the client is very knowledgeable about his business, its current capabilities and growth trajectory, and might therefore opt for a completely different kind of services than the ones we suggest if he understood the various services we are able to offer. It is therefore useful to offer clients a menu of advisory services and explain the benefits and costs of each of them. The clients may then select the service or mix of services that best meets their needs based on a good understanding of the merits of our advisory services. Implicit in the above is that if we offer only one or two advisory services, there is the likelihood that the client may decline our service offer once they know that it is not suited to his needs.

Financing alone is not enough: Where IFC has worked with financial institutions to expand the availability of loans to support EE investments, we have found that pari-passu guarantees (loan guarantees with equal risk sharing) alone do not provide adequate incentive to make financial institutions offer EE loans. Strong advisory services and a close working relationship with the financial institution are often required. The loan guarantee product is not seen as very valuable unless it is complemented by advisory services, which often enables/helps the bank assess the risks associated with the underlying loan product and other aspects of individual EE transactions.

Advisory services and clients' existing strategy: Advisory services can be especially valuable if they support a financial institution's business or strategic direction. Before a specific or menu of advisory service is offered to any entity, it is best to understand the strategy of the entity as well as the market challenges it faces. The assistance should be designed around the direction a business has set for itself rather than offering advisory services that divert a client's attention away from its established priorities. A financial institution that is marketing a range of mature loan and other financing products and is interested in expanding into other areas may be a good candidate for EE-oriented advisory service, since this will represent a new and unexplored opportunity — provided that the necessary conditions for success of an EE program exist.

If a bank is only offered a limited guarantee facility, and operating that facility has high transaction costs, then it will not focus on this business opportunity.

Figure 2



Status Today: As the demand for sustainable energy programs has increased within IFC, it is essential that we learn from these lessons and build them into current and future program designs. The adaptive management style employed allied to regular management review meetings has meant that CEEF has modified its systems and approach to increase its impact. The following top three lessons have been incorporated into the design of IFC's newest EE programs, the Russia Sustainable Energy Finance (RSEF) initiative and the China Utility Based Energy Finance Program (CHUEE):

- **Monitoring of advisory activities:** Russia has an extremely robust monitoring system which is carefully managed. A database tool has been created to help the team with acquisition of information

- **Financing alone is not enough:** In Russia and in CHUEE, more attention has been paid to market development activities that go beyond just working with the FI.

- **Menu approach:** The Russia team has developed a structured approach for working with FIs to identify which items from the menu they want/need and then have a MoU that states what each party will do.

- **Adoptive management**: With the benefit of working with financial institutions on energy efficiency projects over several years, IFC has learned to exploit the competitive advantage of financial institutions in processing small transactions—the typical deal size of EE projects. IFC has adapted its energy efficiency products and services to the capabilities and needs of FIs. The result, depicted in Figure 2 above, shows how changing our project review procedure through delegating credit appraisal responsibilities to partner FIs enables the completion of a much larger volume of transactions without compromising credit quality. This change brought about a 2.5-fold increase in the volume/value of deals competed in the 2005-2006 timeframe, a trend that has continued into 2007.

About the Author

Eluma P. Obibuaku is Monitoring and Evaluation Specialist with the Environment and Social Development Department. Over the past two years, the author has been responsible for the development of monitoring tools and practices for a wide range of sustainable energy initiatives. This document has been written with extensive input from the Sustainable Energy team, namely Ian Crosby and Russell Sturm.

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