## **GENERAL INFORMATION**

PETUS description of tool in use		
Name of the case	Municipal Energy Efficiency Programme	
Name of the tool	Ranking Criteria for Priority Assessment (RCPA)	
Country	Bulgaria	
<b>City / region</b> Total area (km2) Population Density (people/km2)	Gabrovo 555.6 km2 74 357 inhabitants (census 2002) 134 inhabitants/km2	
<ul> <li>Tool user's profile</li> <li>a. Organisation name (municipality, NGO, national or regional department, company, etc.)</li> <li>b. Field of activity</li> <li>c. Detailed contact/feedback (project website, e-mail, address, tel., fax)</li> </ul>	<ul> <li>a. Centre for Energy Efficiency, EnEffect, NGO</li> <li>b. Supporting local authorities for energy efficient use (elaboration of municipal energy efficiency programmes)</li> <li>c. EnEffect, Centre for Energy Efficiency 1164 Sofia; 1, Christo Smirnenski Blvd., Floor 3 Phone: (+359 2) 963 17 14; 963 07 23; 963 21 69 Fax: (+359 2) 963 25 74 Web site: http://www.eneffect.bg</li> <li>E-mail: eneffect@mail.orbitel.bg</li> </ul>	
Reviewer, date	Aneta Markova	

## Short description of the case

The case presents an integrated evaluation approach applied to the elaboration and implementation of Municipal Energy Efficiency Programmes in Bulgaria. All stages of the process, from the initial gathering of information to the implementation of particular projects are concerned. The methodology is developed as an initiative of EnEffect and the Municipality of Gabrovo in order to overcome estimated general shortcomings at the municipal level: (i) estimated low energy efficiency; (ii) bad technical conditions of the sector infrastructure; (iii) insufficiency of experts.

The overall development of the project provides two important points of reference:

- International cooperation and outside financial support they were crucial at the starting point of the project; Bulgarian potential at both national and municipal level developed in the meantime; Bulgarian experience was later on disseminated to other countries from Centre and Eastern Europe (CEE) region.
- The project was successful in creating a basis of its own it developed the human potential, the institutional capacity and the instruments needed (including evaluation tools and database); missing data on energy consumption at the municipal level was continuously filled-in during a period of 10 years.

The Programme provides for a good combination of long-term goals and visible short-term effects. Its implementation supposes actions with clear results that were integrally estimated. The effects of the programme implementation were: 3.6 times less municipal consumption of energy in the city of Gabrovo, considerable reduction of GHG emission and the same time better quality of life for the whole community. The effective implementation of the project and the dissemination of the experience throughout the country led to the establishment of a nation-wide municipal EcoEnergy network and stimulated legislation changes at the national level.

This case study is related to 'the security of energy supply' (PETUS key-issues in energy sector)

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Sector	Waste	Energy	V	Vater	Transp	ort	Green/blu	e Building & Land Use
		Х						
Scale of project	Component	t Buildin	g	Neighbo	ourhood		City	Region
							Х	
Status of project	Starting up	Ongoin	g	Finis	hed	S	tart date	End date (exp
				)	K	Μ	ay 1998	2003
Key words								
energy consumption, energy efficiency, co-operation, legislation changes								
Project								

<b>a.</b> Object (building, city park, wind farm, etc.)	<b>a.</b> Municipal Energy Efficiency Programme (for municipal energy sector)
<ul> <li>b. Type of activity (regeneration, renovation, new development, etc.)</li> </ul>	<b>b.</b> Renovation of the city energy infrastructure
<b>c.</b> Type of product (plan, scheme, design project, etc.)	<b>c.</b> Municipal programme.
Tool	
a. Character (according to WP3final0704.doc)	a. assessment method
<b>b.</b> Benchmarks (qualitative or quantitative)	<b>b.</b> qualitative and quantitative
c. Availability (paid/ free)	c. paid - 135 EU (free for members of <i>EcoEnergy</i> municipal network)
Decision-making process	
<b>a.</b> Stage of the tool implementation (preliminary, midterm, etc.)	a. all stages of the decision-making process
<b>b.</b> Level (political, technical, etc.)	<b>b.</b> political and technical level
c. Public participation	c. yes (public involvement in all the stages of the decision-making process)

