ENERGY EFFICIENCY WATCH

Energy Efficiency Policies in Europe



Case Study

The Slovak Energy Efficiency and Renewable Energy Finance Facility (SlovSEFF)

Co-funded by the Intelligent Energy Europe Programme of the European Union

Key facts and figures

Country	Slovakia
Name of policy	Slovak Energy Efficiency and Renewable Energy Finance Facility (SlovSEFF)
Type of policy	Financing instruments, grants/Energy Efficiency Fund
Target sector	Residential Sector – Buildings; Industry, Tertiary Sector, and Agriculture (Private enterprises, Energy Service Companies (ESCOs) and housing associations or cooperatives)
Actions targeted	Renewable energy, industrial energy efficiency and residential energy efficiency projects
Duration	SlovSEFF was one of the first Sustainable Energy Finance Facilities launched by the European Bank for Reconstruction and Development (EBRD) in 2007 with a total credit line of €60 million. In December 2009, an extension to the facility was approved (SlovSEFF II) with a credit line of €90 million and since February 2014, the EBRD has commissioned the third phase of the fund (SlovSEFF III).
Overall achievements	Primary energy savings of 580 GWh/year and 114,512 tCO_2e/year (in the period 2007-2013) (SlovSEFF I and II).
Overall aim of the policy	Provide financing to sustainable energy projects to reduce greenhouse gas emissions (GHG)
Innovativeness	Link GHG emission reduction potential to incentive payment level; free technical assistance to the borrowers

Policy objectives

SLOVSEFF

SlovSEFF intends to channel financing to sustainable energy projects reducing GHG emissions. This is done by providing:

- Loans (€20k – 2,500k);
- Grants (7.5% to 15% of loan);
- Incentive payments;
- Free technical assistance to borrowers (SlovSEFF 2015).

SlovSEFF also aims at transferring and building expertise among banks and companies related to sustainable energy investments. By improving energy efficiency and utilisation of energy, it also aims at mitigating electricity price increases.

The EBRD is the main actor responsible for commissioning and funding the SlovSEFF. Its set up was motivated by the closure of the Bohunice nuclear power plant as part of the negotiations for the accession of Slovakia to the European Union (EBRD 2014). SEFFs are a priority within the EBRD's Sustainable Energy Initiative. The Slovak Sustainable Energy Financing Facility (SlovSEFF) was one of the first SEFFs launched by the EBRD. Between the launch of the Sustainable Energy Initiative in 2006 and 2014, the EBRD disbursed loans of more than €2.1 billion to institutions across 17 countries. The EBRD extends credit lines to local financial institutions to develop energy financing as a permanent field of business. Local financial institutions (four in the first phase and six in the second phase) act as

intermediaries and lend the funds to their clients (small and medium-sized enterprises, corporate and residential borrowers) to undertake energy efficiency savings projects or to invest in small-scale renewable energy generation.

At the time of initial approval of SlovSEFF, 25% of electricity supply in Slovakia was from nuclear. As the nuclear plant Bohunice V1 was being closed, it was estimated that nuclear supply would decrease by one third, making it difficult to meet demand. Additionally, the economic growth and energy intensity measured at purchasing power parity was approximately 1.6 times the EU average. SlovSEFF sought to mitigate these challenges (EBRD 2014, ABB 2013).

Beneficiaries and action targeted

SlovSEFF III provides financing to private companies and housing associations through privately owned banks in Slovakia (EBRD 2015). Overall, SlovSEFF targets 3 groups of projects:

1 renewable energy (all major renewables),
2 industrial energy efficiency (e.g., on-site natural gas, rehabilitation of boilers, fuel switch)
3 residential energy efficiency (highly efficient ventilation with heat recovery, urban renewable energy systems) (SlovSEFF 2015).

Under SlovSEFF III, the minimum level of energy savings for residential projects is 30% of the total delivered energy (before-after rehabilitation). Depending on the achieved savings, the incentive payment is 10% of disbursed loan (30-40% savings) or 15% (≥40%) (SlovSEFF 2015).

