THE ECONOLER SERIES

THE ENERGY EFFICIENCY AND RENEWABLE SOURCES FUND 2005-2025

The Bulgarian Green Bank

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Acronyms and abbreviations

BgEEF	Bulgarian Energy Efficiency Fund
DEA	Detailed energy audit
EBRD	European Bank for Reconstruction and Development
EE	Energy efficiency
EEE	Econoler-EnEffect-Elana
EERSF	Energy Efficiency and Renewable Sources Fund
EPC	Energy performance contract/contracting
GHG	Greenhouse gas
IEA	International Energy Agency
IFI	International financial institution
LFI	Local financial institution
M&V	Measurement and Verification
ME	Ministry of Energy
MOEW	Ministry of Environment and Waters
PEA	Preliminary energy audit
PIU	Project Implementation Unit
RES	Renewable Energy Sources
RS	Republika Srpska
SEDA	Sustainable Energy Development Agency
SMEs	Small and medium-sized enterprise
UNDP	United Nations Development Programme
USAID	U.S.Agency for International Development
WB	World Bank

A Word from the President

Quebec City, January 2026

Dear Readers,

As energy efficiency (EE) is becoming an increasingly attractive solution to mitigate climate change worldwide, there is an urgent need to create better access to financing that is adapted to the specific needs of EE initiatives. Issues regarding how to improve access to EE financing will continue to hold the attention of many private and public sector stakeholders who are committed to pursuing EE at their facilities and in their operations in the years to come.

Econoler is pleased to share with you, through this highly informative booklet, valuable experience gained and insightful lessons learned from the operation of the Energy Efficiency and Renewable Sources Fund (EERSF), formerly known as the Bulgarian Energy Efficiency Fund (BgEEF) in its initial years of operation.

Econoler, an internationally renowned EE consulting firm with 45 years of experience in the field, has made important contributions to numerous EE initiatives in over 180 countries, including many related to EE financing. We are proud to present our 20 years of experience in the management of the EERSF as one of the most successful specialized EE funds in the world and that supports clients in identifying and implementing cost-effective solutions to meet their EE financing needs.

It is my hope that the true narrative of the EERSF told in the following pages will offer you a glimpse of some of the most effective EE financing concepts, approaches, and practices that your organization can also embrace to develop and secure the right kind of financing to make your or your clients' EE projects a reality. Happy reading!

Pierre Langlois,
P. Eng., President Econoler

Introduction

Energy efficiency (EE) is widely recognized as not only the cleanest and cheapest way for countries to address their energy security and energy demand issues, but also one of the most efficient ways to reduce greenhouse gas (GHG) emissions that cause climate change.

However, despite the numerous potential benefits for countries and end-users, only a small fraction of financially viable EE projects are implemented. Some of the main reasons underlying this low level of EE development are the multiple barriers that exist in the market, including the following four main types:

1. Policy and regulatory barriers;
2. Barriers related to energy end-users (in both the public and private sectors);
3. Barriers related to suppliers of energy-using equipment and energy services; and
4. Financing barriers.

One of the publications in *The IEA Policy Pathway Series*[1] makes the following observation regarding the financing barriers faced by enterprises of all kinds and small and medium enterprises (SMEs) in particular:

> *Even when the first three barriers have been overcome, financing barriers arise because energy users are generally unwilling to invest their own funds in EE projects; they have many of what they consider to be higher priority investment options for their funds. Most energy users, including large industrial firms, small and*

1. IEA, "Joint Public-Private Approaches for Energy Efficiency Finance," The IEA Policy Pathway series, 2011. Page 9.

medium enterprises (SMEs), commercial sector energy users, and public agencies, therefore, seek external financing for their EE projects. However, banks and financial institutions (referred to herein as local financial institutions or LFIs) are generally reluctant to provide loans even for highly profitable EE projects because of their lack of knowledge and understanding, and their perception of high risk with respect to EE projects. Among the potential EE investors and EE-supporting industry, SMEs are affected much more by the disconnect between the financing needs and the lending practices of LFIs than large industrial firms with substantial balance sheets and that can borrow funds with fewer restrictions. Since a substantial portion of EE potential is in SMEs, mechanisms must be developed to scale up lending to SMEs for the implementation of EE projects on a national and international level.

