

Private Sector Participation in Market-Based Energy-Efficiency Financing Schemes: Lessons Learned from Romania and International Experiences



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**PRIVATE SECTOR PARTICIPATION
IN MARKET-BASED ENERGY-EFFICIENCY
FINANCING SCHEMES
LESSONS LEARNED FROM ROMANIA AND
INTERNATIONAL EXPERIENCES**

November 2003

Joint UNDP/World Bank Energy Sector Management Assistance Programme
(ESMAP)

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This report was written by Anke S. Meyer (Energy Efficiency Consultant with ECSIE) under the guidance of Varadarajan Atur who is the Task Team Leader of the GEF-supported Romania Energy Efficiency Project.

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Abbreviations and Acronyms

ANRE	Autoritatea Nationala de Reglementare in Domeniul Energie
ASE	Alliance to Save Energy
BOA	Board of Administration
EBRD	European Bank for Reconstruction and Development
EE	Energy Efficiency
ESCO	Energy Service Company
ESMAP	Joint UNDP/World Bank Energy Sector Management Assistance Programme
EU	European Union
CO ₂	Carbon Dioxide
FI	Financial Institution
FREE	Romanian Energy Efficiency Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
HEECP	Hungary Energy Efficiency Cofinancing Program
ICSID	International Center for Settlement of Investment Disputes
IFC	International Finance Corporation
IFI	International Financial Institution
SME	Small and Medium Enterprise
TA	Technical Assistance
WTO	World Trade Organization

Executive Summary

1. Why are commercial banks and other local financing institutions so reluctant to finance energy-efficiency (EE) projects and businesses? In most developing and transition countries the barriers to commercially based EE financing, particularly domestic financing, are still formidable, characterized by:

- ~~✍~~ Unfamiliar risk profiles of energy users that prevent financing from being extended or that require collateral as high as 200 percent.
- ~~✍~~ Lack of collateral value of EE project equipment.
- ~~✍~~ Very cautious bank lending practices toward smaller clients.
- ~~✍~~ Domestic financial institutions' lack of relevant experience, expertise, and capacity with regard to project finance and lack of understanding of EE business potential and how to assess EE project risk.
- ~~✍~~ Relatively high transaction costs associated with EE project development and financing and the transactional cost burden of EE projects that tend to require small amounts of capital per project
- ~~✍~~ Difficulty of securing the savings (“negative cash”) stream associated with EE projects and having it provide meaningful credit support to the EE loan. A closely related topic is how, through financial structuring or specific credit enhancements, to create more “bankable” EE projects.

2. EE financing schemes relying on a one-time infusion of grant money were realized in some countries, a sustainable EE business can, however, develop only with the participation of the commercial financial sector. A few projects supported by the Global Environment Facility (GEF) have pioneered new mechanisms such as partial credit guarantees that reduce the above-mentioned barriers to private sector involvement in financing EE projects. They provide the first lessons learned in how to attract private sector financing. The International Finance Corporation (IFC)/GEF project in Hungary resulted in

- ~~✍~~ Initial champions to prove that EE projects are financially viable and that financing can be structured to have the savings stream provide security for lenders.
- ~~✍~~ Credit enhancements to substitute for straight guarantees and collaterals.
- ~~✍~~ Development of niche financial products.
- ~~✍~~ Project development activities and capacity building of stakeholders, both financial institutions and project developers, supported from technical assistance grants.

3. Where conditions are developed as they were in Hungary, a guarantee mechanism may be a promising approach. In other countries, where the economy is still undergoing structural reforms, and both banks and enterprises have had very little if any

experience with other than directed lending to state-owned enterprises or short-term lending for working capital, a more comprehensive approach may be required to get the private sector involved. Romania is one such example.

4. Without any interest of the Romanian financial sector to become directly involved in EE financing, a new EE project was developed that would commence with GEF financing. The centerpiece of the World Bank /GEF project is an energy-efficiency fund (FREE) that GEF has capitalized with US\$8 million. GEF also contributes US\$2 million for technical assistance designated for the removal of barriers to EE investment. A fund management company is in charge of the investment aspects of the fund, acting as both project developer and financier. While FREE is designed as an overall financially self-sustainable operation, it is highly desirable that FREE's resources be complemented with cofinancing investment capital. FREE is in fact meant to have a demonstrative impact, contribute to an EE market transformation, and build capacity in the Romanian EE finance industry. Supplementing GEF funds with a substantial amount of commercial cofinancing would have the following advantages: increase profitability of the operation; catalyze more investment in energy efficiency; lead to greater CO₂ savings; recover the initial transaction costs of fund management and FREE administration; and ensure that the model is sustainable.

5. In principle, banks operating in Romania have expressed interest in cooperating with FREE, because of the potential strategic value of fund participation. In practice, several key factors weigh heavily on the prospect of successfully attracting cofinancing, namely:

- ✍ The perception by cofinanciers that there is a viable demand for financing for EE projects that meet the eligibility criteria of FREE, while also providing an attractive risk and financial return profile to the cofinanciers.
- ✍ The quality and credibility of the selected fund manager.
- ✍ The governance structure of FREE, that is, the degree to which the cofinanciers believe the fund manager will have the autonomy to operate the fund in a purely commercial manner, free from political interference.

6. These concerns were addressed during project preparation. A thorough market assessment confirmed that with energy prices rising and macroeconomic conditions improving, awareness of the benefits of reducing energy intensity and costs is increasing. Ample opportunities exist for quick-payback EE investments, especially in the industrial sector.

7. The effectiveness of the fund manager is obviously seen by investors as a crucial success factor for FREE and for their own participation, since the fund management company undertakes all functions central to the conduct of FREE's business. There is indeed a pool of fund management resources in Romania perceived as effective enough to manage FREE's funds as well as cofinancing investment capital profitably. Fund management services for FREE were selected through a competitive process, procured under World Bank guidelines.

8. Weak governance of FREE could lead to possible conflict of interest among FREE's board members designated from the public and the private sector, lack of independence and commitment of the fund management company, and inadequate participation of cofinancing parties in those decision-making processes within FREE that directly impinge upon their profitability as co-investors. These concerns were addressed by establishing a board composed of a majority of private sector members chosen for their combination of financial and technical expertise; by ensuring the commitment of the fund manager through partly success-fee-based remuneration; and by considering that those co-investors entering a tighter cofinancing agreement might receive a voting chair in FREE's investment committee and representation on FREE's board.

9. Several commercial banks have indicated that they are interested in undertaking parallel commercial lending with FREE, with the fund manager's role seen as arranging the parallel commercial financing and coordinating the transactions (and in some cases originating the deals). Cofinanciers are expected to join the fund when the first successful deals have been concluded.

