

ENERGY EFFICIENCY AGENCY OF THE REPUBLIC OF SERBIA

ROLE OF SERBIAN ENERGY EFFICIENCY AGENCY

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Conference on
Financing Eco-innovation in South Eastern Europe
Mechanisms, opportunities and challenges

Monday, April 27, 2009
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Establishment of EEA has been funded by the European Union
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Serbian Energy Efficiency Agency - SEEA

- ***The Serbian Energy Efficiency Agency (SEEA) is a national non-profit organization***
 - *It was founded in May 2002 by the Decree of the Government of the Republic of Serbia and*
 - *with the financial support of EU (EAR - CARDS 2002)*
- ***The legal status of the SEEA was changed by the Energy Law on 1 August 2004***
 - *It has been established as a special republic organization with the status of a legal entity*
 - *Potential status is to become Public Agency*
- ***Human resources***
 - *12 permanent staff*
 - *2 experts hired on contractual basis (WB - Serbian Energy Efficiency Project)*



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Serbian Energy Efficiency Agency

Mission and Duties

- *The SEEA develops and proposes programmes and measures;*
- *Co-ordinates and stimulates activities intended to achieve rational use and saving of energy, as well as increase in efficiency of energy use in all sectors of consumption especially in:*
 - *Buildings sector*
 - *Municipal infrastructure and*
 - *Industry*
- *Stimulates wider use of renewable energy sources and co-generation*



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Serbian Energy Efficiency Agency

Mission and Duties

- *Collects data on energy consumption;*
- *Proposes measures for obtaining financial resources and for technical assistance, including monitoring;*
- *Proposes financial support and priority projects and monitors results following implementation of projects;*
- *In coordination with relevant Ministries, cooperates with similar international, foreign and local institutions; and*
- *Performs other activities at the request of the Government of the Republic of Serbia.*



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Financing

- **State budget of the Republic of Serbia**
 - Only for running costs, and
 - Projects of the EE and RES – NGO (Non Governmental Organizations)
- **EU (EAR) Grant €5M - CARDS 2002 / 2002-2006**
 - € 3.75 M for Programs
 - Grant for running costs of SEEA (continue till May 2008)
- **Kingdom of Norway /2002-2007**
 - Technical and financial assistance to Ministry of mining and energy and SEEA, about € 300.000 annually



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Serbian Energy Efficiency Agency

Financing

- **Kingdom of Spain /2007-2008**

- *Technical and financial assistance for use of wind energy in Serbia, € 204.000 measurement and feasibility study for wind farm*

/2009-2010

- *Technical and financial assistance for use of solar energy in Serbia, Demonstration Project and Study of the Solar Energy Potential*

- **World Bank**

Serbian Energy Efficiency Project – EE in social public buildings

IDA credit and IBRD loan

- *(2005-2010) (\$ 25 M)*
- *(2008-2010) (\$ 30 M)*

- **Other financial sources**



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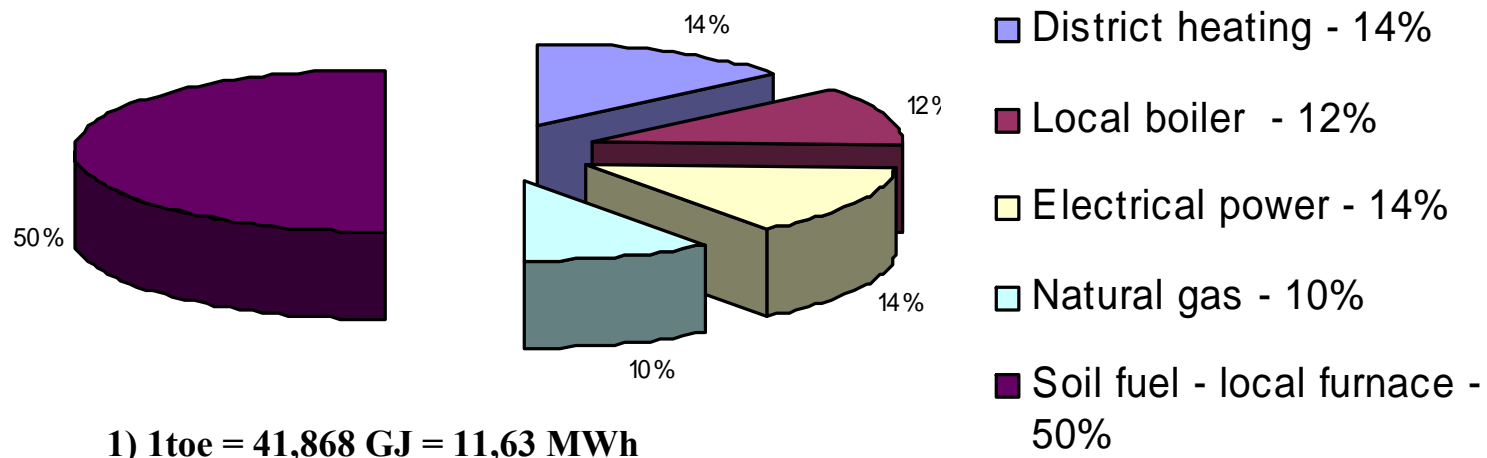
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Energy Efficiency in Buildings