The above situational characterization of SMEs also applies to larger energy users and public sector entities that want to use their own financing resources for core activities and are, therefore, reluctant to see their operating budgets affected by non-core investments such as EE improvement measures and projects.

Generally, LFIs approach EE projects, at best, with a great deal of caution and, at worst, with enormous reluctance and suspicion because of the following main factors related to the unique nature of EE projects.

A lack of information and awareness about EE;

- The size of EE projects (usually smaller and below the threshold that LFIs are willing to finance on a case-by-case basis);
- The perceived high transaction costs; and
- The perception of high risk that EE projects can bring to the financial sector.

To provide better access to EE financing, some governments and international financial institutions (IFIs) have been supporting LFIs in recent years by providing dedicated EE credit lines, often coupled with a technical assistance program. To date, this dedicated EE credit line approach has achieved moderate success because, quite often, the same barriers described above arose, rendering the EE initiative unsuccessful or unsustainable in the long run.

Another less commonly used pathway toward improving access to financing for countries developing an EE market has been the creation of specialized and dedicated funds or financing facilities. Such funds and facilities not only provide access to appropriately structured financing, but also help develop pipelines of EE projects. The Energy Efficiency and Renewable Sources Fund (EERSF) is one of those funds. Since its creation in 2004 (named BgEEF[2] at the time), it has become a widely lauded model of success and an inspiring example to other countries in the region and elsewhere in the world.

Innovatively structured, the EERSF serves as a lending institution, a credit guarantee facility, and a consulting company all rolled into one. It provides Bulgarian enterprises, municipalities, and private individuals with not only technical assistance in developing EE investment projects, but also financing or co-financing; it even plays the role of guarantor to other financing institutions.

22. In May 2011, under The Energy from Renewable Sources Act, the BgEEF was assigned additional functions in funding energy generation projects that consist of using renewable sources, this in addition to EE projects. The name of the fund was changed to the Energy Efficiency and Renewable Sources Fund (EERSF). In this text, we still refer to this fund as the EERSF.

History[3]

In 2004, many Bulgarian businesses and organizations that intended to invest in EE measures were faced with multiple seemingly insurmountable barriers to gaining access to commercial financing suitable for EE, including the major barriers described below:

- Considering the size of Bulgaria's economy, the level of intermediation of its commercial banks was, then, quite low by international standards. A lack of competition allowed banks to manage risks by: Limiting their lending volumes; demanding high collateralization (200% or higher); charging high interest rates to local businesses (between 10% and 18% despite inflation being contained at 4%); focusing on short-term lending (with loan maturities of one to two years); and investing in low-risk government securities.
- Bulgaria's judicial system was quite ineffective, thus lengthening debt recovery and collateral seizure processes. SMEs, housing cooperatives, municipalities, hospitals, and similar energy consumers felt the impacts of perceived high credit risk most strongly since they lacked either the proper credit history or the suitable collateral values to be associated with EE projects. Moreover, credit application approvals often took months.
- Commercial banks were generally not familiar with commercial and technical issues related to EE projects. They lacked the financial and technical skills required to prepare robust EE business plans and thereby develop bankable EE projects. EE projects and energy

3. A major portion of information presented in this section was extracted from "The World Bank Implementation Completion and Results Report" (September 22, 2010;TF-54515).

supply projects often had to compete with one another for financing. EE project sizes were generally smaller than those of energy

- Innovative financing approaches such as energy performance contracting (EPC) were rarely used, if at all, neither was bundling of individual EE projects (proposed by different project owner entities and each too small to justify an energy performance contract) to create a financially viable package for LFIs to finance. Such EE project packaging is generally considered an innovative and effective way to attract capital for projects deemed too small for financial institutions. Additionally, Bulgaria's energy service industry at the time was characterized by a lack of both maturity and competition, with private energy service companies (ESCOs) operating, for the most part, on a small scale and with a very limited balance sheet.