10. It is hoped that the design of FREE as a project development and financing facility and its first experiences will contribute to a better understanding of the benefits of EE investments and the possibilities of structuring financing for different client groups. Based on the experience with FREE, the financing of EE investments is expected to become an attractive business for domestic financial institutions.

1

Introduction

1.1 Financing of energy-efficiency (EE) projects in a country almost always commences with public funds. Examples are energy service company (ESCO) businesses in the United States and Canada that were able to take advantage of public funds for public buildings (World Bank 1999), most of the EE funds worldwide as compiled in a recent Alliance to Save Energy report (ASE 2002),¹ or various EE projects funded by international financial institutions (IFIs). A sustainable EE business can, however, develop only if public funding is complemented by funding from the private sector. In the past few years, some equity funds with IFI and private sector participation have sprung up, such as the Renewable Energy and Energy Efficiency Fund for Emerging Markets (REEF)² and Dexia-FondElec³, and several IFI/GEF projects in transition and developing countries have experimented with various features that would reduce the barriers for private sector involvement in financing EE projects. The longest running of those financial schemes is the Hungary IFC/GEF Guarantee Fund. In light of the lessons learned from those projects, this report concentrates on the example of Romania, where implementation of a World Bank GEF project with a market-based EE financing mechanism has just started.

1.2 Until recently, Romanian energy consumers were enjoying energy prices well below world market prices. With restructuring of the energy sector, the energy price level is now going up and subsidies are being phased out. Together with restructuring and privatization in the industrial sector, there are now incentives for investments in energy efficiency that would reduce costs and improve the competitiveness of Romanian companies. There is, however, a history of failed initiatives to set up EE credit lines or promote ESCOs. Given the utter lack of positive experiences of EE investments and the continuing reform efforts in the financial sector in Romania, the financial sector had no

¹ http://ase.org/programs/international/intl_eefunds_march5.pdf

² Renewable Energy and Energy Efficiency Fund;
<http://www.ifc.org/enviro/EMG/Renewable/REEF/reef.htm>)

³ This fund will invest in ESCOs (energy service companies)
<http://www.ebrd.com/opera/projects/psd/psd1999/326dexia.html> and
www.dexia-pfb.com/francais/file/fondelec.pdf

interest in going ahead, for example, as did Hungary, with private sector lending supported by a guarantee scheme (see chapter 2). A new EE project would have to commence through GEF financing initially.

1.3 The centerpiece of the World Bank/GEF project is an energy-efficiency fund (FREE) that GEF has capitalized with US\$8 million. GEF also contributes US\$2 million for technical assistance designated for the removal of barriers to EE investment. A fund management company is in charge of the investment aspects of the fund. While FREE is designed as an overall financially self-sustainable operation, it is highly desirable that FREE's resources be complemented with cofinancing investment capital. FREE is in fact meant to have a demonstrative impact, contribute to an EE market transformation, and build capacity in the Romanian EE finance industry. Supplementing GEF funds with a substantial amount of commercial cofinancing would have the following advantages: increase profitability of the operation; catalyze more investment in EE; lead to greater CO₂ savings; recover the initial transaction costs of fund management and FREE administration; and ensure that the model is sustainable.

1.4 ESMAP supported research into the requirements the private financial sector has in order to participate in this or other funding mechanisms. Several international EE projects and financing schemes were reviewed, and a large number of interviews were conducted with Romanian and international banks and fund managers. The interviews revealed the broad interest of commercial banks in either cofinancing or fund management, provided that the financing scheme be carried out with a truly commercial focus without interference from the government. A workshop was cosponsored by ESMAP in Bucharest in the fall of 2001 to discuss a recommended approach for Romania and to seek further input from stakeholders in the financial sector. This report summarizes the findings and conclusions from both the consultant reports and the workshop. The lessons learned from worldwide experience and from the special case of Romania are expected to be of relevance to many countries with emerging capital markets.

2

International Experiences with Commercial Financing Schemes

2.1 Until very recently, EE financial schemes were rarely commercially based. Most relied on the infusion of grant money. Many revolving funds funded by EU Phare, especially in Eastern Europe, are a testimony to this approach (see ESMAP 2000, http://www.worldbank.org/html/fpd/esmap/eef_report.pdf for examples from various funds). They tend to revolve only slowly, and, without additional infusions of funds from the outside, they frequently have to stop activities. Other examples are credit lines that have subsidized interest rates or sizable grant components, often provided by IFIs. An example is the World Bank's Lithuania Energy Efficiency and Housing Pilot Project (World Bank 2002). These schemes can, however, familiarize the various stakeholders with some of the benefits of EE investment and contribute to the emergence of an ESCO industry. The challenge under those circumstances is to make the transition to commercial schemes by removing the remaining barriers to EE financing.

Barriers to commercial energy-efficiency financing

2.2 Even in those countries where the financial sector operates in a liberalized environment, where institutions are relatively mature, and where some experience with EE projects has already been gathered (for example, through schemes such as EE funds or ESCO projects), the barriers to commercially based EE financing, in particular through increased domestic financing, are still formidable for the reasons outlined below.

- ✍ Unfamiliar risk profiles of energy users prevent financing from being extended or require collateral as high as 200 percent.
- ✍ EE project equipment typically has little collateral value.
- ✍ Banks exercise very cautious lending practices toward smaller clients.
- ✍ Domestic financial institutions lack relevant experience, expertise, and capacity with regard to project finance and have insufficient understanding of EE business potential and how to assess EE project risk.
- ✍ The transaction costs associated with EE project development and financing are relatively high and the transactional cost burden of EE projects that tend to require rather small amounts of capital per project is considerable.

✍ It is difficult to secure the savings (“negative cash”) stream associated with EE projects and have it provide meaningful credit support to the EE loan. A closely related topic is how, through financial structuring or specific credit enhancements, to create more “bankable” EE projects.

2.3 Without any mitigation of those barriers, the risk premium required because of high transaction costs, small project scale, uninformed domestic capital markets, perceived credit risks, and a lack of guarantees would lead to interest costs that would prevent most projects from being financed.

