



Energy Agency of the Republic of Macedonia

Inter-regional Workshop on
Energy Efficiency Investment Project Pipeline

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POLICIES AND REGULATIONS ON ENERGY EFFICIENCY ARE BASED ON:

➤ **National Energy Strategy 2010 until 2030**

The objective of the Strategy is restructuring of the energy sector based on market economy principles and developing a modern energy policy.

➤ **EE Strategy 2010-2020**

Implementation of energy efficiency measures in the public, commercial, industrial and residential sector.

➤ **National Energy Action Plan 2010-2018**

The main goal of EE Action plan is achieving 9% savings in the final energy consumption until 2018.

➤ **Energy Law 2011**, amended 2012 and 2013.

➤ **Rulebooks on Energy Audit and Energy Performance of Buildings**, are adopted in 2013. Training for the first 250 auditors began in early 2014.

THE ENERGY AGENCY IS AN INSTITUTION RESPONSIBLE FOR:

- Preparing of the Annual National Energy Balance.
- Organizing selection of training institutions, trainings and certification for the energy auditors. 5 Training institutions were selected in 2014.
- Approval of the 3-year Energy Efficiency Programs and Annual Action Plans, for all 81 Municipalities in the Republic of Macedonia.
- Running registers for energy auditors and building certifications as well as and monitoring and verification of the energy efficiency data.
- National Energy Information System.
- Preparing annual report for implementation of EE measures, using the bottom-up and top-down methodologies.

CURRENT FINANCIAL STATUS

- Energy Efficiency Fund is in the final stages of foundation but has not been established yet.
- Initiated liberalization of the energy market can increased the interest in establishing the ESCO companies.
- Undeveloped EE services and financing mechanisms under the energy saving performance contracting (ESPC).
- Only construction companies, design institutes and energy consultants are providing the basic lines of EE services.
- Lack of wide range of EE service providers as well as lack of financial resources.
- The public sector and municipalities are not creditworthy to undertake various projects using the ESCO model of repayments from the energy savings.

BARRIERS FOR FINANCING-1

- Public institutions still receive recourses for covering their operating costs, including energy bills from the central budget. If the energy costs were reduced due to implementation of energy efficiency measures, in the next year, the budget income would be automatically reduced, by the amount of savings.
- Accounting systems for the budget users does not allow separate energy savings from other expenditure items. Under the current system the municipalities may only borrow in general obligations which will be repaid from their own municipal revenues.
- The provisions in the Law on Public Procurement made it impractical for the ESCO Model to operate. Law on Concessions and Public-Private Partnership-adopted 2012, would apply to contracts between public sector entities and ESCOs, but tendering and contracting provisions and approval mechanisms are still untested in the practice.

BARRIERS FOR FINANCING (2)

- The lack of legislative incentives require adoption of specific EE Law with definition of financing instruments and procedures including EE Fund, ESCO models and ESPC.
- Lack of experience of the local banks in project financing and active participation in EE Fund, ESCO and ESPC.
- Low electricity prices, high loan interest rates and insufficient budget planning for more than one calendar year.
- Liberalization of the energy market is in initial phase. Monopolies in energy sector still exist , but the sector is restructuring.
- Lack of expertise for preparing bankable projects.
- General information on financial instruments is very limited.

BARRIERS AND CONSTRAINTS TO EE INVESTMENT IN THE PUBLIC SECTOR

Policy / Regulatory

- Low energy pricing and collections
- Rigid procurement and budgeting policies
- Limitations on public financing
- Ad hoc planning
- Limited and poor data

Public End Users

- Limited incentives to save energy/try new approaches
- No discretionary budgets for special projects/upgrades
- Unclear ownership of cost/energy savings
- Limited availability of financing
- Lack of awareness and technical expertise
- Behavioral biases

Equipment/ Service Providers

- Higher transaction costs for public sector projects
- Perceived risk of late/non-payment of public sector
- High project development costs
- Limited technical, business and risk management skills
- Limited access to equity and financing

Financiers

- High perceived public credit risks
- New technologies and contractual mechanisms
- Small sizes/high transaction costs
- Behavioral biases

Success Factors (1)

The Government of the Republic of Macedonia is committed to implement:

- National Action Plan for EE 2010-2018.
- National Action Plan for EE in the Public Buildings.
- Municipals EE Programs and Action Plans.