State of EE in Building Sector in Serbia *

- Final energy consumption in the Building stock was **3,29 Mtoe*** in 2005.
- Share of the Building Stock in final energy consumption is **48%** - whereof **65%** in the residential sector
- About **60%** for the heating purposes

MODE OF THE BUILDINGS HEATING



* Programme for Implementation of the Serbian Energy Development Strategy until 2015 in the period 2007-2012



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Energy Efficiency in Buildings Demonstration Projects

16 Municipalities/Projects

Municipal Public Buildings

Total Investments: > 1,400,000 €

Grant amount: 897,000 €

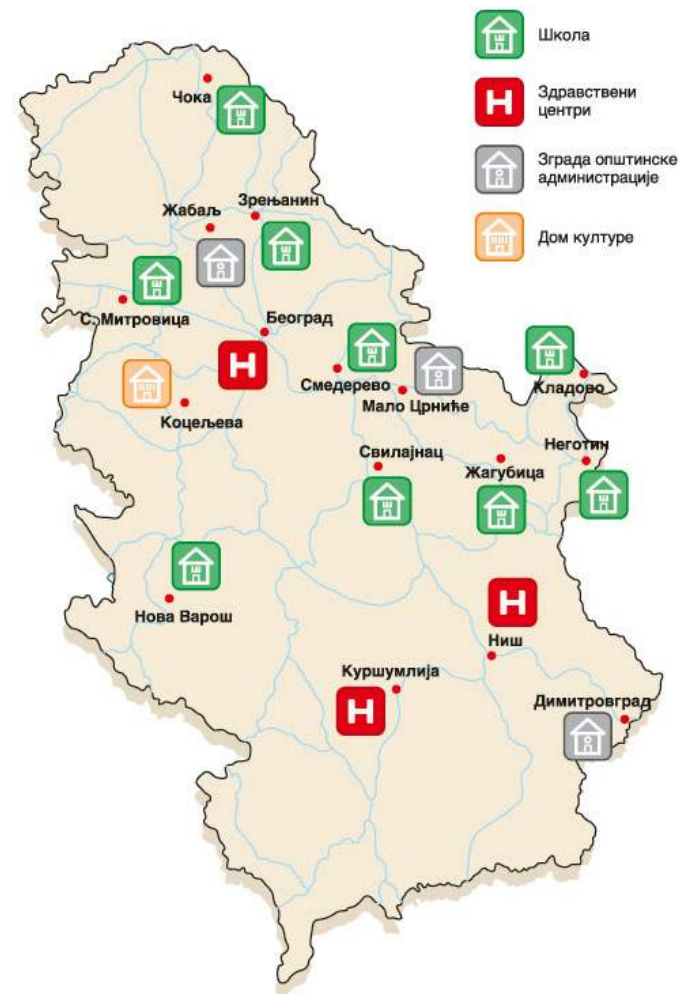
Financing Source: EAR

Per Project: to 70%

Realization period: 2005 – 2006

Energy Efficiency measures relate to:

- Building envelope (roofs, walls, windows)
- Heating system
- Building interior lighting



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Energy Efficiency Project in Serbia

IDA credit YF3870-1, IBRD loan YF7466 WB

PART B. Public buildings – schools and hospitals

Realization period: 2005. – 2010.

IDA credit YF3870-1- WB (\$ 25 M)

2005. – 10 buildings

6 schools and 4 hospital.

