

Building a sustainable future. Tools and decision making  
for sustainable urban development

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# Energy Efficiency Networks in Eastern Europe and Capacity Building for Urban Sustainability



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PETUS Practical Evaluation Tools  
for Urban Sustainability



## Aims of the presentation:

- To describe the municipal network activities in Bulgaria and South-Eastern Europe
- To share some useful experience in three key aspects – Capacity building, Projects sustainability and Information dissemination
- To demonstrate the transferability of the results
- To establish a possible positive connection with PETUS and to find opportunities for mutual support



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## Establishment of EcoEnergy

The main obstacles that municipalities face in energy efficiency improvement

- Inadequacies in legislation
- Insufficient financing instruments
- Poor investment practices
- Insufficient institutional and human competence
- The network is a bottom-up initiative of 23 municipalities in 1997

## Strategic goals of EcoEnergy

To contribute for the:

- Reduction of the burden of energy expenses on municipal budgets
- Improvement of the security of energy supply
- Improvement of the quality of energy services
- Reduction of the burden of energy expenses on households budgets



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## Two stages of development

### I. Informal association (1997 – 2003)

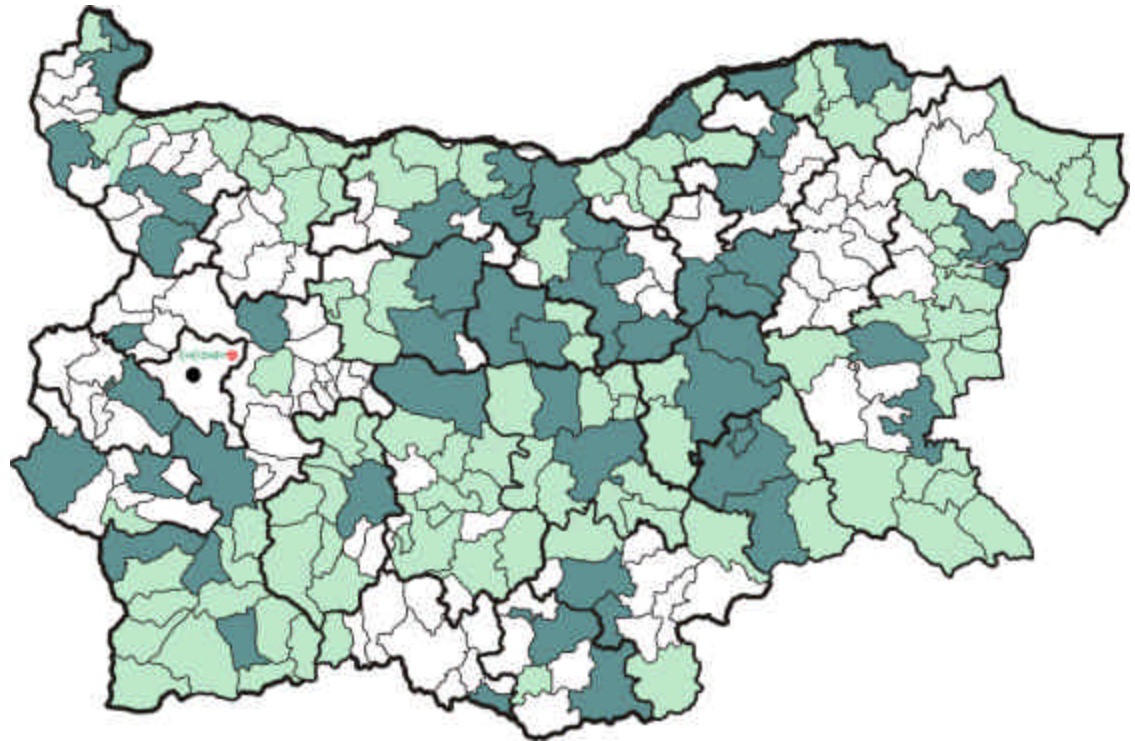
- Lack of governmental support & adequate legal framework
- Focus on local capacity building & information exchange
  - Local energy planning
  - Project development
  - Project financing
- Demonstration projects as a means of experience exchange