2.4 With a new breed of projects, primarily under the umbrella of the GEF contingent finance approach, the barriers to EE financing are now being addressed more directly. A partial risk guarantee bundled with technical assistance (TA) funds has emerged as the instrument of choice to eliminate the barriers and provide incentives for the private financial sector to extend medium-term financing for EE projects. GEF is supporting guarantee funds in Hungary, Poland, and China. The U.S. Agency for International Development (USAID) set up the Development Credit Authority program, which offers partial (for example, 50 percent) guarantees on loans or loan portfolios in several developing and transition countries. In a few cases, such as Bulgaria, these have been tapped to facilitate commercially based EE financing.⁴

Partial credit guarantee programs

2.5 The IFC pioneered the use of guarantee mechanisms with the Hungary EE Cofinancing Program (HEECP). In its pilot phase, starting in 1997, US\$5 million in GEF financing was made available to develop a partial credit guarantee program, including a TA component. Guarantee Facility Agreements for EE transactions were executed with three domestic financial institutions (FIs), and eligible transactions of these institutions are then covered by a guarantee of generally 50 percent on a subordinated recovery basis. With one participating bank, a retail guarantee was developed that is targeted at individual homeowners and structured on a portfolio basis, funding a loss reserve. TA is provided to the participating FIs to train bank staff (particularly credit officers in appraising EE projects), and for ESCO capacity development, for example, developing projects with ESCOs and providing emerging ESCOs with business planning to assist in capitalization, business development, and joint venture partnerships.⁵ The guarantees were originally targeted at a variety of FI customers. It turned out, however, that the preferred borrowers are project developers: ESCOs, leasing companies, and small and medium enterprises (SMEs) that are involved in delivering EE equipment, projects, and

⁴ (see www.usaid.gov/economic_growth/egad/ci/dca2.htm and <http://www.electrotek.com/meep/eng/mainpagefiles/mainpage.htm>).

⁵ (For details see, for example, IFC 2000, http://www.ifc.org/enviro/EPU/Eefficiency/HEECP/HEECP-Mid-TermEvaluationReport-FINALDraft_Aron_-Oct2.pdf).

services. By using the guarantees for developing new financial products in these niche sectors, FIs are able to avoid the transaction costs of having to deal with a multitude of small projects proposed by individual borrowers. This also eases the problem of collaterals and of securing the savings (“negative cash”) stream associated with EE projects by using the energy supply agreement between the project developer and the end user or the performance guarantee provided by the ESCO. Similarly, TA can be provided more effectively to a small number of project developers.

2.6 In 2001, IFC contributed an additional US\$12 million to a second phase of the HEECP, plus additional US\$0.7 million of GEF funds for TA purposes. At least seven FIs are expected to join the program. In these guarantee facility agreements, “IFC requires FIs to appoint two senior managers, one responsible for credit, the other for marketing and origination, to oversee the FI’s participation in the guarantee program. This requirement is intended to assure that, first, the value of the guarantee as a reliable credit risk management tool is recognized in credit committee decision processes, and second, that the guarantee product and EE finance methods are disseminated throughout the FI.”

2.7 The GEF-supported guarantee operations in China, Poland and Croatia⁶ are also targeted at providing credit enhancements to facilitate commercial borrowing by ESCOs, complemented by TA for project development and ESCO support. A similar scheme is proposed in Brazil where ESCOs are mostly in the SME category and currently have no access to mid-term lending at moderate credit spreads without huge collateral requirements.⁷

The Private Sector Experience

2.8 The FIs participating in the Hungary project have seen a substantial increase in their EE lending activities, even though this was somewhat slow in coming. By late 2001, a total of US\$3.8 million had been extended in credits, covered by a total guarantee amount of US\$1.3. No guarantee has been called to date. The FIs’ capabilities in risk management and design of specialized financial products have improved, and they have reached new customer groups for their financial products, that is, SMEs and individual homeowners.

2.9 The most successful of the HEECP participating FIs had some previous experience in EE financing through its management of several of the subsidized EE loan programs in Hungary. After several years of HEECP experience, its management realized

⁶ China (see <http://www.gefonline.org/projectDetails.cfm?projID=1237>), Poland (see <http://www.gefonline.org/projectDetails.cfm?projID=786>) and Croatia (see <http://www.gefonline.org/projectDetails.cfm?projID=944>)

⁷ (see, for example, <http://www.worldbank.org/html/fpd/esmap/pdfs/goaworkshop.pdf>).

that it might be even more profitable to do business through its own ESCO rather than lend to other ESCOs.

Conclusions

2.10 The Hungary project has shown that the commercial financial sector can be led to provide lending for EE investments if the project puts in place the following elements:

- ?? Initial champions to prove that EE projects are financially viable and that financing can be structured to have the savings stream provide security for lenders.
- ?? Credit enhancements to substitute for straight guarantees and collaterals.
- ?? Development of niche financial products.
- ?? Project development activities and capacity building of stakeholders, both financial institutions and project developers, supported from technical assistance grants.

2.11 Where conditions are developed as they were in Hungary, a guarantee mechanism may be a promising approach. In other places, it may take different mechanisms to get the private sector involved. Romania is one such example.

3

Romania: Setting up a new energy efficiency financing mechanism

3.1 This chapter provides a brief background on the Romanian financial markets, the barriers to EE investment that have been identified in the Romanian context, and the features of the GEF EE project.

The Romanian financial markets and energy-efficiency financing

3.2 Financial sector reforms. Until 1999, Romania's financial sector was mostly state-owned, with state-owned banks accounting for about three-quarters of balance sheet stock of the banking system and about 70 percent of total loans. The state-owned banks suffered from years of government interference, directed lending, and a host of management and institutional weaknesses. By 1998-99, these weaknesses made the situation in the financial sector untenable in face of the economy's overall deterioration. Against this backdrop, the government launched comprehensive institutional and structural reforms in the sector with World Bank support. The reforms were designed to move Romania closer to a market-based system and eliminate the sector as a source of financing for loss-making state-owned enterprises. A core element of the government's program was privatization and restructuring of the banking system, accompanied by a series of other legal, regulatory, and institutional reforms. Further measures are required to develop a well-functioning financial services sector, bring an end to public sector banking, and ensure that incentives for a competitive and modern financial system are in place.

3.3 The EE financing gap. As in the past, Romanian banks still prefer to deal in treasury bills or to provide short-term loans for working capital. The Romanian market for corporate lending in general is not competitive. There is in fact essentially no competition for clients, as demand for corporate loans is much greater than supply. Financial sector experts quoted a total market of US\$3 billion for corporate loans in Romania, less than 10 percent of gross domestic product (GDP), and an aggregate banks' asset value of less than 30 percent of GDP—the lowest in Europe. Most lending is in addition concentrated in a few blue-chip clients, and some 85 percent of the total

liabilities of most of the Romanian-based foreign banks is in foreign companies. Surveys of more than 200 companies during the EE project preparation showed that a large number of EE investments had been identified, but that only a few EE investments had actually been carried out, with the overwhelming majority being financed from companies' own funds (see www.free.org.ro).

Overcoming barriers to energy-efficiency financing—The Romanian experience

3.4 The Romanian situation can be considered typical for those countries where the economy is still undergoing structural reforms, and both banks and enterprises have had very little if any experience with other than directed lending to state-owned enterprises and short-term lending for working capital.