The serious barriers to implementing EE and providing suitable EE-related financing in Bulgaria prompted the national government to create the Bulgaria Energy Efficiency Fund (BgEEF, now the EERSF), a dedicated EE fund whose mission is to build sustainable market-based capacity for developing and financing EE projects through a commercial mechanism.

The Energy Efficiency Act enacted in February 2004 by the Bulgarian Parliament is aimed at fostering broad-based and sustainable commercial financing for EE projects. In accordance with Chapter 4 of that Act, the EERSF, a commercially-oriented revolving EE fund, was established to demonstrate the financial profitability of investments in the EE sector. The strong financial stakeholder support for the initial capitalization of the EERSF was critical to its successful establishment.

Thanks to the dedicated efforts of Bulgaria's Ministry of Economy, Energy and Tourism, the initial capitalization of the EERSF was entirely composed of grant funds provided by the following sources:

- The Global Environment Facility through the International Bank for Reconstruction and Development - The World Bank - USD 10 million;
- The Government of Austria - EUR 1.5 million;
- The Government of Bulgaria – EUR 1.5 million; and
- Private Bulgarian companies.

At the end of 2022, the Bulgarian government decided to launch a transformation process of the EERSF into a National Decarbonization Fund (NDF). The NDF is poised to build on the EERSF's legacy of addressing larger decarbonization goals and expanding financing for EE in buildings and industry, renewable energy, and energy storage solutions. Success will depend on:

- Strategic partnerships with public and private entities to maximize resources;
- Innovation in financing mechanisms to target emerging sectors; and
- Strong alignment with national and European Union (EU) climate objectives.

This transformation required legislative changes. In November 2025, the Parliament adopted the new EE Act, which operationalized the NDF as a successor to the EERSF.

Objectives and Operational Structure

Since its operational inception, the EERSF has had the capacity to manage key issues related to both EE project technical development and financial structuring. Designed to be flexible, it has successfully designed and offered various types of adapted financial products demanded by the evolving EE market in Bulgaria. To fulfill its multifaceted mission, the EERSF serves as a bank, a credit guarantee facility, and a technical advisory company.

The EERSF has been structured as a self-sustaining entity focused on facilitating EE investments and promoting the development of a well-functioning EE market in Bulgaria. The main EERSF environmental objective has been to support the identification, development, and financing of viable EE projects to help substantially reduce GHG emissions in the country.

EERSF's three-fold mission

- Facilitate EE investments
- Pursue substantial reductions of GHG emissions
- Promote the development of a well-functioning EE market in Bulgaria

Types of Projects Supported by the EERSF

As agreed to by the founders, EERSF financial resources may be used to finance only the following six types of investment:

1. Investments in improved EE in industrial processes, including but not limited to:
   - Equipment, machinery, and tool purchases;

- Installation of the purchased equipment; and
- Staff training in the proper use of new equipment and technologies.

2. Rehabilitation of buildings in all sectors, including but not limited to industrial, commercial, multi-family residential, single-family residential, and municipal buildings at all levels as well as healthcare facilities, schools, universities, and cultural facilities. Rehabilitation should be directed toward improving EE, including but not limited to:
   - Modernization of heat exchanger substations;
   - Heating insulation, including new thermally insulated doors and windows, roofs, ceilings as well as wall insulation;
   - Solar window treatment and passive solar devices;
   - Improvements to mechanical heating ventilation and air-conditioning; and
   - Improvements to interior and exterior lighting.
3. Improvements to heat sources and distribution systems, including but not limited to:
   - New high-efficiency boilers and burners;
   - Automatic boiler control systems;
   - Solar hot water heaters for summer use;
   - Substantial efficiency-driven modernization of existing boilers;
   - Boiler heat recovery devices; and
   - Small cogeneration systems.
4. Rehabilitation of municipal facilities, e.g. street lighting.
5. Other energy end-use applications, including but not limited to:
   - Energy management control systems;

- Power factor correction measures;
- Air compressors; and
- Fuel switching (only those options conducive to GHG emission reductions).