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Bottom-up  
initiative

**2008**



## Two stages of development

### II. Formal association (since 2003)

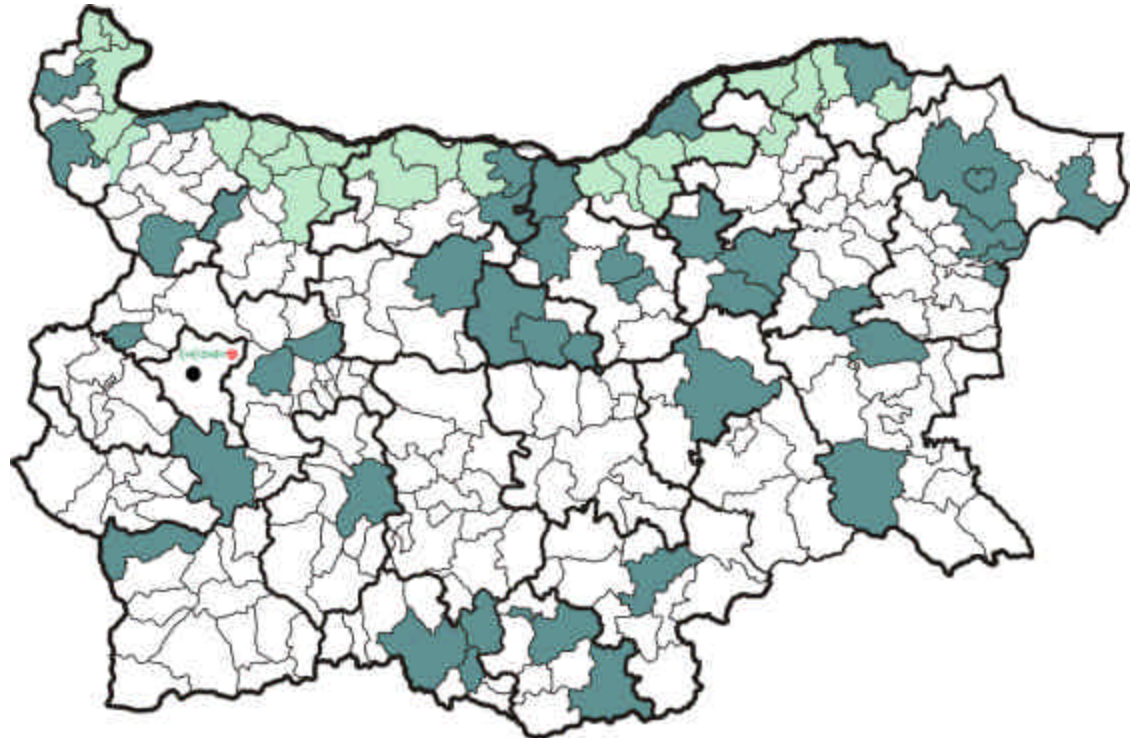
- Specific EE legislation in place
  - obligatory local energy planning
  - obligatory building certification
- Municipalities acutely need support to face the requirements of the new EE legislation
- Governmental AEE acutely needs the network support – pushing to extend EcoEnergy
- Focus on capacity building / information exchange / international cooperation
- Court registration by initiative of municipalities



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Formal  
association

# 2005





## General goals were addressed by local actions

- A. Strengthening the legislative reform
- B. Introducing financing instruments
- C. Activate investment practices
- D. Building local capacity