3.5 The potential for commercially viable energy efficiency investments in Romania is large. In the industrial sector alone, the market potential of short-payback EE investments was estimated at more than US\$200 million (see www.free.org.ro). Especially those sectors that have good export potential and face growing energy bills, such as wood processing, pulp and paper, and chemicals, are increasingly interested in investments that would modernize their production facilities and reduce their costs, making them more competitive.

3.6 Although there have been numerous donor-funded technical assistance and technical demonstration projects to improve energy efficiency, these have achieved very few results in terms of increasing investments on the ground. The overarching barrier to EE investment is a lack of commercial credit for these projects; lending institutions consider both the costs and the risks of lending for energy efficiency at this time to be too high. The failure a few years back of a European Bank for Reconstruction and Development (EBRD) project provides instructive experience. It established a credit line for EE projects with a Romanian bank that failed to disburse because of lack of incentives and interest and inadequate subproject development.

3.7 The following barriers are the major causes of the financing gap:

- ?? The high transaction costs of identifying, developing, and financing energy efficiency projects.
- ?? The perceived high risk of financing energy efficiency projects.
- ?? The lack of the institutional combination of financial and technical skills necessary to develop energy efficiency projects successfully.

3.8 To overcome the barriers above and break the longstanding logjam impeding EE investments in Romania will require at least the following:

- ?? A proven track record of commercially profitable EE projects, achieved without subsidies to end users. To convince lenders that a number of risks are only perceived and can be managed, and that initial costs of getting into this specialized business are worth incurring or can be partly avoided

as a result of previous experience, they need to see the results of successful projects.

- ?? Institutional development, whereby provision of finance and specialized expertise in the technical appraisal and optimal financial packaging of EE projects are combined in one institution, providing easy access for enterprises seeking financing for such investments.
- ?? Increased flow of information, training, and TA to assist potential clients in identifying and preparing commercially attractive energy efficiency projects.

The Romania GEF project: The Romanian Energy Efficiency Fund

3.10 The gaps to be filled by an EE financing scheme in Romania were identified as follows:

- ?? Deal origination—there is little money in Romania seeking these types of transactions.
- ?? Technical expertise—no Romanian financial institution has the combined expertise in energy efficiency analysis, structured finance, and credit analysis.
- ?? Cofinance—foreign banks with Romanian affiliates have limited country lending ceilings and therefore have difficulty leading transactions of any magnitude. Romanian banks could be brought along as participants, perhaps on a pooled basis, as they have limited lending capacity and expertise.

3.11 An EE fund operating on a commercial basis and accommodating commercial cofinancing was determined to be the most appropriate institutional structure under the Romanian circumstances, combining both the EE project development and structured financing expertise. The most important lessons learned from worldwide experience with EE funds are reflected in the project design are described below.

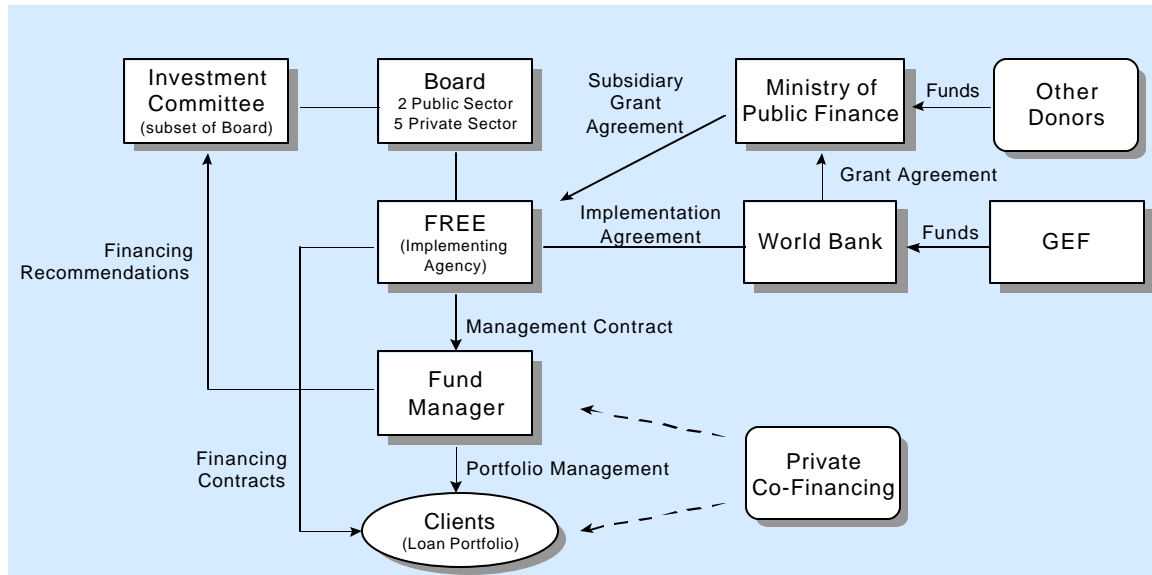
- ~~✍~~ Maximize the transparency of procedures; minimize government interference in financing decisions; establish and operate the fund as a business, not a technology deployment system; profitmaking should be an objective of the fund.
- ~~✍~~ Use existing market players (that is, banks) for functions (for example, collections) where possible. In any case, make sure that financial and technical-economic appraisals are of high quality. Due diligence must be performed by professional staff with incentives for good performance.
- ~~✍~~ The financing institution needs to be proactive in the development of a project pipeline. Marketing, particularly to senior management, is a critical step in the success of a fund. Use third parties such as ESCOs or industrial associations to market and develop projects for the fund, thus avoiding high transaction costs.

- ✍ Focus on short-term loans for projects with high rates of return. Avoid placing funds in a few large loans; spread the risk through many projects. Fund financing should cover only a portion of the project costs; the borrower should have equity in the project. Lend only to creditworthy clients; establish high creditworthiness criteria that are rigorously enforced. Full collection of interest and principal repayment is an overriding concern.
- ✍ Small projects have high transaction costs. They need to be packaged by partners such as ESCOs, or simple mechanisms have to be designed that avoid costly audits and feasibility studies, such as a list of standard EE measures.
- ✍ Monitor thoroughly to ensure that the funds are spent on the project and that the project is implemented properly and operated as designed; monitoring provides an early warning for problems.
- ✍ While some experts believe that EE funds require lower than market interest rates to attract clients or some other enhancements for potential customers such as project development support, subsidized interest rates are not conducive to the creation of a sustainable market for EE financing. In the case of Romania, the design concept therefore included from the beginning the intent to price the financial products on terms that are generally consistent with the nascent corporate finance market in Romania. The proposed facility would, however, set itself apart by offering to its potential clients its combined expertise in energy efficiency, structured finance, and credit analysis, as well as project development support.