6. Demand-side off-grid renewable energy generation:
   - Solar panels for hot water;
   - Small photovoltaic (PV) installations;
   - Biomass heating and power generation installations; and
   - Geothermal heating installations.

Project Financing Structures and Terms

EERSF initial capitalization was used to: 1) Provide seed capital; 2) defray initial setup and operating costs until the EERSF reached financial self-sufficiency; and 3) partially defray the initial costs of EE capacity building (project development, financial packaging, etc.).

The main portion of this capital has been used to provide beneficiaries with access to financing via two main types of financing products: 1) Lending products; and 2) guarantee products. What follows is a brief overview of how these two types of products work.

Lending Product

EERSF has been structured as a mechanism that promotes competition under normal market conditions through an efficient process that has been improved over time.

EERSF EE Financing Application Process and Project Cycle

After multiple rounds of improvement and adjustment, the EERSF EE project cycle currently consists of eight steps as summarized in the table below.

Normally, it takes up to six weeks to complete project appraisal, provided that the project developer submits all necessary documents accompanying the Initial Project Proposal (IPP) on time.

Eligibility Criteria

All EE projects approved and supported by the EERSF must meet the following eligibility criteria:

- Involve the application of well-proven technologies;
- Project cost from EUR 15,000 to EUR 1,500,000, although exceptions are possible if justified;

Table 1: EERSF EE Financing Application Process and Project Cycle

Step No.	Action	Carried out by
1	Project identification: i.e. submission of detailed energy audit (DEA) results or proposal for implementing a set of energy-saving measures	Project developer
2	Initial project screening	EERSF
3	Completion of the Initial Project Proposal (IPP)	Project developer
4	Submission of IPP and accompanying documents to EERSF	Project developer
5	Assistance in project design and completion of related documents	EERSF
6	Project appraisal and credit-worthiness assessment	EERSF
7	Formal decision on approval for financing	EERSF
8	Preparation and signing of the contract for financing and disbursement of funds	EERSF and project developer

- The equity contribution by the project developer should be at least 10% of the total project value.

Standard Loan Collaterals

The EERSF requires standard collateral, including mortgages, pledges, claims on accounts and commercial contracts, financial risk insurance, and bank guarantees. The types of collateral and size are defined according to the financial standing of the borrower while taking into account the added assets created by the project to be implemented.

Interest Rates

Applying a market-based approach, the EERSF provides loans to EE projects at commercial market interest rates.

The applied interest rate is fixed for the whole credit period. The borrower does not pay any additional fees and taxes or any penalty charges for early loan repayment. Over the years, the EERSF has provided loans in accordance with the terms and conditions summarized in the following table.

Table 2: Loan Terms and Conditions

Total Project Investment Size	Annual Interest Rate	Maximum Tenor	Minimum Equity Contribution by Project Developer
Up to EUR 500,000	4.5 - 6%	Up to 10 years	10%
Exceeding EUR 500,000	4 –5%	Up to 10 years	10%

Guarantee Products

To achieve the leveraging objective of using its limited funds to involve LFIs in the EE market, the EERSF designed and implemented three main types of specialized guarantee products for its early stage operations: 1) Partial credit guarantees; 2) portfolio guarantees for energy performance contracting; and 3) residential portfolio guarantees. A brief overview of how these guarantee types function is presented below.

Partial credit guarantee

The EERSF has designed and offered collateralized credit guarantees covering up to 80% of the credit value to secure loans for EE project contractors.

Individual (per-project) guarantee commitments must not exceed EUR 400,000. Guarantees on greater amounts may be provided in exceptional cases requiring approval by the EERSF Management Board. The credit guarantee provided by the EERSF has been recognized by the Bulgarian National Bank as a first-class collateral equivalent to a bank guarantee.