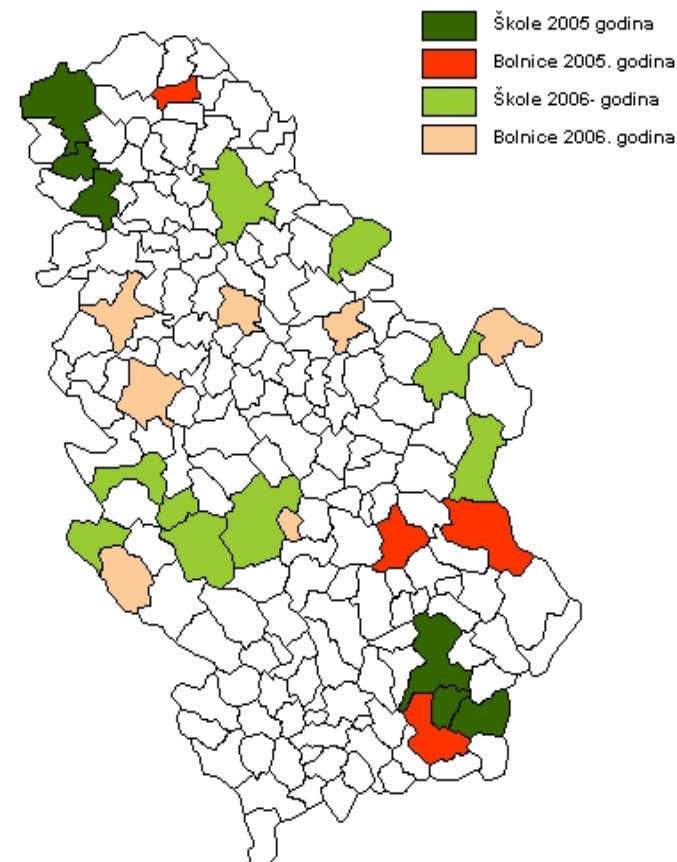
2006. – 18 buildings

10 schools and 8 hospital.

2007. – 2010. Project supplement financing

IBRD loan YF7466 – WB (\$ 30 M)

Up to 100 buildings: Schools, hospitals and social care institution



Projekat unapredenja energetske efikasnosti



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Energy Efficiency Project in Serbia

IDA credit YF3870-1, IBRD loan YF7466 WB

Assembly of the Republic of Serbia ratified agreement with World Bank for additional financing

Credit became effective in November 2008

Project coordination: Ministry of Mining and Energy

Project implementation: SEEA according Project Implementation Plan and WB Procedures

Beneficiaries:

- *Ministry of Education*
- *Ministry of Health*
- *Ministry of Labour and Social Policy*



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Energy Efficiency Project in Serbia

IDA credit YF3870-1, IBRD loan YF7466 WB

Credit objectives:

- *Rehabilitation of Heat supply System of CC Nis and implementation of EE retrofit measures within 17 buildings of Hospital Complex*
- *Other - Energy Efficiency improvement of Public buildings in health, education and social care sectors:*
 - *Schools*
 - *Hospitals*
 - *Social care institutions*

Green Award 2007 - WB



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Energy Efficiency in Industry/1

Industrial energy audits and training programme

- *Implementation: Sep 2003-April 2004*
- *Consultant: LDK, Greece*
- *Financing source: EAR*

Training programme for industrial Energy Management Systems

- *Implementation: April - October 2005*
- *Consultant LDK, Greece*
- *Local partners: REEC Belgrade and Novi Sad*
- *Financing source: EAR*

Industrial energy audits and development of EA methodology

- *4 Seminars jointly with regional chamber of commerce*
- *Contracts with 4 Regional Energy Efficiency Centers (REEC)*
- *Financing source: EAR*



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Energy Efficiency in Industry/2

Demonstration of general energy auditing in industry

- *Consultant COWI, Denmark*
- *Implementation: August – November 2006*
- *Financing source: EAR*

Training in financial engineering

- *Consultant NEEG, Norway*
- *Implementation: December 2003 – May 2004*
- *Financing source: Kingdom of Norway, multi annual programme of technical and financial assistance to EE in Serbia*

Training in Energy Management System for food industry

- *Consultant NEEG, Norway*
- *Implementation: December 2004 – June 2005*
- *Financing source: Kingdom of Norway, multi annual programme of technical and financial assistance to EE in Serbia*



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Norwegian Program

Norwegian Government has for five years (2002-2007) actively supported activities in Serbian energy sector: technical assistance and financial support

Results/Deliverables

- *SEEA, MOME*
- *Regional energy efficiency centers REECs – 5*
- *(Belgrade, Novi Sad, Kragujevac, Nis, Kraljevo)*
- *Industrial energy efficiency network (SIEEN)*
- *Kyoto Protocol, CDM, Energy Planning on local Level, Building labeling*