Design and implementation

The EBRD is the main actor responsible for commissioning and funding the SlovSEFF. A total of €30 million in grant funds (€15 million for phase I and II) was provided to cover the cost of technical assistance and performance fees to participating banks and sub-borrowers. The fund is administered by the EBRD. Technical assistance is provided by external, local consultants: the Project Consultant and the Verification Consultant. No performance parameters were set for the first phase of SlovSEFF. In the design however, experience from two earlier successful Bulgarian frameworks (Bulgaria Energy Efficiency and Renewable Energy Credit Line and the Bulgaria Residential Energy Efficiency Credit Line) was used. In Bulgaria, both whole-building and single-dwelling projects were permitted, which increased the administrative burden and required a much more complex system of incentive payments. Therefore, under SlovSEFF only whole-building projects involving housing associations are eligible.

Technical assistance

SlovSEFF provides technical assistance to financial institutions and their clients such as training:

- To promote new financial products
- To assess technically eligible products
- To create standards for environmental due diligence.

Borrowers are provided with assistance in identifying energy saving opportunities through energy audits and are advised on high performing technologies. Technical assistance is provided by external, local consultants: the Project Consultant and the Verification Consultant

Incentive payments

Incentive payments are provided to kick-start markets by incentivising financial institutions and borrowers to comply with higher standards for energy efficiency and renewable energy projects. In the case of financial institutions, it also occasionally compensates for costs of staff training and monitoring activities. The main barrier to the implementation of energy efficiency projects are long payback times and a large upfront investment. Incentive payments have helped to correct these market barriers. The incentive payments vary according to projects. In SlovSEFF II, for housing projects

10% of the loan was payed as an incentive if 15% of energy savings were achieved and 15% of the loan if savings were larger than 25%. The energy saving thresholds have been increased under SlovSEFF III to 30% and 40%, respectively. For renewable energy projects, the incentive payments varied from 5-15% of the loan amount depending on the technology and capacity installed once the internal rate of return (IRR) is larger than 10%. For industrial energy efficiency projects, incentive payments represented 7.5% of the loan amount once the IRR was larger than 10% (EBRD 2014).

SlovSEFF III

The latest extension, SlovSEFF III is co-funded by the Ministry of Environment of the Slovak Republic and the Ministry of Agriculture, Food and Environment of Spain, and provides a credit line of up to €40 million to Slovak commercial banks. Incentive payments are funded from the proceeds of the sale of carbon credits from the Slovak Republic to Spain, facilitated by the EBRD.

Marketing has proved to be crucial to the success of SlovSEFF. In order to maximise the demonstration effect of projects, SlovSEFF established annual awards with wide media coverage for the best performing projects.

Application process

After an application is submitted, a simple analysis is undertaken on whether basic SlovSEFF criteria are fulfilled. Once the appraisal is positive, the client signs a Letter of Engagement accepting SlovSEFF conditions. Afterwards the project consultant performs an audit (energy audits for industrial energy efficiency, simple energy audit for residential energy efficiency) to identify and confirm best energy/carbon saving measures. Thereafter the project developer confirms that investment recommendations are understood and the bank loan is signed and disbursed. Once the project is completed, the client issues a verification request and the Verification Consultant verifies that the project has been implemented in compliance with the Project Assessment Report. Following the project verification, the incentive payment of Carbon Reduction Compensation is disbursed. Annual GHG emissions and energy savings have to be reported to the Solvak Innovation and Energy Agency (SIEA) for a period of 5 years after project completion. The following figure provides an overview of how SlovSEFF works.