Portfolio Guarantees for Energy Performance Contracting

The EERSF provides uncollateralized guarantees to a portfolio of receivables from energy service companies (ESCOs) and derived from energy performance contracts (EPCs). The EERSF guarantees that it will cover up to 5% in delayed payments of the covered portfolio.

Residential Portfolio Guarantees

Under this product, for example, the EERSF guarantees that it will cover the first 5% of defaults within a condominium building (or portfolio of condominiums).

The table below presents a summary on the main terms and conditions applicable to all types of guarantee product (project and portfolio level guarantees).

Table 3: Guarantee Terms and Conditions

Type of Guarantee	Annual Fee	Maximum Tenor
Partial - 80% on a pari passu basis	0.5 - 2%	Up to 10 years
Partial - 50% on a first-loss basis after the bank creditor	0.5 - 2%	Up to 10 years

Mechanism for a Revolving EERSF

Since its creation, the EERSF has operated on a self-sustaining basis as a revolving EE facility with technical and financial evaluation capacities. Since 2011, all funds raised through initial capitalization have been fully invested in projects. The EERSF has relied only on revenues from loan repayments, which is a usual feature of this fund type. Thanks to a rigorous selection process, the EERSF has developed a very strong project portfolio and has achieved a steady volume of operations every year since inception.

EERSF Management

Originally set up according to Chapter 5 of the Energy Efficiency Act, the EERSF governance structure was modified according to relevant provisions in the Energy from Renewable Sources Act of 2011. The current EERSF governing roles are assumed by the following bodies and entities:

- Funders' Assembly (FA)
- Management Board (MB)
- Fund Manager (FM)
- Executive Director (ED)

Funders' Assembly (FA)

The FA includes representatives from the primary sources of EERSF funds:

- The Government of Bulgaria; and
- Private funders and contributors.

Every two years, the FA holds a regular session during which it adopts or updates operational regulations, elects MB members, and addresses other issues under its purview through legal means or international agreements.

Management Board (MB)

The MB is the primary governing body responsible for overall EERSF strategic management in compliance with established objectives and operational principles. MB sessions are convened every month upon a formal invitation by the MB Chairman.

The MB consists of 11 members:

- One representative from the Ministry of Energy (ME), designated by the minister;

- One representative from the Ministry of Economy, designated by the minister;
- One representative from the Ministry of Regional Development, designated by minister;
- One representative from the Ministry of Environment and Waters (MOEW), designated by the MOEW;
- The Executive Director of the Sustainable Energy Development Agency (SEDA);
- Six representatives elected by the General Donors' Assembly, including:
  - One representative from a non-government organization focused on reducing the risk of global climate change;
  - Three high-level experts with experience in financing power generation projects;
  - One EE expert with advanced education in engineering; and
  - One renewable energy expert with advanced education in engineering.

Fund Manager (FM)

Since its creation, a FM has managed day-to-day EERSF operations. In addition, the FM is responsible for ensuring the successful implementation of project cycles. The principal mandate of this position is to operate the EERSF as a profit-oriented business and in a manner that promotes EE investments and the development of a sustainable EE market in Bulgaria. The FM selects, develops, and applies the appropriate financing tools based on specific project needs as well as characteristics and considerations related to the overall management of the project portfolio.

From the start of its operations, the FM has been Econoler-EnEffect-Elana (EEE), a Canadian-Bulgarian consortium selected through a rigorous international

procurement process. The consortium is comprised of an international EE consulting firm, Econoler,[4] and two local Bulgarian firms, namely the Foundation Center for Energy Efficiency (EnEffect)[5] and the non-banking financial institution Elana Holding PLC.[6]

Executive Director (ED)

The FM team is led by a full-time ED proposed by the FM and appointed by the MB. The ED manages day-to-day operations and administration, including:

- Selecting and developing commercially viable EE projects and establishing the required financial structures;
- Developing, managing, and evaluating the product portfolio;
- Managing EERSF financial resources; and
- Fulfilling monitoring, reporting, and budgeting duties and any other required tasks.

The ED also attends MB meetings as a non-voting member presenting various financing opportunities for approval and reporting on regular operations.