DETAILED INFORMATION		
	A. Detailed description of project and tool	
<b>1. Description of context</b> (existing strategies, laws, policy, action plans, etc.): EU, national, regional, municipal	Bulgaria has confronted a series of major challenges in the energy sector, stemming from complex circumstances during the years of social and economic transition since 1990s. The country imports more than 70% of its primary energy sources. It is mainly reliant on energy sources from Russia: oil, natural gas, high-quality coal and nuclear fuel. This causes concern about the security of energy supply (for comparison: EU whose dependence on imports is about 40%, but with a trend towards increasing this share up to 70% in the coming 20 years, is making strenuous efforts in two key areas - reduction in specific energy intensity per GDP unit in economy and utilisation of local renewable energy sources).	
	The rational use of energy sources is a national key strategic objective. Considerable scientific and technical potential has been mobilised for the attainment of this objective even back in the times of planned economy. Yet, the absence of market mechanisms has not made it possible to achieve substantial results.	
	The required <b>revision of the national energy policy</b> after 1990 was formulated in a number of official documents adopted at the national level:	
	National Energy Strategy – aimed at applying a proactive approach and expected to provide for higher efficiency in all processes of energy supply (generation, transmission, distribution and consumption). Energy efficiency is regarded as related to cost reduction, improved competitiveness, security of energy supply and environmental protection.	
	National Action Plan for Energy Efficiency and Action Plan for Renewable Energy Sources – aimed at improving energy intensity indicators by means of proactive policy for efficient use of energy and energy sources.	
	The political changes in the country have resulted in decentralisation of all the governance processes and in a <b>stronger focus on the local level in energy management.</b>	
<ul><li>2. Description of project</li><li>a. Background (What caused the initiation of the</li></ul>	<b>a.</b> The problem faced by all Bulgarian municipalities in 1990s is how to diminish expenses for energy consumption and increase the energy efficiency of the city infrastructure under complicated social and economic	

## **DETAILED INFORMATION**

project?; What was the problem? Who initiated the project?);	conditions (economic restructuring resulting in high unemployment rate, generally very low income of large social groups and a very modest municipal budget).
	<b>EnEffect</b> is a non-profit NGO, founded in 1992, with the aim of supporting the efforts of Bulgarian national and local authorities for the attainment of sustainable development through more efficient energy use.
	<b>EcoEnergy</b> is a Municipal Energy Efficiency network of Bulgarian municipalities, established in February 1997 by the initiative of 23 municipalities (EnEffect acts as the Network secretariat). By the end of 2003 the Network included municipalities with 68% of total Bulgarian population.
<ul> <li>b. Objectives/aims         <ul> <li>(sustainability statement –</li> <li>what issues of</li> <li>sustainability were</li> <li>attacked);</li> </ul> </li> </ul>	<b>b</b> , <b>c</b> & <b>d</b> . The project started after a successful application for a <b>Global</b> <b>Environmental Facility (GEF) grant</b> of US\$ 2.5 million to a project entitled <i>Energy Efficiency Strategy to Mitigate GHG Emissions Energy Efficiency</i> <i>Demonstration Zone in the city of Gabrovo.</i>
attacked); c. Time interval and stages of project realisation; d. Financing – amount, sources, institutions involved, partnerships, levels.	<ul> <li>The Energy Efficiency Demonstration Zone in the city of Gabrovo was conceived and developed by the Centre for Energy Efficiency EnEffect in active collaboration with the Ministry of Environment and Water, the United Nations Development Programme (UNDP), the US Agency for International Development (USAID), the Municipality of Gabrovo. A large number of local and international institutions and experts were also involved. The project started in May 1998 and continued till the end of 2003. It comprised two major components (<i>Fig. 1</i>):</li> <li><i>i)</i> Capacity Building – focused on formulating the municipal energy efficiency policy, organising specialised training on energy efficiency, and overcoming of existing financial barriers to energy efficiency.</li> <li><i>ii)</i> Demonstration Projects - focused on energy efficiency improvement of the city street lighting facilities, energy efficient renovation of the district heating system and heating end-use, retrofit of buildings (a hospital, a school, a block of flats and an industrial building) in order to increase their energy efficiency.</li> </ul>
	ENERGY EFFICIENCY STRATEGY TO MITIGATE GHG EMISSION
	+ + +
	CAPACITY BUILDING DEMONSTRATION PROJECTS
	MUNICIPAL ENERGY MUNICIPAL ENERGY MUNICIPAL ENERGY EFFICIENCY POLI
	NE     <
	Fig. 1 Project structure