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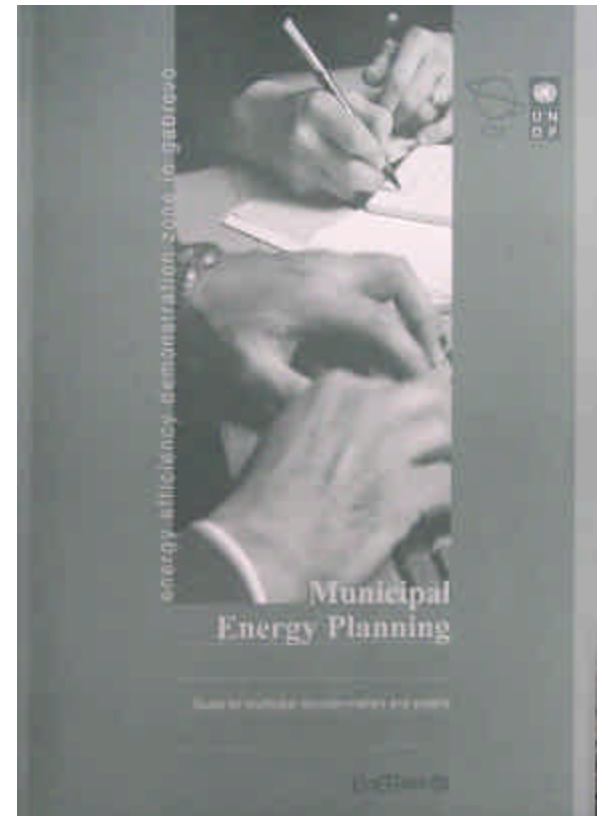
## A. Strengthening the legislative reform

**Municipal energy planning was recognized as a national priority**

40 pilot municipal energy programs developed before 2004

Manual on local energy planning developed

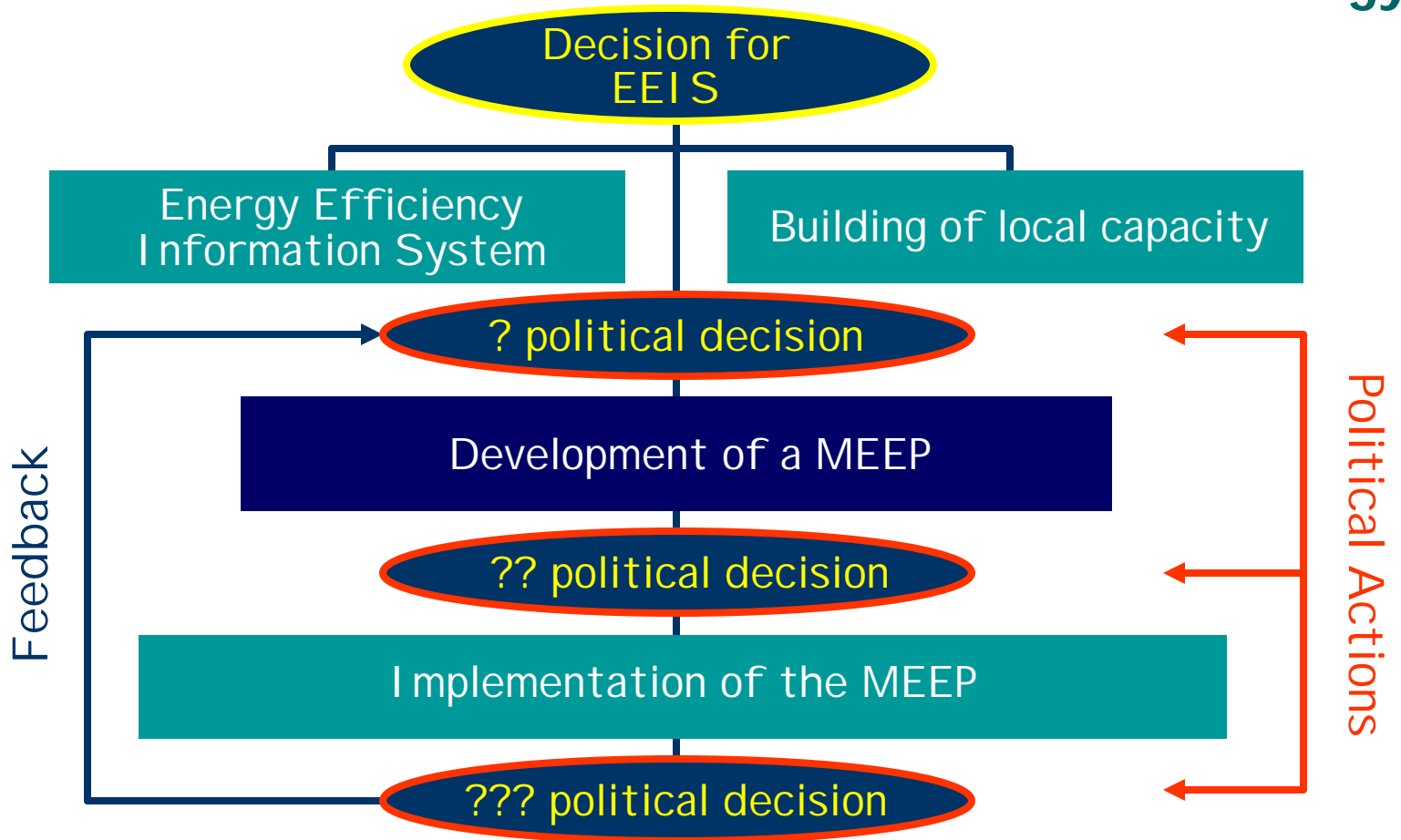
Training and technical assistance for energy planning offered