3.12 The fund, operated under the Romanian FREE, is capitalized from GEF funds that also partly defray initial transaction costs. A professional fund manager is responsible for the investment aspects of the fund. The fund was launched in early 2003 with a term of at least five years. The organizational structure of FREE is represented in Figure 1 and explained in more detail in Annex 1, together with eligible projects and products to be offered by FREE.

3.13 Initially, FREE is designed as a revolving debt fund that focuses on financing medium-size projects within restructured or privatized industries. Larger and more complex and innovative investment projects, in terms of both financial products and participation in the upside of EE investments, will be approached in the later stage of fund operations (after at least two-three years of operation). In that stage, it is expected that FREE will be able to attract cofinanciers. Involving the private sector during project implementation is seen as important to ensure the sustainability of EE financing and the success of market development and transformation.

Figure 1: FREE Organizational Structure



4

Prospective commercial cofinancing of the Romania GEF project

Main requirements of the financial sector

4.1 In principle, banks operating in Romania have expressed interest in cooperating with FREE. This interest arises from the potential strategic value of fund participation, as described below.

- ~~✍~~ The ability to learn from one another (technology transfer) by cooperating to finance difficult credits and develop more complicated financing structures.
- ~~✍~~ Having preferential access to a source of funds that could finance portions of transactions not marketable to banks, while assuming only a small portion of the risk as an equity participant in the fund along all the other equity participants plus the GEF money.
- ~~✍~~ Being able to expand their Romanian presence without having to finance 100 percent of the exposure of each new client.
- ~~✍~~ Being able to participate in a form of structured finance lending as a precursor to expansion of their own structured and project finance activities in Romania.
- ~~✍~~ The ability to benefit from a relatively low-cost, low-risk way of gaining credit exposure in sectors in which they are not presently active.

4.2 The project design is flexible, allowing for both parallel and direct cofinancing arrangements. In a parallel arrangement, each cofinancier retains control over his own funds and coordinates with the fund manager in the following ways: sharing the deal flow; sharing due diligence, consultants, and structuring concepts; and harmonizing the terms of financing among different financing sources, so that the client signs only one financing contract and interfaces with a single point of contact, namely the fund manager. In a direct fund management arrangement, the cofinancier would instead establish a dedicated account over which the fund manager would have control (but not ownership). In this case, the fund manager is empowered to make disbursements from the account for any transaction approved by the fund manager (within the context of the fund

management agreement between the cofinancier and the fund manager), with or without the express consent of the co-financier.

4.3 While not built into the original design of the project, cofinancing arrangements could be specified in such a way that, under either arrangement, the fund could take subordinated positions, pay a small commitment fee, offer guarantees, and so forth, especially in the beginning stages of the implementation, to provide additional incentives for cofinanciers should this be considered necessary.

4.4 In practice, several key factors weigh heavily on the prospect of successfully attracting cofinancing, namely:

- ?? The perception by cofinanciers that there is a viable demand for financing for EE projects that meet the eligibility criteria of FREE, while also providing an attractive risk and financial return profile to the cofinanciers.
- ?? The quality and credibility of the selected fund manager.
- ?? The governance structure of FREE, that is, the degree to which the cofinanciers believe the fund manager will have the autonomy to operate the fund in a purely commercial manner, free from political interference.

4.5 These concerns were addressed extensively during project preparation, summarized in the following section.

Addressing the Concerns of Cofinanciers

Demand for Energy-Efficiency Investments

4.6 In general, for coinvestment to be secured, EE markets must be adequately developed? unless market fundamentals are strong, success in advocating cofinanciers' participation will be limited.

4.7 Romania's energy intensity (total primary energy supply per unit of GDP) and greenhouse gas (GHG) intensity (CO₂ emissions per unit of GDP) are among the highest in the region and are about 5 to 10 times higher than in UK, France, Germany, or United States. Inefficient energy utilization exists in all sectors of the economy, notably in the industrial sector, which accounts for more than 60 percent of energy consumption, but only 33 percent of GDP. In large part, such high intensity in Romania is a consequence of aging equipments of antiquated technologies, and is an impediment to improving competitiveness of Romanian industry.

4.8 Despite the obvious inefficiency of energy use, the history of EE efforts in Romania is littered with failures. It has been difficult to generate demand for EE financing, mostly because neither financiers nor potential borrowers were sufficiently aware of each other's requirements. Limited interest can also be explained by the distortions created by the ubiquitous energy subsidies, with energy tariffs set below long-run marginal cost and a low rate of energy bill collection throughout the economy until very recently. Moreover, inflation eroded real financial benefits and thus the

attractiveness of EE investments. In essence, under the past macroeconomic circumstances and energy tariff levels and collection rates, firms perceived EE investments as a net financial liability.

4.9 The awareness of and demand for improving energy efficiency has been increasing. The present macroeconomic policies are resulting in lower and more stable interest rates, lower and stable inflation rates, and more stable exchange rates. Private enterprises as well as restructured and privatized state enterprises are actively exploring cost reduction and efficiency improvement strategies as a consequence of steep increases in energy prices (gas, electricity, and district heat; see figures in Annex 2) and further adjustments anticipated under the Romanian government's reform program to reach cost-recovery tariff levels by 2002-03 and enforce collection of energy bills. The Romanian enterprise and energy sectors have been undergoing major restructuring and reform, which is supported by various World Bank activities. The government also introduced a heating subsidy to mitigate the impact of these adjustments on poorer households, and beginning in January 2002 put in place a means-tested minimum-income guarantee scheme aimed at providing a social safety net for the most vulnerable households. Consumers who do not pay for energy consumption will have their service discontinued. The latter has also created awareness among the residential and nonindustrial sectors for improving efficiency and reducing their energy bills.

4.10 Under these new circumstances, market conditions that are necessary to make energy efficiency an attractive investment are in place? though there still are some market and financial barriers, as well as lack of combined financial and technical expertise. Firms now have an incentive to address their energy bill and would want to reduce their costs by increasing energy efficiency.

4.11 This analysis was confirmed by participants in the recent workshop. While there is no "energy-efficiency finance industry" proper in Romania, financial players signal that there is a high and increasing demand for investment capital to finance projects with EE components. Perception of the nature of market opportunities for energy efficiency varies across commercial banks and investment funds in Romania, which rarely have first-hand solid experience in EE finance. Energy efficiency deals as described differ widely in terms of both technologies demanded (from lighting retrofits to cogeneration) and types and magnitude of investments (from retrofit deals of less than US\$0.5 million) to new plants, where EE investment is only one component of a larger investment; that is, the construction of a new building that will include an energy management system).