The methodology for developing *Municipal Energy Efficiency Programmes* (*MEEP*) aims at integral energy planning to balance specific environmental, social and economic requirements in each municipality. Four types of roles of the Municipalities with regard to energy planning and management are regarded: energy consumers; heat and electricity producers; regulators and investors in the local energy sector; sources of motivation for raising demand- and supply-side energy efficiency and protection of the environment.

The implementation of the Programme covers a broad set of activities:

• Defining the baseline conditions in the municipality – technical, financial,

<ul> <li>regulation, etc.;</li> <li>Analysing, evaluating and defining priority areas and <i>target groups</i> (consumers with similar energy use) – prevailing technical and economic criteria;</li> <li>Estimating possible measures – technical, organisational, behavioural,</li> </ul>
etc.;
<ul> <li>Implementation of the Programme;</li> </ul>
<ul> <li>Monitoring and evaluation of results - concerning savings, changes in expenditures for energy, consumption by types of fuel/energy carriers and by municipal sectors, environmental impact, etc.</li> </ul>
The programme also includes assessment of the opportunities for increasing motivation of the actors involved. Three main elements are focused upon: (i) analysis of involved actors' feedback; (ii) identification of key institutions and persons; (iii) analysis of the target groups' potential to make independent decisions.
The approaches applied to formulate the <b>objectives</b> of MEEP are clustered into two major groups – <i>policy</i> and <i>expert ones</i> . More often the formulated preliminary policy objectives are combined with immediate actions defined by experts - <i>combined approach</i> .
MEEP has been developed during the whole implementation period of the Demonstration Project in Gabrovo. The practical experience gained provided for greater flexibility of both the assessment tool and the Programme by using <i>the 'learning by doing' approach</i> .
e. The building and the transport (trolleybus) sectors were involved in the development of the Programme for being significant municipal energy consumers.
The city problems with the central heating system were rooted in outdated facilities resulting in considerable energy losses both along the heating network and in the buildings. While about 90% of the flats with central heating were privately owned, the high unemployment rate and low incomes stopped owners from undertaking needed insulation and repair actions.
The measures for increasing energy efficiency of the outdated public transport (trolleybus) infrastructure of the city were hampered by the restricted municipal budget.
No significant conflicts were reported, yet wider collaboration with other sectors was considered difficult at the beginning. Further involvement of other sectors (water supply) is currently discussed.
Ranking Criteria for Priority Assessment (RCPA) tool is applied for the purposes of:
(i) Analysis, evaluation and definition of priority areas and target groups of MEEP - ranking the target groups by: potential for producing energy, potential for consuming energy, technical state and exploitation conditions; integral ranking according to technical-economic potential for energy efficiency. The assessment is based on "key number" software, elaborated by ENSI (Energy Saving International AS - consulting company, Norway) and adopted for Bulgarian particular climate conditions.
(ii) Estimation of alternative measures – rating the target groups according to "weight coefficient" by: energy consumption, municipality's influence, motivation and commitment for participation in the Programme. The complex intervention into a limited number of selected sites is based on a combination of different measures, which provides for a maximum utilisation of the energy saving potential. The selection of sets of the most cost-effective measures ("cream skimming" method) usually leads to rapid and greatest energy savings. This is very appropriate in the cases when municipalities are faced with grave financial difficulties for a short period of time. The combination of measures, which are cost-effective, with more expensive ones, however urgently needed measures, usually results in an acceptable average general level of effectiveness and ensures the long- term effect of the programme.