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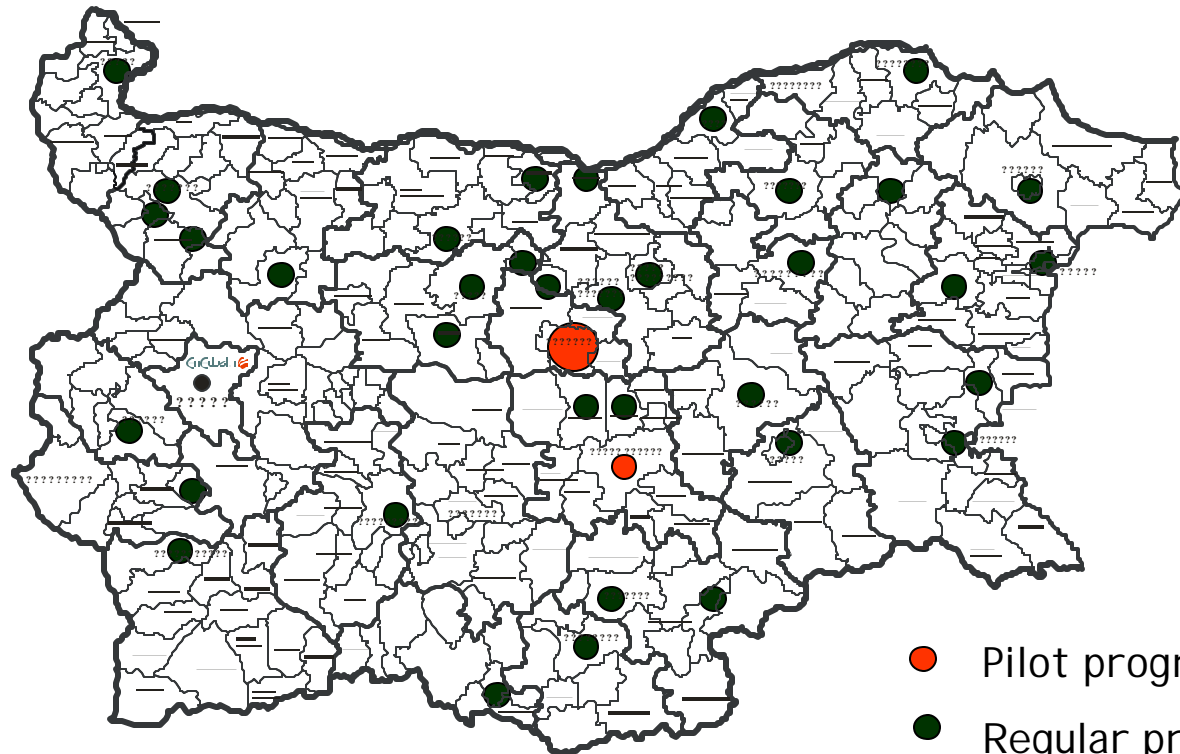
# Municipal Energy Planning Methodology