Mandatory activities:

- Introduction of Energy Audits and EE certification of buildings in 2014.
- Creation of the specific financial instruments:
 - *EE Fund,*
 - *Budget capture,*
 - *ESCO companies.*

Available financing instruments

- *Credit lines by the financial institutions (World Bank, EBRD, KfW, WeBSFF)*
- *Credit Line by the commercial local banks and Macedonian Bank for Promotion D.*
- *Grants*

Success Factors (2)

National Action Plan for Energy Efficiency in the Public Buildings

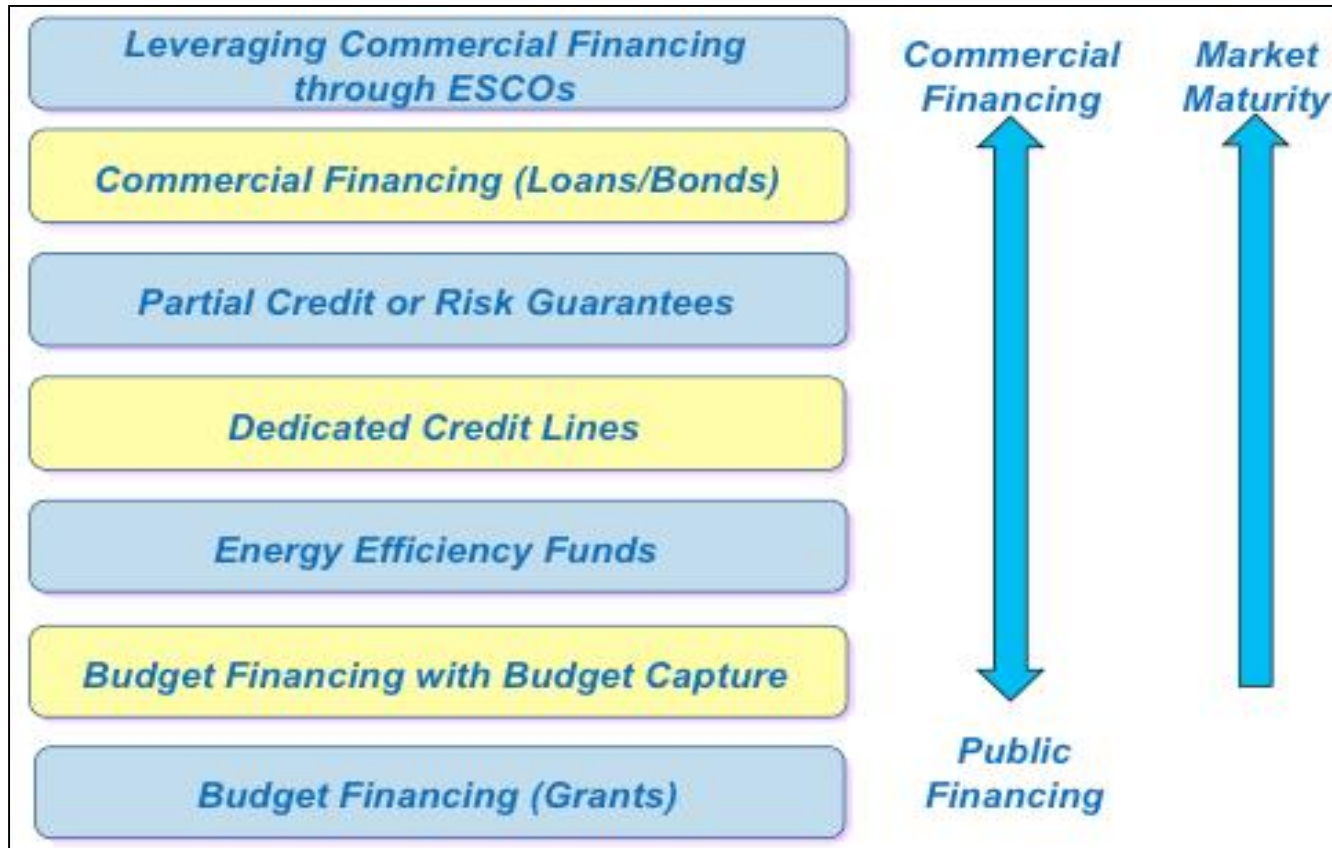
- There are 2.441 public buildings, with total heated area of 2.265.944 m².
- The public buildings consume 40.87 ktoe energy annually.
- The expected energy savings are about 33.2% from the current actual consumption.
- The required investments is estimated to app. 95 mill. Euros.
- The monetary annual savings is app.14 mill. Euros.
- The simple payback is 6.8 years.
- The total saved energy in public buildings is 13.6 ktoe/year, which is about 56% of the target for the whole Commercial and Service Sector.
- These energy savings would result in reducing greenhouse gas (GHG) emissions by about 39,000 t CO₂/year.

Figures show that there are economic reasons to invest in EE measures, but financial mechanism should be developed as soon as possible.

Technical and economic parameters by Program components

Program Components	Total saved energy (in 2018)	Total monetary saving	Total investment	Simple payback
	MWh/year	Million Euro/year	Million Euro	years
Municipal buildings	83,131	7.04	51.56	7.3
Health care buildings	45,399	3.61	24.96	6.9
Universities and science institutes	22,914	2.64	14.66	5.6
State administrative buildings	1,355	0.17	1.20	7.1
Social institutions	5,119	0.50	2.89	5.7
TOTAL	157,918	13.96	95.26	6.8

Financing Energy Efficiency in the Public Sector: Moving from Public to Commercial Financing





THANK YOU FOR YOUR ATTENTION
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