<ul> <li>Two main approaches are applied by RCPA (i) Expert approach – available databases a experts preferred) on current situation are (ii) System approach – multilevel and multic information.</li> <li>Through the <b>expert approach</b> the selection impact, the assessment of the baseline stat for impact are carried out. The reliability of the reliability of the available information, the quant and the techniques applied. Sometimes the considerably influence the political will of m expert approach is considered particularly a municipalities where local expert evaluation processes while keeping high sensitivity to The assessment and decisions based on the complex analyses of a considerable amount approach is more reliable, however more tin connected with a more substantial preliminate experts, who apply it, have specific capacity implementation of the system approach Mu information based on: national and regional expenditure for energy consumption.</li> </ul>	and expert assessment (local ind possible actions to undertake; riteria analysis of compiled in of the sites of the programme tus and the selection of measures this approach depends on the ualification of the involved experts expert assessments may unicipal decision-makers. The appropriate for small in could cover all aspects of the the case peculiarities. The <b>system approach</b> suppose t of objective information. This me- and effort-consuming. It is ary work and presumes that y and qualification. For the nicipalities need a lot of
<ul> <li>The assessment of the baseline information energy systems in the municipality and aborn human and financial capacity of the municipality and aborn of the municipality and the final terms of:</li> <li>(i) targets groups (based on Dutch mether Environment NOVEM),</li> <li>(ii) single objects (based on American municipality and the provided the final terms of the municipality o</li></ul>	ut the regulation, institutional, bality to implement MEEP is nodology – Agency on ethodology with support of John onservation Water and Power Country of San Francisco, and single objects. tation in the city of Gabrovo <i>sipal Energy Efficiency</i> components <i>(Fig. 2)</i> : nulation, etc. information;
Analysis and Evaluation Analysis and Evaluation Data base Data base Production Exploration of Exploration state Integrated Documentation Documentat	Standards Institutions Standards Standards Standards Standards Finances Finances

	Fig. 2 Energy efficiency information system
a. Character (according to WP3final0704.doc) - calculation tools, process tools, assessment methods, generic tools, simulation tools, guidelines, framework tools, schemes, indicators and monitoring, checklists, case-specific tools;	<ul> <li>a. The tool applied is an assessment method for prioritising activities towards energy efficiency.</li> <li>A Municipal Energy Planning Manual (MEPM) for local experts including step-by-step guide for MEEP development and the methodology for applying the assessment tool is published by EcoEnergy.</li> </ul>
<ul> <li>Availability of the tool (web- based / paper, paid / free, etc.)</li> </ul>	<b>b.</b> The Municipal Energy Planning Manual (both paper-based and a digital version) for local experts' tool is freely available to members of <i>EcoEnergy</i> municipal network; it could be also purchased from EnEffect.
<b>c.</b> Based on existing tool or newly elaborated;	<b>c.</b> The tool used in this case study is a newly developed tool by EnEffect.
d. Other tools implemented to support the project development	<ul> <li>MEEIS compiles and systematises information about the building stock, which is either municipal property or has been put under the care of the municipality (street lighting infrastructure, schools, etc.). The database for the system is used in the elaboration of Municipal Energy Programs, in particular energy efficiency projects and in the process of energy consumption management in municipalities. It provides for determining the real energy saving potential in the municipalities and for identifying the opportunities for its efficient utilisation.</li> </ul>
	<ul> <li>Interviews and discussions with local authorities were undertaken to identify their attitude and opinion about the possibility for an effective programme implementation. The results were used to better adjust the programmes to the particular context.</li> </ul>
	B. Tool implementation
<ol> <li>Argumentation for choosing the tool</li> <li>What were the reasons for the implementation of the tool? (voluntary or requested by what local, national, etc regulation)</li> </ol>	<b>a.</b> The Municipal Council of Gabrovo took a political decision for developing the MEEP. The municipal technical experts took the decision for applying the RCPA tool in conformity with local characteristics and needs. The membership in EcoEnergy network and the EnEffect professional facilitated the adaptation of the tool.
b. Who took the initiative for choosing /elaboration the tool?	<ul> <li>b. EnEffect acts as the Network Secretariat, responsible for the management of the practical implementation of project activities. Project implementation is organised in accordance with UNDP (United Nation Development Programme) rules and procedures for the implementation of projects by NGOs.</li> <li>The methodology is developed as an initiative of EnEffect and the Municipality of Gabrovo in order to overcome estimated general shortcomings at the municipal level:</li> <li>(i) estimated low energy efficiency;</li> <li>(ii) bad technical conditions of the sector infrastructure;</li> <li>(iii) insufficiency of expertise in the field of energy efficiency.</li> </ul>
	EnEffect aims to apply the experience from this project in as many as possible Bulgarian municipalities.
<b>c.</b> What were the criteria for choosing the tool?	<b>c.</b> The tool was developed to meet the specific needs of the energy sector in Gabrovo by adapting the existing international expert knowledge and skills.
d. Was there knowledge of other tools and were they considered?	<b>d.</b> The methodology was based on two previously developed European methodologies – ENSI (Energy Saving International – Norway and France) and NOVEM Agency of Energy and Environment (The Netherlands). During the project implementation in Gabrovo, international experts audited the