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## Municipal energy efficiency programs before 2004





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Local actions

## Energy Planning became mandatory activity by law (2004)

Training on energy planning is a critical need for municipalities

Coordinated activities with the Energy Efficiency Agency





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## Municipal Information system

A special software was developed and disseminated among the municipalities of EcoEnergy

ENERGY CONSUMPTION INFORMATION SYSTEM IN THE MUNICIPAL ENERGY EFFICIENCY NETWORK MEMBER-MUNICIPALITIES

Select municipality  
GABROVO

Община енергия за енергийна ефективност

ЕКО ЕНЕРГИЯ

ЕкоЕнергия

- Data input
- Expenses data input
- Budgetary expenditure
- Degree-day
- Standard reports
- Custom reports
- Graphics
- Service functions
- Exit

Graphics

Scope of the report

Select municipality  
GABROVO

From quarter and year  
1 1999

Till quarter and year  
4 1999

Target group  
All

Report

- On screen
- On printer

Exit

Reference notes for municipality

- By fuel types and sectors (in TOE and leva)
- By sectors and years (up to 3 years)
- By sites within target group (up to 3 years) specific costs
- By sites within target group (up to 3 years) aggregate costs in MWh
- Energy consumption by years
- Energy and budgetary expenditure
- Relative part of energy costs
- Specific costs in target group
- Specific costs in target group for selected sites
- Aggregate costs by target groups
- Costs proportion by target groups (in MWh and leva)

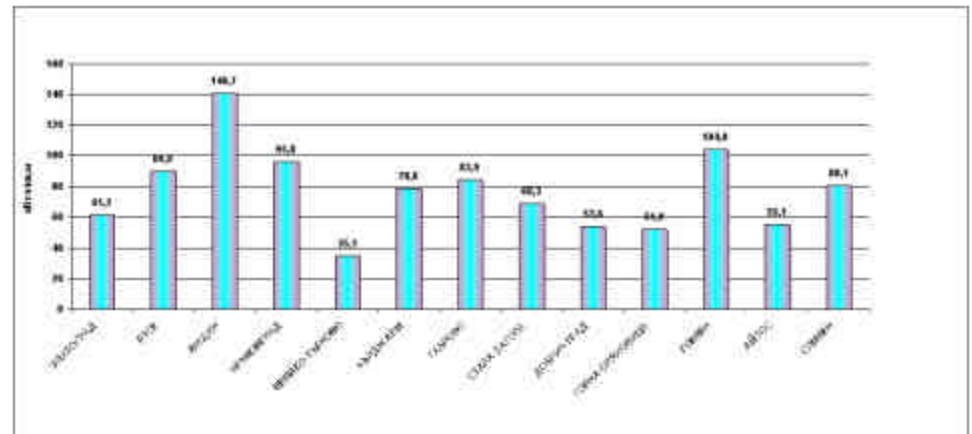
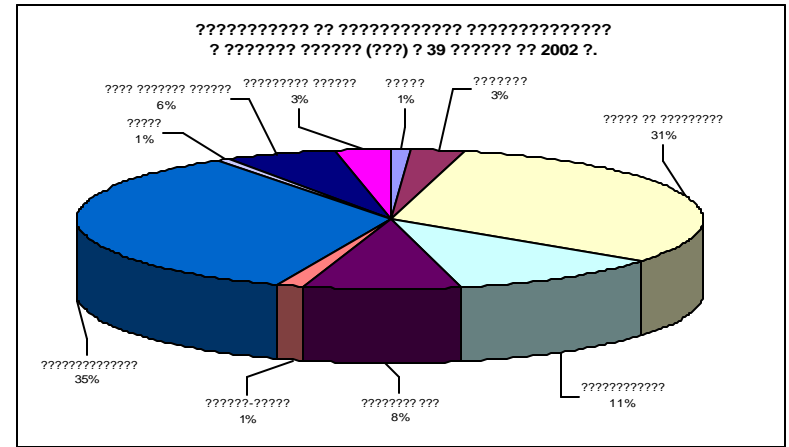