4.12 It is often the case that the deals described could not materialize because the potential borrower could not fully collateralize them or was not otherwise meeting the very conservative credit criteria followed by commercial banks in Romania (which are not otherwise engaged in project finance operations). Several bankers expressed regret for the forgone investment opportunity and voiced a strong interest in tapping the EE market in the near future. In short, there is no concern on the part of the financial sector that FREE would not be able to generate an adequate deal-flow.

Effectiveness of the Fund Management Company

4.13 Fund management services for FREE are selected through a competitive process, procured under World Bank guidelines. Effectiveness of the fund manager is obviously perceived by investors as a crucial success factor for FREE and for their own participation, since the fund management company undertakes all functions central to the conduct of FREE's business (see table in Annex 1).

4.14 Potential co-investors expressed a two-fold concern related to the adequacy of FREE's fund management expertise: Is there a pool of fund management resources in Romania that ensures that the tendering process for the selection of FREE's fund manager is actually meaningful and can provide a "best choice" that is also effective enough to manage FREE's funds as well as co-financing investment capital profitably; and they would want reassurance that, should the relevant fund management expertise exist in Romania, FREE will attract it.

4.15 Availability of Romanian Fund Management Expertise. A number of potential Romanian fund managers were interviewed. All companies and professionals have strong financial and investment skills and previous fund management experience in Romania (within their present firms or with former companies), and several have structured finance expertise and/or banking background? both highly relevant for those large deals that require cofinancing. The great majority of the firms and professionals interviewed had had first-hand exposure to the international finance industry, and several firms retain strong links with international groups that could in principle bring co-investment to FREE. In a few cases, potential fund managers would be able to mobilize Romanian capital for co-investment through participating Banks or leasing companies.

4.16 There is, however, limited experience in EE finance "proper" (as opposed to energy sector finance, with which several of the firms are quite familiar), which is not surprising, given the history of limited demand for EE investments in the Romanian market. Fund management companies would be required to add EE expertise either by hiring additional staff or collaborating with EE experts. The provision of TA funds for technical due diligence and other relevant assistance to the fund management company in the initial period would further enhance technical project development expertise of the fund manager.

4.17 Ability of FREE to Attract Adequate Fund Management Expertise. Since FREE's success (and the success of cofinanciers) is largely predicated upon the ability and commitment of the fund manager, cofinanciers want to make sure that FREE attracts the best talents. It is thus important that the fund manager and cofinanciers be presented with an investment operation that is fully characterized in terms of design, overall objective, and operating mode (see details in Annex 1).

4.18 There is evidence of a strong interest in FREE on the part of the potential fund management firms interviewed, with a high turnout rate at the workshop in Bucharest. There is no reason to speculate that bidders of adequate caliber would not

confirm this initial interest. Several potential candidates are strong professionals who are running small investment-advisory companies by taking the long-term strategic view that the Romanian economy is moving toward the end of transition. The overall attitude is that of showing a strong commitment to the investment industry in Romania, with most firms indicating that they would be happy to work for a success-fee component, as long as they have access to a small retainer that covers prudent cost.

4.19 The procurement for the fund manager is being carried out under World Bank procurement rules. It is hoped that the best talents within the tendering firms can be put to good use for FREE's purposes. The fund manager will enter a five-year contract with FREE that will be subject to review and negotiations after three years, and may be extended beyond five years if required, subject to successful performance and renegotiations.

Governance Structure of FREE

4.20 FREE's governance structure has several traits that are unusual in a commercially oriented vehicle:

- ~~/~~ FREE is governed by a board of directors with two representatives of the government and five members from the private sector with relevant backgrounds. The chairmanship will rotate annually, with the first chair being one of the representatives of the government.
- ~~/~~ The board members from the private sector are selected by the chairman of the board. They are not shareholders or co-investors of the fund.
- ~~/~~ The fund management company will be selected by FREE's board of directors under World Bank competitive procurement guidelines.
- ~~/~~ FREE has an administrative director who interfaces between the fund manager and the board;
- ~~/~~ The Investment Committee is largely a subset of the board.
- ~~/~~ The World Bank is not formally part of the board of directors or the Investment Committee.

4.21 In general, the more structured the cofinancing agreements envisaged, the greater the concerns on the part of potential co-investors that the governance structure is adequate to ensure interest alignment. Potential cofinanciers signal that weak governance could in particular result in the following:

- ~~/~~ Possible conflict of interest of FREE's board members designated from the public and the private sector
- ~~/~~ Lack of independence and commitment of the fund management company
- ~~/~~ Inadequate participation of cofinancing parties in those decisionmaking processes within FREE that directly impinge upon their profitability as co-investors.

4.22 These concerns are being addressed as follows:

✍ *Conflict of Interest within the Board of Directors.* While there is no built-in incentive mechanism guaranteeing interest alignment between the board of directors and the fund management company, the board members were chosen for their combination of financial and technical expertise (as opposed to political appointees). Moreover, the fund management company will have a nonvoting seat on the board and the Investment Committee, with the faculty to advocate for their investment proposal and other issues, should they wish to do so. Furthermore, the World Bank within its regular supervision role will act to resolve any significant conflict that might arise between the fund management company and FREE, should there be any threat to the fund management company's ability to function.

✍ *Independence and Commitment of the Fund Manager.* For cofinancing to be successful, the fund management company should retain independence of judgment while being fully committed to FREE's success. This prerequisite is partly ensured by the structure of the fund manager's remuneration, based upon a highly progressive success-fee scheme and a small, predetermined retainer to cover operational costs. In other words, the procurement strategy for the fund manager is designed to ensure commitment, as the candidates will bid upon the quality of investment advisory services they offer? as opposed to least cost of service provided.

✍ *Participation of Cofinancing Parties in FREE's Decision-making Process.* Most potential co-investors? such as several commercial banks? are interested in cofinancing on a parallel, deal-to-deal basis, and expect that all investment decisions will be taken independently from FREE, within a framework cofinancing agreement. In these cases co-investors' decisions will in essence be taken separately from FREE. A few potential cofinanciers would instead co-invest under a tighter structure, either by increasing the investment capital within the fund or by establishing separate parallel structures in the form of a collective investment (one or more separate managed accounts, unit trusts, limited partnerships) established to invest in parallel with the fund. Such "tighter" structures would request the stipulation of detailed (as opposed to framework) cofinancing agreements between FREE/the Fund Management Company and the co-investors. Detailed cofinancing agreements are to cover all governance-related relevant contractual aspects, a nonexhaustive list of which is provided in Table 1. It is anticipated that those co-investors entering a tight cofinancing agreement will need to have a voting chair in FREE's investment committee, and might request representation in FREE's board.