2. Barriers for the tool	The main problems in the tool implementation were:
implementation	<ul> <li>low awareness on energy efficiency issues in the municipalities;</li> </ul>
What were the main	<ul> <li>general lack of continuity after political changes in local elections.</li> </ul>
problems in the tool	
implementation?	The barriers to using other tools were rooted in the specific conditions in
(Regulation, information	Bulgarian municipalities: lack of adequate experience and skills, regulatory
available, public	or financial constraints, and absence of mechanisms for rapid and easy exchange of information.
awareness, lack of clear	
SD definitions and	
benchmarks,	
communication etc.)	
C. Infl	uence of the tool on the decision-making process
1. Description of the decision-making	<b>a.</b> The implementation of MEEP follows a sequence of political decisions and technical steps:
process/ procedures	
a. Stages	Step 1 (technical level) - RCPA implemented
	<ul> <li>Building-up an information basis for energy planning (structure of energy efficiency information system, database contents, analysis and evaluation of technical information);</li> </ul>
	<ul> <li>Choice of approach and methodology for elaboration of the programme (possible approaches, method of priority target groups);</li> </ul>
	<ul> <li>Determination of the aims, scope, impact and participants.</li> </ul>
	Step 2 (political level)
	<i>First political decision</i> – formulating the aims of the Municipal Energy
	Efficiency Programme. Checking public opinion and attracting public
	support for the decision is the main part of the precise aims determination.
	Step 3 (technical level) - RCPA implemented
	<ul> <li>identification of the current state and the scenarios for the programme implementation;</li> </ul>
	<ul> <li>classification of target groups and objects according their technical- economic potential for increasing energy efficiency;</li> </ul>
	<ul> <li>assessment of the municipal potential to realise the programme;</li> </ul>
	<ul> <li>determination of the programme financial framework;</li> </ul>
	<ul> <li>choice of the priorities and elaboration of the programme</li> </ul>
	Step 4 (political level)
	Second political decision – approval for the Municipal Energy Efficiency
	Programme by the Municipal Council; the demonstration projects were accomplished in the meantime.
	Step 5 (technical level) - RCPA implemented
	Programme implementation (pilot projects, monitoring of the results)
	Step 6 (political level)
	<i>Third political decision</i> – assessment of the results after the end of the programme. The assessment is accomplished through a comparison of the results, the baseline conditions and the scenario. As a result of the assessment it would be possible to correct the aims and parameters of the programme.
<ul> <li>b. Levels (political, technical, etc.)</li> </ul>	<b>b.</b> The decision making process covers the political and the technical levels at different stages. ( <i>Fig. 3</i> )