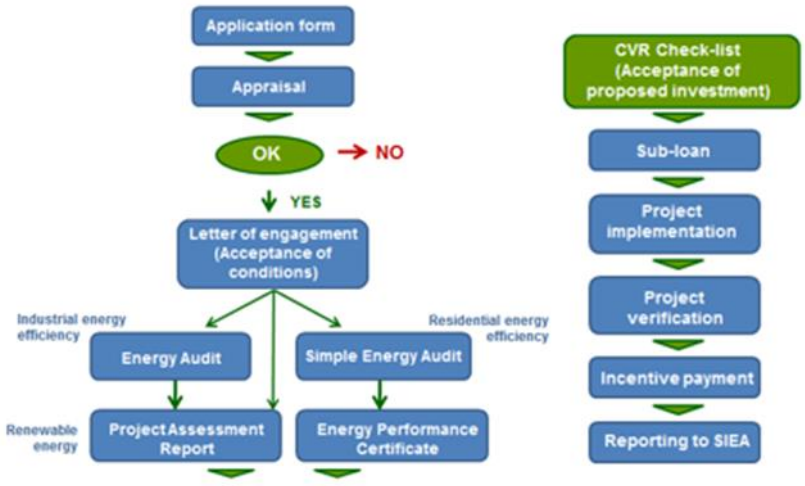

Figure 1: Project approval under SlovSEFF (Source: SlovSEFF 2015)

SlovSEFF within the Slovakian EE policies

SlovSEFF is in line with other Slovakian energy efficiency policies. The National Energy Efficiency Action Plan highlights the importance of energy audits in the industrial sector and recognises the importance of mobilising funds for energy efficiency improvements.

Ensuring compliance

Compliance is ensured by the reporting of annual GHG emissions and energy savings by the borrowers to SIEA (Slovak Innovation and Energy Agency) for a period of 5 years after project completion via templates that can be accessed online (SlovSEFF 2015).

As mentioned, the incentive payments were used to overcome market barriers. Yet, despite an identified large market potential, a low volume of investments led to the identification of further barriers in SlovSEFF I among them: "low awareness in many medium and small industrial companies and poor knowledge of available technologies to reduce energy consumption in the industrial sectors, difficulties in gaining consensus due to the large number of owners in apartment buildings in the residential sector and lack of an adequate incentive system, fragmented regulation, non-guaranteed purchase tariffs, limited tax breaks in the renewable energy sector" (EBRD 2014, p.13). There was no follow-up action on the identified barriers in SlovSEFF II.

Policy impacts

To measure impact, a monitoring system is in place through several project assessment steps, including project verification by the Verification Consultant and annual reporting to SIEA. Additionally, the release of incentive payment follows a rigid verification structure: the independent consultant verifies the project and notifies the participating bank which then approves it and notifies the EBRD. Participating banks also have to regularly submit reports (initially quarterly, later changed to semi-annually) providing details of all projects financed (SlovSEFF 2015, EBRD 2014).

In total 688 projects were funded in SlovSEFF I and II. An evaluation by the EBRD (2014) shows that the largest share of projects took place in the housing sector (87%) followed by the industrial sector (11%) while renewable energy projects represented only 2%. Yet, when considering the allocation of funds, 61% went to housing, 27% to industrial projects and 12% to renewable projects, adjusting for the larger size of renewable and industrial projects. The average loan size for housing projects under SlovSEFF I was about €130,000, while for SlovSEFF II this increased to about €170,000. In the industrial sector they were €568,000 and €515,000 respectively (EBRD 2014).

SlovSEFF I and II jointly achieved annual primary energy savings of 580,000 MWh (compared with a target figure of 504,000 MWh) and result in total annual CO_2 savings of 114,000 t. The industrial sector contributed to about half of these emission reductions. The following table provides an overview of results achieved.

Table 4: Summary of main quantitative results

		Housing	Industrial	Renewables	Total
SlovSEFF I	Annual heat saved / produced (GJ)	135,691	314,929	186,739	637,359
	Annual electricity saved / produced (MWh)	107	18,366	2,800	21,273
	Renewable capacity added (MW)	0.05	-	18.61	18.66
	Annual CO_2 savings (tonnes)	9,570	38,779	15,216	63,565
SlovSEFF II	Annual heat saved / produced (GJ)	185,520	216,373	61,150	463,043
	Annual electricity saved / produced (MWh)	9	1,693	39,431	41,133
	Renewable capacity added (MW)	-	0.21	6.42	6.63
	Annual CO_2 savings (tonnes)	15,280	18,668	16,680	50,628
Combined portfolio	Annual heat saved / produced (GJ)	321,211	531,302	247,889	1,100,402
	Annual electricity saved / produced (MWh)	116	20,059	42,231	62,406
	Renewable capacity added (MW)	0.05	0.21	25.03	25.29
	Annual CO_2 savings (tonnes)	25,063	57,447	31,896	114,406