4. www.econoler.com
5. www.eneffect.bg
6. www.elana.net.

Overview of Results: 2006 – 2024

Between mid-2006 (when it was first launched) and the end of 2024, the EERSF provided EE loans to a total of 218 projects, with total project investments reaching more than USD 59.8 million. Additionally, over the course of that period, the EERSF provided partial credit guarantees or portfolio guarantees to 33 projects, with total project investments amounting to USD 14.7 million.

Using only its initial USD 15 million in capital, the EERSF has catalyzed to date more than USD 74.5 million in EE investments in Bulgaria.

As of September 2024, the EE investments financed or guaranteed by the EERSF had achieved ,889 MWh/year in energy savings and avoided 94,2292eq in emissions. The following two figures (Figures 1 and 2) highlight some of the major EERSF achievements.

Figure 1: EERSF Loan Portfolio Status 2006-2024 (year-end numbers)

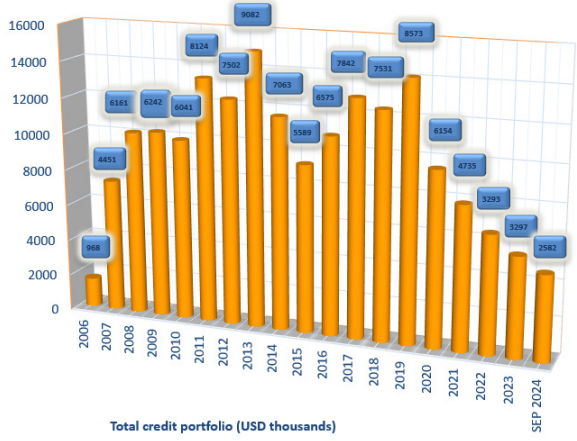
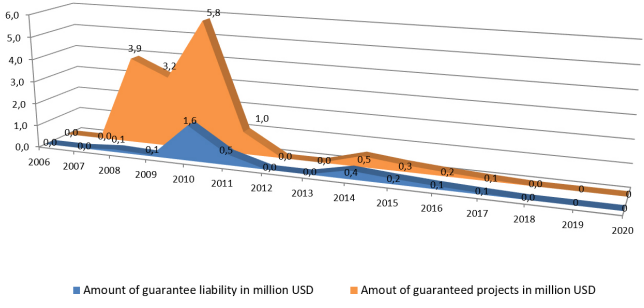


Figure 2: Guaranteed Project Investments and Amount of Issued Guarantees (Million USD), 2006-2020



In the first two years of operation, there was no market demand for EERSF guarantee products because the EE market was still the process of expanding while bank lending was easily accessible and banks had lowered their risk and collateral thresholds. In the wake of the 2008 economic slowdown, commercial banks tightened their lending requirements, resulting in higher demand for guarantees over the 2008-2010 period.

In 2011-2020, market demand for EERSF guarantees dramatically decreased and almost completely disappeared for the following reasons:

- The bulk of guarantees were provided to ESCOs operating in the EE space in the public sector. Over the 2011-2020 period, the public sector received an influx of EU funds for EE interventions, with 70-90% of those funds in grants. This dramatically reduced the market size for these ESCOs, with many of them simply becoming contractors.
- Over the same period, the government implemented a policy to reduce public spending, which resulted in few public sector EE projects being undertaken other than those financed by EU grant programs.

- Over the same period, private sector EE interventions almost came to a standstill. The country's slow economic growth, coupled with a string of poor government policies, led to a significant reduction in domestic and foreign investments in the private sector. In addition, delayed government payments on public contracts SMEs in the country led to many SMEs defaulting.

All these factors had negative impacts on not only Bulgaria's lending market, but also demand for EERSF guarantees. The following table provides an overview of financed projects by contract type.