Municipalities according to the inner requirements of <i>EcoEnergy</i> Network regulations. National technical universities, specialised consultancy companies		
<ul> <li>c. Sources of information used during the dmp:</li> <li>d. Who are the decision-makers?</li> <li>e. Who made the final decision for the programs.</li> <li>e. Who made the final decision?</li> <li>a. The tool is used at different stages of the project: development, implementation of the classion for the project implementation? Was it political or technical and collision for the project implementation?</li> <li>a. At what stage was the tool implemented? By whon?</li> </ul>		
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<ul> <li>c. Sources of information used during the dmp: used during the dmp: during the dmp: during the dmp: during the dmp: during the discission makers?</li> <li>e. Who made the final decision-making process</li> <li>e. Who made the final decision?</li> <li>f. Tool in decision-making process</li> <li>a. The tool is used at different stages of the project: development, implementation and evaluation of the results.</li> <li>a. The tool is used at different stages of the project: development, implemented? By whon?</li> </ul>		DEFINITION OF THE AIMS
<ul> <li>c. Sources of information used during the dmp;</li> <li>d. Who are the decisionmakers?</li> <li>e. Who made the final decision for the project implementation? Was it political or technical decision?</li> <li>2. Tool in decision-making process</li> <li>a. At what stage was the tool implemented? By whom?</li> <li>c. The Municipal Energy Efficiency Information System is used to collect technical and other data (<i>Fig. 2</i>) as a basis for the program development, implementation and for monitoring of the results.</li> <li>d. The municipal authorities (technical and political level) are the decisionmakers. New administrative structures - energy efficiency offices, are established at the Municipalities according to the inner requirements of <i>EcoEnergy</i> Network regulations. National technical universities, specialised consultancy companies and local NGOs are frequently mobilised in the design and implementation of the municipal energy programs.</li> <li>e. The final decision for the project implementation? Was it political or technical decision?</li> <li>a. At what stage was the tool implemented? By whom?</li> </ul>		DECISION ELABORATION OF MUNICIPAL ENERGY EFFICIENCY PROGRAMME SECOND POLITICAL DECISION IMPLEMENTATION OF MUNICIPAL ENERGY EFFICIENCY PROGRAMME THIRD POLITICAL
<ul> <li>c. Sources of information used during the dmp;</li> <li>d. Who are the decisionmakers?</li> <li>d. Who are the decisionmakers?</li> <li>e. Who made the final decision for the project implementation? Was it political or technical decision?</li> <li>2. Tool in decision-making process</li> <li>a. At what stage was the tool implemented? By whom?</li> <li>c. The Municipal Energy Efficiency Information System is used to collect technical and other data (<i>Fig. 2</i>) as a basis for the program development, implementation and for monitoring of the results.</li> <li>d. The municipal authorities (technical and political level) are the decisionmakers. New administrative structures - energy efficiency offices, are established at the Municipalities according to the inner requirements of <i>EcoEnergy</i> Network regulations. National technical universities, specialised consultancy companies and local NGOs are frequently mobilised in the design and implementation of the municipal energy programs.</li> <li>e. The final decision for the project implementation? Was it political or technical decision?</li> <li>a. The tool is used at different stages of the project: development, implementation and evaluation of the results.</li> <li>Project Development</li> <li>evaluation of existing conditions, choosing of priority areas and target</li> </ul>		
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processimplementation and evaluation of the results.a. At what stage was the tool implemented? By whom?Project Development• evaluation of existing conditions, choosing of priority areas and target	decision for the project implementation? Was it political or technical	
implemented? By whom? • evaluation of existing conditions, choosing of priority areas and target	•	
<ul> <li>objects, different targets group and target sectors; (ii) political, regulation social and environmental factors - assessment of the municipalities' potential for implementation of the Energy Efficiency Programme;</li> <li>comparison of the target groups is made according to "weight coefficien for: energy consumption, municipality's influence, willingness for participation in the programme;</li> <li>Identification of further activities – technical, regulation and organisation measures, stimuli, etc.</li> </ul>	<ul> <li>At what stage was the tool implemented? By whom?</li> </ul>	<ul> <li>Project Development</li> <li>evaluation of existing conditions, choosing of priority areas and target groups. Analyses are based on: (i) technical and economic criteria - assessment of the potential for increasing the energy efficiency in single objects, different targets group and target sectors; (ii) political, regulation, social and environmental factors - assessment of the municipalities' potential for implementation of the Energy Efficiency Programme;</li> <li>comparison of the target groups is made according to "weight coefficient" for: energy consumption, municipality's influence, willingness for participation in the programme;</li> <li>Identification of further activities – technical, regulation and organisational measures, stimuli, etc.</li> </ul>
outer consultants (private companies, NGOs, agencies, etc.), local community.  Monitoring and evaluation of the results:		community.