Table 1: Examples of governance-related contractual aspects to be covered by detailed cofinancing agreements

??	Investment policy of the co-investment vehicle
??	Relationship between the co-investment vehicle and FREE, including possible subordination of lending
??	Relationship between the co-investment vehicle and the fund management company
??	Participation of the cofinanciers in the decisionmaking process concerning lending and monitoring of investments and/or delegation of authority clauses
??	Administrative procedures (accessibility of records, reporting)
??	Conflict of interest clauses
??	Exclusivity clause
??	Liability and confidentiality clauses
??	Recess clauses
??	Environmental policy (to avoid liability from environmental contamination from made loans)
??	Other aspects (effectiveness clauses, etc.)

Results so far and conclusions

4.23 Several commercial banks have indicated that they are interested in undertaking parallel commercial lending with FREE, with the fund manager's role seen as that of arranging the parallel commercial financing and coordinating the transactions (and in some cases originating the deals). Several of those banks have provided nonbinding letters of interest. However, it may be possible to have a direct fund management arrangement with certain foreign capital sources because of the diseconomies those foreign sources may have in working on individual transactions (unless they have a local implementing agency). Any cofinanciers are expected to join the fund when the first successful deals have been concluded. Hence, implementation of the project will commence through GEF financing initially.

4.24 It is hoped that the design of FREE as a project development and financing facility and its first experiences will contribute to a better understanding of the benefits of EE investments and the possibility of structuring financing in a way that accommodates the special features of EE projects and different client groups. FREE should also educate and train important stakeholders: for example, train credit officers of participating banks perhaps through rotation with the fund manager, or service providers through active development of projects with them and additional capacity building as required. Thus, elimination of the barriers to EE financing would enable the commercial financial sector to extend services to new groups of clients.

4.25 It is interesting to note that commercially based EE funds are now being designed in various countries of Eastern Europe, for example, in Lithuania, Bulgaria, and Serbia, most of them with the prospect of GEF financing.

Annex 1

FREE Organizational Structure, Eligible Projects, and Products to Be Offered

1. FREE is an independent, autonomous legal entity with headquarters in Bucharest, Romania. It was established by the Government of Romania through Emergency Ordinance Nr.124, approved October 8, 2001, published in Official Gazette Nr.644, October 15, 2001. The organizational structure of FREE is represented in Figure 1 in chapter 3. Although the funding initially comes mostly from GEF (public funds), FREE is independent and separate from any government agency. The fund is overseen by a Board of Administration (BoA), consisting of seven representatives from the Romanian private and public sectors, with a private sector majority. The chairmanship of the BoA, which changes annually, is initially held by a representative of the Ministry of Industry and Resources. The three-person Investment Committee is a subcommittee of the BoA, and two of its members are financial experts. The fund manager can sit in on meetings of the Investment Committee and relevant portions of board meetings. The Investment Committee will review all financing proposals submitted by the fund manager and make its investment recommendations to the board for final decision through majority voting. FREE is administered by a small professional management team, headed by an executive director whose main responsibilities are to provide overall management of the project and serve as the main liaison with the World Bank and the Romanian government during project implementation.

2. FREE will enter into a performance contract with a professional fund manager who will manage the investment aspects of the fund in a commercial manner, and who is in charge of identifying, developing together with clients, and financially structuring subprojects to assure a sound portfolio in terms of sectors, risks, and terms. This includes the following functions central to the conduct of FREE's business (as shown in Table 2):

- ~~///~~ Originate the deal flow and identify investment opportunities.
- ~~///~~ Determine the structure of specific investments including size and uses of funds.
- ~~///~~ Identify opportunities for further co-investment or TA with foreign or local partners.
- ~~///~~ Structure co-investment related to specific deals.
- ~~///~~ Identify needs for post investment support.
- ~~///~~ Fulfill monitoring requirements.
- ~~///~~ Make recommendations on potential investments to the investment committee.

☞ Ensure that the financial targets are met and report to investors as required.

Table A1.1: Relevant Fund Management Functions

Financial	Legal Actions	EE Marketing and Technical Assistance	GEF/Co-investor Functions
Deal Origination (Credit prescreening and analysis, documentation) Billing and collection Postclosing administration Manage local debt syndicate, if applicable, including disbursement Structure deals	Manage security Enforce rights, recovery, and other legal actions	Energy-efficiency capacity building or TA procurement (as appropriate), end users' programs (when required), project development origination function (when not outsourced)	Interface with the staff and board of FREE, reporting to FREE's executive director Report to cofinanciers on co-investment funds

3. Initially, the fund is designed as a revolving debt fund. The target projects and investment guidelines of the fund can be summarized as follows. In the first phase, the Fund will focus on financing projects within restructured and privatized industries that can establish basic creditworthiness and have no major environmental problems. Guidelines for eligible projects are summarized below.

- ☞ The projects and the fund's financial support are expected to be in the range of US\$100,000 to US\$1 million. Projects outside the range are not necessarily excluded; however, financing for projects with a large financial contribution from the fund would have to ensure adequate risk coverage, including sharing of risks with commercial cofinanciers.
- ☞ Projects should contribute to a well-diversified portfolio of projects to assure a balanced risk-return profile to the fund.
- ☞ Projects should have a relatively short payback time (generally under three or four years).
- ☞ At least 50 percent of each project's benefits have to come from energy savings (for example, process or capacity improvements that have ancillary energy savings benefits are not eligible).
- ☞ The technology must be well proven in the proposed application to avoid technological risk.
- ☞ technological risk.

The main EE technologies that meet these criteria are burners and boilers, variable speed drives, condensers for power factor improvement, compressors, controls, and steam traps.

4. During the initial phase, the fund is expected to provide the following financial products for EE projects in Romania:

- ✍ Cash flow-based term loans made directly to end users (either based upon cash flow of the project plus the creditworthiness of the end user or on projected cash flow alone.
- ✍ Cash flow-based loans made to ESCOs on a project-by-project basis.
- ✍ “Performance” loans, where FREE partners with a supplier consortium and offers a total project package including engineering, equipment, and financing.

5. In addition to debt financing, project financial support may include equipment leasing, payment for services, and combinations of these. Loans will be made in U.S. dollars or in dollar-denominated local currency; repayments would also be made in dollar-denominated local currency.

6. The fund is designed to be flexible in terms of product mix and terms, enabling the fund manager to offer the financial products that the evolving market for commercial project financing demands. In order to set the fund apart from other financial service providers, the fund manager is expected to employ innovative risk mitigation measures for the various types of clients, projects, and products. Eventually, FREE may invest equity in carefully selected projects and ESCOs. Furthermore, the fund manager will actively develop appropriate new financial products for EE projects.