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Local actions

## Municipal energy database

Comprehensive energy database developed and maintained for more than 40 municipalities of EcoEnergy







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# International dissemination of the Information system







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## **B. Introducing financing instruments**

Energy Efficiency Funds

TPF / ESCO financing

Leasing for energy efficiency improvements

Municipal bonds issuance

Guarantee instruments for energy efficiency  
loans

Equity financing for large projects

Standard bank loans

Granted financing



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Local actions

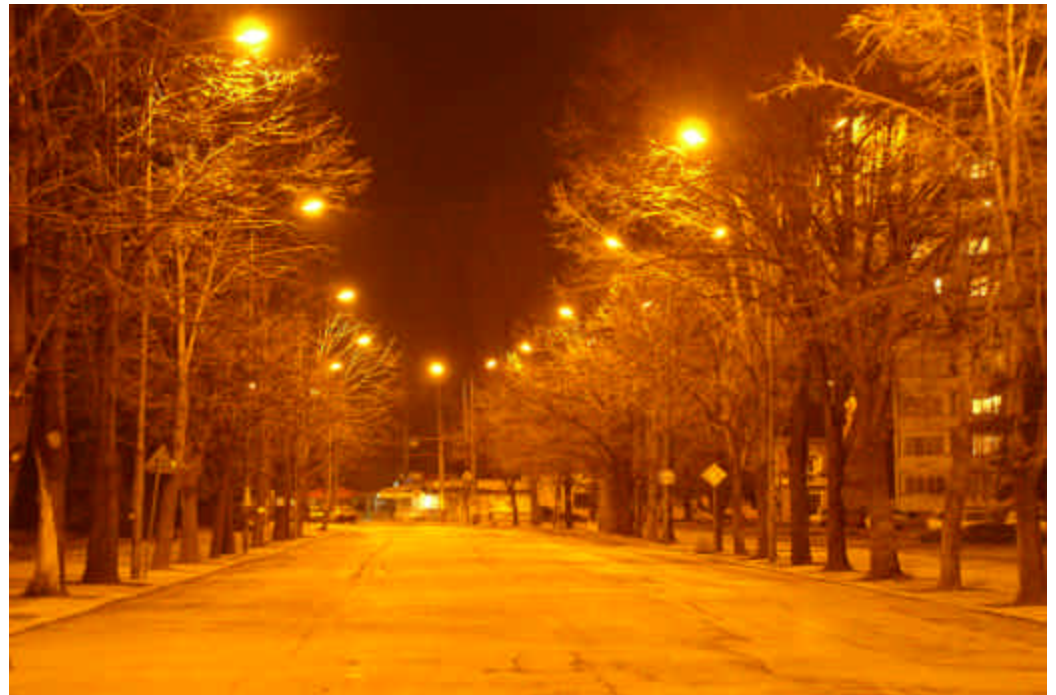
**Example:**

## **Bonds for street lighting energy efficiency project in Varna**

Bonds

documentation  
prepared with  
the assistance  
of the network

Enormous success  
of the project





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Local actions

## C. Activate investment practices

District heating projects

Projects in municipal buildings:

- Hospitals
- Schools and kindergartens
- Office buildings

Street lighting projects

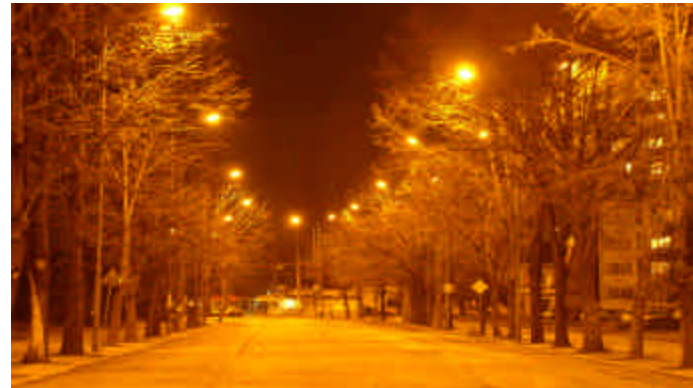
Renewable energy sources



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## Real projects for EE improvement

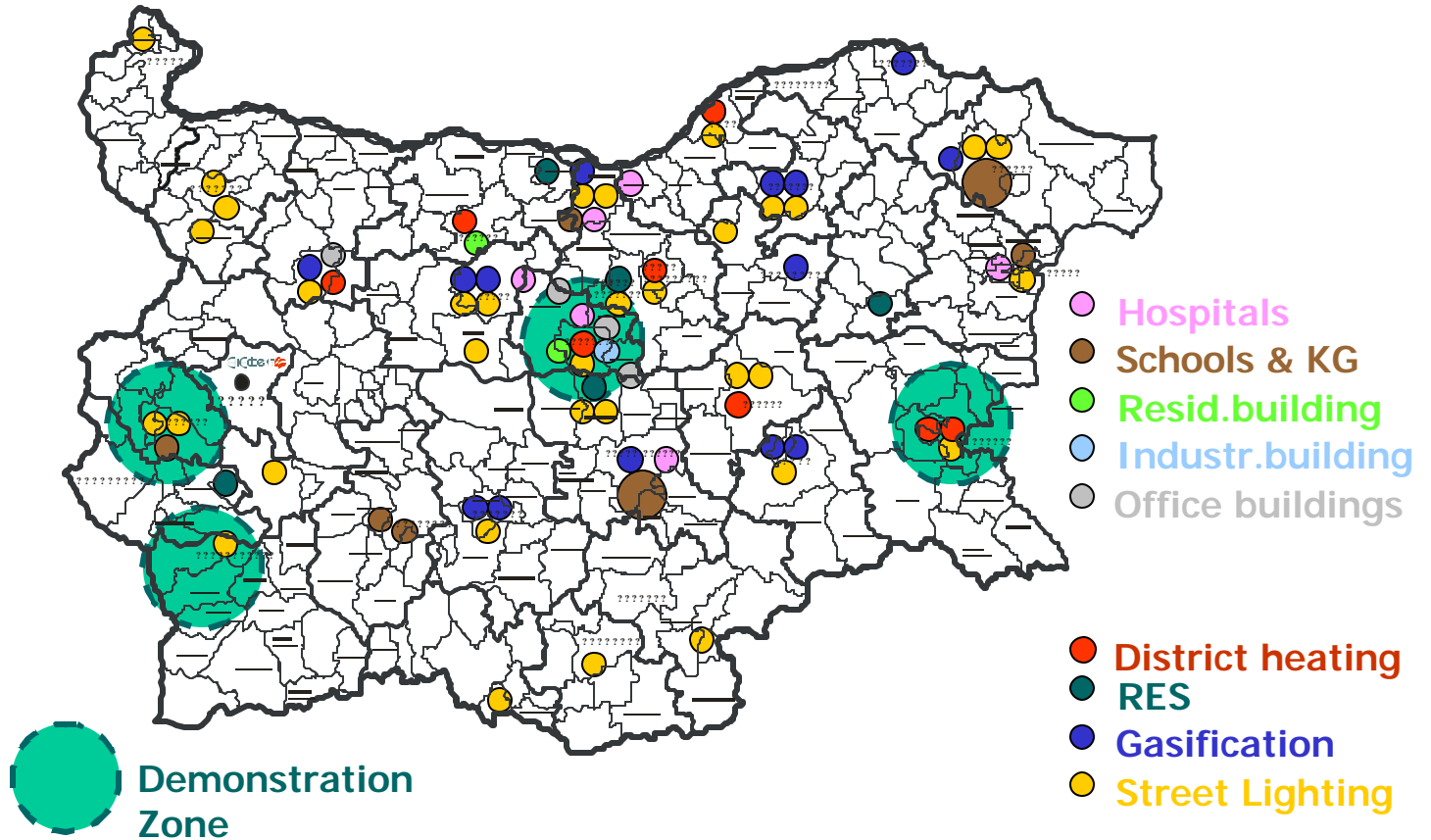




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# Municipal Energy Efficiency Projects





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## Attractive payback of municipal projects

Type of project	SPB (years)
Street lighting projects	1.4 – 2.9
Schools	1.1 – 2.1
Hospitals	2.2 – 3.6
District heating	3.7 – 4.1





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Local actions

## D. Building local capacity

40 municipal energy  
efficiency offices  
established





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25 local trainers trained and certified. Hundreds of municipal specialists trained

Awareness of policy makers raised







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## Projects' sustainability



- Partnership and co-operation with end users
- Feedback from end users
- Training and work with children
- Competition for child drawing: "Energy and environment"





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**For more than 8 years the focus of energy efficiency issues is constantly changing**

From pressure to mayors towards pressure from mayors

From request for money to request for knowledge and skills

From demonstrations to investments

From grants to bank loans and innovative commercial financing



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# SOME LESSONS FROM THE EXPERIENCES OF THE BULGARIAN MUNICIPALITIES

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## Lesson 1:

**The municipalities could achieve a lot on the base of bottom-up initiatives without waiting for the legislative reform**



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## Lesson 2:

**The municipalities should take initiatives to accelerate the implementation of EU directives at the local level**

## Lesson 3:

**The municipalities need special energy efficiency departments (offices) to organize, manage and monitor the implementation of local (municipal) energy programmes, projects and actions**



Under the auspices of UNECE EE 21



**RENEUER**

**REgional  
Network for  
Efficient  
Use of  
Energy and Water  
Resources**



Under the auspices of UNECE EE 21

## Strategic Goals

Contribute to build cooperative environment in SE Europe

Contribute to encourage investments and partnership for efficient use of energy and water in the region

Contribute to the accelerated accession of SEE countries to the European Communities



Under the auspices of UNECE EE 21

## Why do we need RENEUER?

Significant potential for improvement of energy / water efficiency exists in SEE countries

Foreign investments are urgently needed for the utilization of this potential

A series of obstacles for the utilization of this potential still exist in SE Europe

Instruments for assisting regional cooperation in removing these obstacles are needed



Under the auspices of UNECE EE 21

## The main RENEUER activities

1. Building of local capacity in the region
2. Support to energy policy reforms
3. Enrich financing practices
4. Promotion of energy efficiency businesses on the local level
5. Dissemination of information to awareness raising





Under the auspices of UNECE EE 21





Under the auspices of UNECE EE 21







## The activities of the Networks are made public by:

- Newsletter
- E-bulletin
- Internet sites
- Annual conferences
- Workshops
- Films
- Different publications
- Broadcastings
- TV Programs

[www.ecoenergy-bg.net](http://www.ecoenergy-bg.net)

[www.reneuer.com](http://www.reneuer.com)

[www.eneffect.bg](http://www.eneffect.bg)

[www.eepartner.net](http://www.eepartner.net)



## Possible positive connection with PETUS and opportunities for mutual support

- Links between websites
- Presentation of PETUS on the Network's events
- Dissemination and practical application of the evaluation tools for urban sustainability



**Thanks for your  
attention**