	<ul> <li>updating of the database</li> </ul>	2.	
	<ul> <li>assessment of the qualit</li> </ul>		
	<ul> <li>influence on other sectors (not fully assessed yet).</li> </ul>		
<b>b.</b> How did the tool output influence the process (added or skipped levels/stages in the existing decision-making process, etc.)?	<ul> <li>b. The evaluation results are available to the public, which makes the process transparent. Increased public awareness of energy efficiency issues after the implementation of the programme was not been specially measured but municipal authorities reported public readiness to join in activities aimed at energy efficiency to be rising.</li> </ul>		
<ul> <li>c. Quantitative goals or benchmarks defined? (If YES, which – and what were they compared to?)</li> </ul>	<ul> <li>c. Quantitative goals defined at the beginning of the project comprise economic and environmental indicators, based on the programme aims and national standards.</li> <li>More than 30 Bulgarian municipalities have already developed their Energy Efficiency Programs. Half of these have been approved by the Municipal Councils and are successfully implemented. The results of the implementation in different municipalities were later compared and that contributed to making the tool and the programme more flexible.</li> </ul>		
d. Was the tool used to support argumentations?		actions included in the programme provid ments in municipal energy sector.	le
<ul> <li>3. Transparency of decision-making process</li> <li>a. How was the information of the dmp disseminated?</li> <li>directly (decision makers</li> <li>public) or indirectly (decision makers - NGO, PR company, etc public); sources of dissemination used (mass media,</li> </ul>	<ul> <li>a. The information about the political decision concerning the Programme implementation was directly disseminated by the Municipality to the public. when its own capacity to accomplish communication strategy is estimated to be high enough. The collaboration with the specialised NGO EnEffect was considered particularly helpful for increasing public awareness on the issues of energy efficiency.</li> <li>The information sources chosen depend on the aims defined. The guidance for Municipality Energy Efficiency Programme (MEEP) implementation recommends an "aim – source" matrix. (<i>Fig. 4</i>)</li> </ul>		
internet, brochure, etc.)	Defined aim	Recommended information sources	
	Drawing attention	Mass media	
	Knowledge dissemination and problem understanding	Written information and personal contacts	
	Building-up motivation and willingness to participate	Public discussions and visible feedback for achieved results	
	Behaviour changes	Personal contacts	
<b>b.</b> How was the public involved?	<ul> <li><i>Fig. 4 "Aim – source" matrix</i></li> <li>b. It is established that the degree of public awareness and involvement</li> </ul>		
involved :	varies in different target groups. The chosen communication patterns and intensity depends of the commitment degree of each group concerning a particular energy problem.		
<b>c.</b> Was there a public discussion over the project and at what stage of the project development?	<b>c.</b> Public discussions accompanied the development and implementation of the projects in residential buildings.		
D. Expert a	ssessment/analysis/comm	ent of the tool effectiveness	
1. Assessment by tool	-	ts as a result of the tool implementation w	
<ul> <li>users</li> <li>a. Were there measurable improvements as a result</li> </ul>	<ul> <li>Reduction of Greenhous programme;</li> <li>Reduction of energy con</li> </ul>	e Gas emissions after implementation of t sumption;	the