7. FREE's financial transactions would start up slowly in the initial years and would most likely not be sufficient to generate an interest income covering the setup costs of FREE initially. As experience is gained, the number of projects can be increased sufficiently, achieving self-financing of FREE after about three years.

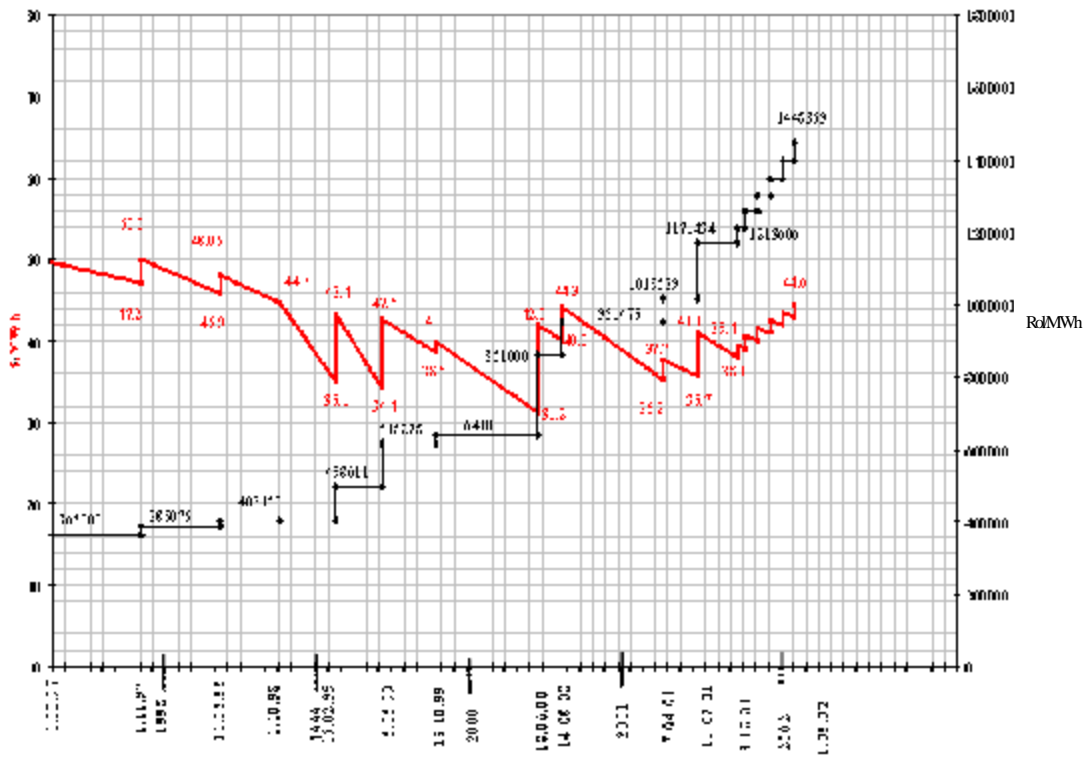
8. Larger and more complex and innovative investment projects, in terms of both financial products and participation in the upside of EE investments will be approached in the later stage of fund operations (after at least two-three years of operation). In that stage, it is expected that the fund manager will be able to attract cofinanciers, if necessary by using GEF financing to take subordinated positions, pay a small commitment fee, offer guarantees, and so forth. It is expected that the range of clients will also expand, as the municipal services and the buildings sector will become more creditworthy, and the fund manager will be able to structure financing products and packages in innovative ways to target new clients.

9. Active partnerships with commercial financing institutions, leasing companies, and ESCOs will be strongly encouraged. In addition to financial services, the fund would offer its clients and partners expertise in energy efficiency to train and support them in project development and financial packaging and to generate and disseminate information on the benefits and costs of EE investments and success stories. Technical assistance from the GEF contribution and donor funds will provide support for the latter.

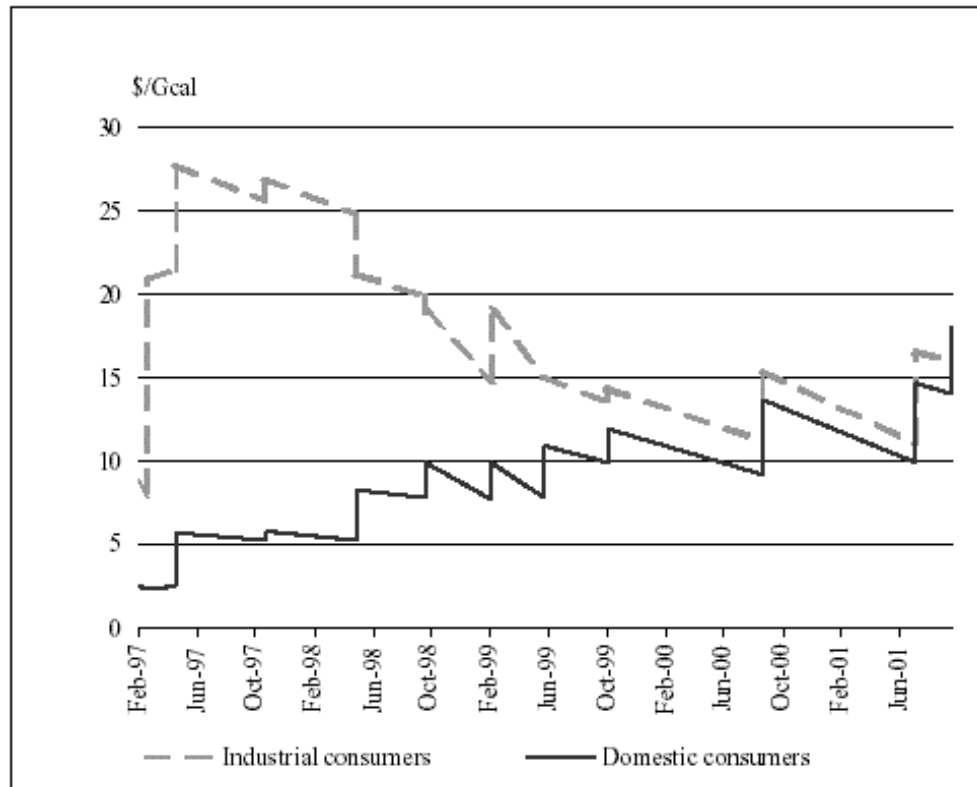
Annex 2

Energy Prices in Romania

EVOLUTION OF THE AVERAGE PRICE FOR THE ELECTRICITY DELIVERED TO THE END-USERS 1997-2002



Source: ANRE Annual Report 2001.



Source: ANRE Annual Report 2001.

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