Table 4: Financed Projects by Contract Type, 2006-2024

No	Type of Contract	Number of Projects	Total Value of Projects (USD)*	Total Value of Credit (USD)
I.	**Credit Contracts**	**218**	**59.8 million**	**43.8 million**
1	– Municipalities (including ESCO contracts)	109	25.8 million	17.7 million
2	– Corporate clients and SMEs (including ESCO contracts)	82	21.6 million	16.6 million
3	– Other clients (hospitals, universities, residential)	27	12.4 million	9.5 million
II.	**Guarantee Contracts**	**33**	**14.7 million**	**2.68 million**
1	– Partial credit	4	4.1 million	2.32 million
2	– Guarantees for ESCO	29	10.6 million	0.36 million

* Used Exchange Rate: 1 USD = BGN 1.65

International Recognition

Since its official launch, the EERSF has received multiple awards and has been recognized on many occasions for its excellent performance in EE financing.

In 2006, the Bulgarian Agency for Energy Efficiency awarded the EERSF the title of "the best specialized institution for financing EE projects in Bulgaria".

In 2007, the World Bank commended EERSF as a "highly satisfactory (or best practice) operation, whose design and implementation should be disseminated internationally". In the same year, the EERSF became the financier of choice for EE in the public sector (municipalities, public healthcare, and education). In 2007, building on the highly successful market penetration achieved by its direct lending products, the EERSF launched its partial credit guarantee products dedicated to EE.

In 2008, the EERSF was recognized for a second time as a "best practice operation" by the World Bank. In the same year, the EERSF launched its 5% first-loss EE portfolio guarantee targeting the portfolio-based receivables of Bulgarian ESCOs. Launched at exactly the right time for the Bulgarian market, this well-designed product has become a true success story.

In its 2010 project completion report, the World Bank[7] has the following praise for the EERSF:

> *At the time of appraisal, the project design represented what was considered "best practice" for EE-programs in Central and Eastern Europe. In fact, the project quality at entry was rated highly satisfactory by the World Bank's Quality Assurance Group, which stated that "the project preparation process can be considered a good example of what needs to be done early in project design to ensure successful implementation".*

6. World Bank "Implementation Completion and Results Report (September 22 2010;TF-54515)".

Lessons Learned for the Design and Management of EE Funds

The EERSF's strategic mission, as defined in the agreement with funders, is to develop and expand the local EE market. Although not the only player in the EE financing market in Bulgaria, the EERSF has clearly been a key instrument in striving toward this goal.

Since the beginning of EERSF operations, the FM has been unwaveringly committed to cultivating a specific niche market for EE financing rather than solely focusing on the financial survival of the EERSF.

As a result of its ongoing and carefully conducted work to identify market needs for EE financing, the EERSF and the FM identified significant demand for credit among municipalities, SMEs, hospitals, and universities. It was not an easy task for the EERSF to develop its own niche market because two European Bank for Reconstruction and Development (EBRD) credit lines were already successfully operating in Bulgaria, notably one credit line for EE and RE projects in the industrial sector and one credit line targeting EE in households.

Thus far, the EERSF has succeeded in not only creating its own niche market by catering to the specificities of EE projects and small-scale demand-side RE projects, but also establishing itself as one of the leading financial institutions lending to Bulgaria's various economic and social sectors, including municipalities, hospitals, and universities.

The **EERSF** has demonstrated that a well-structured, flexible, and innovative public-private fund can effectively address barriers to EE financing. Some key lessons are presented below.

Lessons Learned

Adequate response to market changes is an important factor for the smooth implementation of an EE fund. Such innovative facilities are particularly vulnerable to market developments.

In the case of the EERSF, although the FM made appropriate and timely operational decisions, the fund did not meet the initial expectation of its funders for its potential role in the EE financing market in Bulgaria (co-financing with commercial banks), as revealed in a mid-term review conducted by the World Bank. However, the fund was highly successful in identifying another market niche by providing loans and guarantees to public sector EE projects and by actively supporting the preparation of EE projects.