not?	etc.)
	The effects of the programme and tool implementation are: 3.6 times less consumption of energy in the city; considerable reduction of GHG emissions; and at the same time - higher quality of life for the community.
b. Were there any spun-off's or unintended consequences?	<b>b.</b> The implementation of the programme and the established mechanisms for overcoming the different barriers were the reasons for change in the national regulations.
	The 'tailored' proactive approach developed by EnEffect could be considered effective in overcoming possible future unintended consequences.
<b>c.</b> General view on the tool? Lessons learned?	<b>c.</b> The described tool (RCPA) and its methodology of integrated energy planning in municipalities are consistent with the particular current conditions in Bulgaria. They could be successfully applied in other CEE countries from the region after being adapted to the local context and available information and taking into account specific decision making processes. The implementation of the Municipal Energy Efficiency Programme provides for a good combination of long-term goals and visible short-term effects. The implementation of the programme supposes actions with clear results that should be integrally considered.
d. Potentials for further use of the tool?	<b>d.</b> The tool has been successfully implemented in many municipalities in CEE countries (Albania, Bosnia and Herzegovina, Macedonia, Moldova, Romania, Croatia and Serbia). The integrated approach is appropriate for other infrastructural sectors.
e. Will the actors recommend it or use it in other cases - why / why not?	<ul> <li>e.</li> <li>The EcoEnergy Network maintains active international contacts. It has established good collaboration with the countries of Southeast Europe and with the European network Energie-cites (headquarters in Besancon, France);</li> <li>building on the experience of the network and with financial support from the US Agency for International Development, a Municipal Network for Energy Efficiency (MUNEE) is being implemented with the participation of almost all countries from Central and Eastern Europe and the former Soviet Union;</li> <li>A Regional Network for Efficient Use of Energy and Water Resources (RENEUER) has been set up in Southeast Europe.</li> <li>Actors' view on the tool:</li> <li>The Municipal administration of Gabrovo considers the tool comprehensive and providing for the transparency of the process, as it guarantees that MEEP could be easily implemented;</li> <li>Experts meet difficulties with database collection and multidisciplinary dialogue.</li> </ul>
2. Reviewer's assessment of the tool (usefulness, sustainability relevance, who are the actors excluded? etc.) Suggestions and needs for further development of the tool	<ul> <li>The RCPA tool:</li> <li>i) integrates environmental, social and economic considerations and helps to formulate priorities at the municipal level;</li> <li>ii) relies on clear quantitative indicators (already being measured at the urban level in Bulgaria) that are used to assess the existing situation and changes towards or away from sustainability;</li> <li>iii) promotes broad public participation, thus increasing community awareness about energy efficiency issues.</li> <li>The most important feature of MEEP is its proactive approach and the opportunity to build a shared vision on the actions needed. Possible schemes of private business involvement have been discussed to give:</li> <li>clarification of the municipalities' relations with private business;</li> <li>providing further support for public participation in the decision-making process;</li> <li>defining crossing points with other urban infrastructure sectors;</li> <li>urban aspects to be further discussed in more detail.</li> </ul>

E. Additional information on the case study available	
Websites	Non profit organisation - EnEffect
	http://www.eneffect.bg
	Municipal network - EcoEnergy
	http://www.ecoenergy-bg.net
	Energy Efficiency Agency
	http://seea.government.bg/
	Municipality of Gabrovo
	http://www.gabrovo.bg/
	Ministry of Energy and Energy Resources
	http://www.doe.bg/cgi-bin/i.pl?I=2
	ENSI – Energy Saving International AS
	http://www.ensi.no/
	Municipal Network for Energy Efficiency - MUNEE
	http://www.munee.org/
	Energie-Cités
	http://www.energie-cites.org/
	John Deakin
	http://www.johndeakin.com/index.php
References <i>concerning the</i> <i>case but also the key words</i> <i>or problem</i> (papers, articles, reports, laws, etc.)	National Energy Strategy
	Action Plan for Energy Efficiency and Action Plan for Renewable Energy Sources
	Municipal Energy Planning Manual for local experts, EnEffect
	Zdravko Genchev, Energy Efficiency Policy Instruments in Southeast
	European Countries, 2004
Other sources (Interviews, conferences, discussions, etc.)	Interviews
	Zdravko Genchev, Executive Director, EnEffect (October 2003)
	Valia Peeva, Project Manager, Eneffect, till November 2003 (September 2003)
	Kalinka Nakova, Expert, EnEffect (October 2003)
	Bogomil Belchev, Mayor, Municipality of Gabrovo(June 2004)
	<b>Tatiana Stoykova</b> , Architect in Chief, Municipality of Gabrovo (June 2004)
	Conferences
	Sixth Annual Conference of EcoEnergy, Sofia, 16 – 17 April 2004
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