Financing source

- *Kingdom of Norway, multi annual programme of technical and financial assistance to EE in Serbia*



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Energy Efficiency in Municipalities

Demonstration Projects

11 Municipalities/Projects

- **Energy efficiency in Municipal services / € 170,000**
 - 5 projects - Street lighting
 - 2 projects - Water supply
- **Energy efficiency in District Heating / € 350,000**
 - 4 projects / Heat substations & buildings' installations

Two realized Trainings:

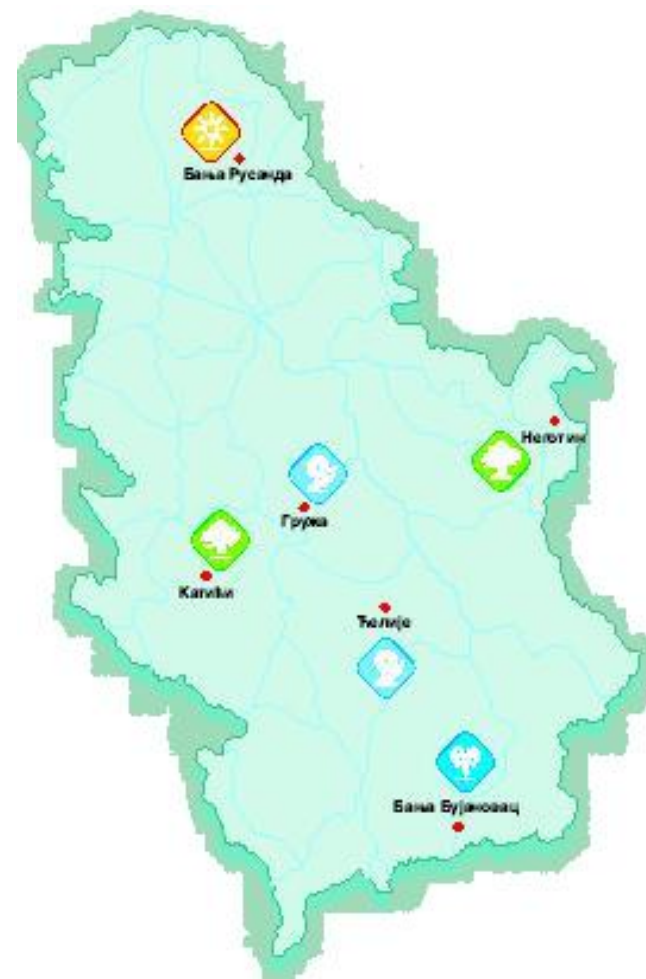
- **Energy Management in Municipalities**
(Dec. 2004/ Feb 2005)
- **Energy Planning in Municipalities**
(Jan. 2005/Oct. 2005)



Renewable Energy Use Demonstration Projects

*Special EARs found for RES
development of € 200,000:*

- 2 seminars:
 - "Biomass for Energy" 2005, Vrnjačka Banja
 - "Geothermal Energy" 2005, Vrnjačka Banja
- 2 demonstration projects:
 - Biomass Fired Boiler in Elementary School "Mićo Matović" in Katići
 - Construction of Small Hydropower Plant at Gruža Lake



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Renewable Energy Use

- 4 feasibility studies: 2005/2006

- "Utilisation of Biomass in Centralised Heating Systems in Negotin "
- "Small Hydropower Plant at Lake Čelije"
- "Solar Energy Utilisation for Heating in Special Hospital of the Spa Rusanda "
- "Geothermal Energy Utilisation in The Spa Bujanovac "

Wind Energy Use: (2007/2008)

- Installed masts: Titel, Veliko Gradište, Negotin
- Feasibility study for Negotin
- Donation of Kingdom of Spain: € **204,000**

Solar Energy Use: (2009-2010)

- Technical and financial assistance for use of solar energy in Serbia,
- Demonstration Project and Study of the Solar Energy Potential
- Donation of Kingdom of Spain



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Technical potential

Market potential

In Republic of Serbia there is a big technical potential for energy saving and implementation of EE measures

On the other side, there is a low market potential for EE improvement caused by:

- *Insufficient economical potential of the most part of the population and consumers*
- *Insufficient motivation for investment caused by:*
 - *Low prices of electricity*
 - *Inadequate parity of different fuels*
 - *Normative collection for heat consumption in DH, etc*
- *Still unfavorable loan conditions*
- *Uninformed the major part of the population*



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