Fund operators and managers must ensure that the features offered by their funds are in demand and appropriate for the target markets. In the case of the EERSF, the facility design was based on the assumption that commercial banks, in many cases, would ask for a partial credit guarantee as a condition to entering into EE finance. However, the Bulgarian finance community did not perceive much of a need for such a guarantee when financing EE projects. Public sector borrowers generally have had good repayment records; in the case of the corporate sector seeking EE loans, such loans were provided based on their balance sheets and the LFI's previous experience with providing loans to such parties. In Bulgaria, a major EERSF sales effort had to be conducted to persuade banks to purchase partial credit guarantees.

Guiding Principles

The following noteworthy principles have been identified as critical to the success of the EERSF.

Principle One: Flexibility is a winning virtue.

- The excellent EERSF design enabled flexible funding operations over time and proved critical to its success

in the changing market environment in Bulgaria. One of the key design elements was an underlying market study conducted before introducing the instrument in the market to determine the basic assumptions regarding why and under which circumstances the fund should be designed to operate.

- Since its creation, the EERSF has played a major role in providing a variety of products dedicated to EE projects in the Bulgarian financial market. Inspired and encouraged by EERSF successes, local Bulgarian financial institutions are increasingly taking a heightened interest in financing EE projects, thereby consolidating the leveraging role of the fund in enhancing the overall availability of EE-related financing products in the market.

Principle Two: Rely on ESCO support to develop the market.

- ESCO-based contracts are becoming increasingly popular among contractors and end-beneficiaries thanks to the EERSF, the only Bulgarian financial institution that finances emerging ESCOs, thereby boosting the development of the ESCO market in the country. This has been quite an achievement considering that, even in developed countries, ESCOs often find it challenging to obtain bank financing due to their limited ability to provide adequate loan collateral.

Principle Three: Strive for market transformation.

Importantly, nine years after EERSF operations were first launched in Bulgaria, there is now a real market providing financial tools for the EE sector, and many financial barriers to EE implementation have been eliminated. The EERSF is effectively fulfilling the mission established by the original funders (primarily the GEF). As the FM, the consortium led by Econoler is fully aware that EERSF achievements to date are only the foundation for the future development of Bulgaria's EE market, and that the Fund should gradually expand the

scope of its interventions to many other sectors. Principle Four: Seize every opportunity to create viable EE projects.

Principle Four: Seize every opportunity to create viable EE projects.

Despite the currently unfavourable economic environment, the EERSF maintains a strong focus on identifying EE financing opportunities in the industrial sector. Currently, the specific features of EERSF credit products are mainly designed to appeal to SMEs in such sectors as the processing and clothing industries and to hotel operators that have regrettably been the worst-hit by the economic crisis among the fund potential customers.

Principle Five: Identify unaddressed niches.

Innovatively structured EE funding bodies such as the EERSF can play a major role in identifying and satisfying the financing needs for EE measures in those sectors or sub-sectors often shunned by financial institutions. In Bulgaria, the education sector serves as an example. To date, the EERSF is the only financing institution in Bulgaria providing loans to universities for EE investments, and the fund continues to make significant efforts to provide adapted products to the higher education sector.

Conclusion

Since its creation, the EERSF has amply demonstrated that a well-structured and carefully managed fund dedicated to EE is an effective approach to addressing the various barriers inherent in the EE market. By combining technical and financial expertise and integrating both kinds of expertise into one financing facility, the EERSF has offered a comprehensive solution to a complex problem faced by numerous organizations around the world.

Although limited by its small financial capacity, the EERSF has achieved tremendous success with the innovative concept designed for its structure and operation. Its success has clearly demonstrated that EE markets need such innovative approaches and that, given the right conditions, the sustainable EESRF business model can be replicated in other regions and countries.

About Econoler

Econoler is a world-renowned consulting firm specialized in energy efficiency and climate finance and that supports decarbonization efforts worldwide. Econoler has carried out more than 6,000 assignments around the world in 180 industrialized, emerging, and developing countries in all regions of the world. Our clients include national and local governments, public utilities, the corporate sector, as well as the leading UN agencies, multilateral and bilateral development banks, and a host of other international organizations, foundations, and NGOs involved in fostering energy efficiency and sustainable energy.

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