Source: Project Consultant

Source: EBRD 2014

An evaluation report of the EPBD (2014) also finds a "significant improvement in the living standard of residents of the refurbished apartment blocks" (p.21). Even though no benchmarks were set, it is estimated that 31,184 households and therewith 86,376 residents benefitted from the refurbishments (SlovSEFF 2015).

Policy innovation

SlovSEFF is an innovative policy instrument due to the technical assistance which is provided by the Project consultant who helps clients of the local banks in identifying most appropriate energy efficiency investments, through Rational Energy Utilisation Plans (REUPs), Simple Energy Audits (SEAs) and assistance to the formulation of loan applications (Build up 2012). Additionally, the policy is unique as it has an incentive payment system in place: All successfully verified renewable energy and industrial energy efficiency projects are granted a one-off payment to compensate for carbon reduction, residential projects receive a payment as a percentage of the disbursed loan depending on the total savings. Emission reductions are calculated based on CDM methodologies (SlovSEFF 2015). Borrower have the right to appeal in case they disagree with the decision of the Project Consultant or Financial Institution on three levels: 1) to the SlovSEFF office in Bratislava; 2) to the Project Manager in charge of SlovSEFF III, and 3) to the EBRD (SlovSEFF 2015).

Lessons learnt 1: Success factors

SlovSEFF illustrates that the involvement of local consultants is crucial for the success of a policy. Besides marketing efforts in the beginning which helped to achieve a strong early uptake, continuous advertisement such as awards for the best projects helped to successfully implement SlovSEFF. Essential also is the combination of technical assistance and incentive payments rather than the mere provisioning of funds.In addition, local consultants contributed to the success by preparing technical assessment packages (rational energy utilisation plans and simplified energy audits) and monitoring. Another key element to the success in attracting sub-borrowers and banks highlighted by the EBRD (2014) was the simple application procedure (EBRD 2014).

Lessons learnt 2: factors to avoid and possible further improvements

The absence of initial targets presented a point for improvement that was consequently made (EBRD 2014). Also, energy saving thresholds to receive incentive payments were found to be too low under SlovSEFF II, which is why they were doubled under SlovSEFF III.
The minimum IRR threshold for renewable energy projects has been set to 10%, which needs to be critically observed as it may lead to superficial rather than fundamental retrofitting activities.

References and further information

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Disclaimer

The Project

In 2006, the European Union adopted the Directive on energy end-use efficiency and energy services ("ESD"). The Directive sets an indicative energy saving target of 9 % by 2016 as well as obligations on national authorities regarding energy savings, energy efficient procurement and the promotion of energy efficiency and energy services. It requires Member States to submit three National Energy Efficiency Action Plans (NEEAPs), scheduled for 2007, 2011 and 2014.

The Energy-Efficiency-Watch Project aims to facilitate the implementation of the Energy Efficiency Directive. This Intelligent Energy Europe project tried to portray the progress made in implementation of energy efficiency policies since the Energy Service Directive via NEEAPs screening and an extensive EU wide expert survey.

www.energy-efficiency-watch.org

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List of Abbreviations

EE – Energy Efficiency, **EED** – Energy Efficiency Directive, **EPC** – Energy Performance Certificates, **EPDB** – Energy Performance of Buildings Directive, **ES&A Targets** - Energy Savings and Action Targets, **ESCO** – Energy Service Company, **ESD** – Energy Service Directive, **EU** – European Union, **EEW** – Energy-Efficiency-Watch, **MEPS** – Minimum Energy Performance Standards, **MRV** – Monitoring, Reporting and Verification, **MURE** – Mesures d’Utilisation Rationelle de l’Energie, **NEEAP** – National Energy Efficiency Action Plan, **R&D** – Research and Development

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