



Energy Policy of Brasov, RO ABMEE, Romania

Summary

Energy Policy of Brasov City is the main task in the SAVE contract signed between the Brasov municipality and EC. The policy is the final result of an intense three year activity conducted by ABMEEs' staff which included data gathering, data analysis, previsions and strategy development.

Taking into account that Brasov City will experience a strong economic development in the following years, where energy consumption will play a crucial role, it is suitable to provide a mid-term policy for the local public administration until 2016 which, starting from the current situation, should sketch the possible modernisation and development scenarios for energy services.

The policy elaboration began with designing the long-term vision that defined the future development of the local community- the target of the energy planning process and the mission committed to in this respect by local public administration:

Vision: Changing Brasov City into a dwelling place with modern, efficient and profitable energy services of low environmental impact with focus of a sustainable development.

Mission: Supply of high quality energy services to the inhabitants of Brasov City under transparent and non-discriminating conditions.

End-user area

- New buildings
- Refurbishment of buildings
- Transport and mobility
- Financial instruments
- Industry
- Legal initiatives (regulations, directives, etc)
- Planning issues
- Sustainable communities
- User behaviour
- Education
- Other

Target Audience

- Citizens
- Households
- Property owners
- Schools and universities
- Decision makers
- Local and regional authorities
- Transport companies
- Utilities
- ESCOs
- Architects and engineers
- Financial institutions
- Other

Technical

- Energy efficiency
- Heating
- Cooling
- Appliances
- Lighting
- CHP
- District Heating
- Solar energy
- Biomass
- Wind
- Geothermal
- Hydro power
- Other

Context

The importance, role and purpose of the power sector are emphasised under the **Governance programme for 2005-2008** and under **Romania's energy policy in 2006-2009**, which stipules the strategic targets of the national energy policy.

The strategy is to improve the elaborating, coordinating and planning policy on a central administration level in a way that will increase the efficiency, responsibility and transparency of public institutions.

Objectives

The review and assessment of the performance of all energy impact activities within Brasov City pointed out some priority issues whose solution is required in the short run, and which are given in stages under the Action Plan attached to the Energy Policy of Brasov City and are emphasised in the Implementation Schedule drawn up for 2006-2008.



Process

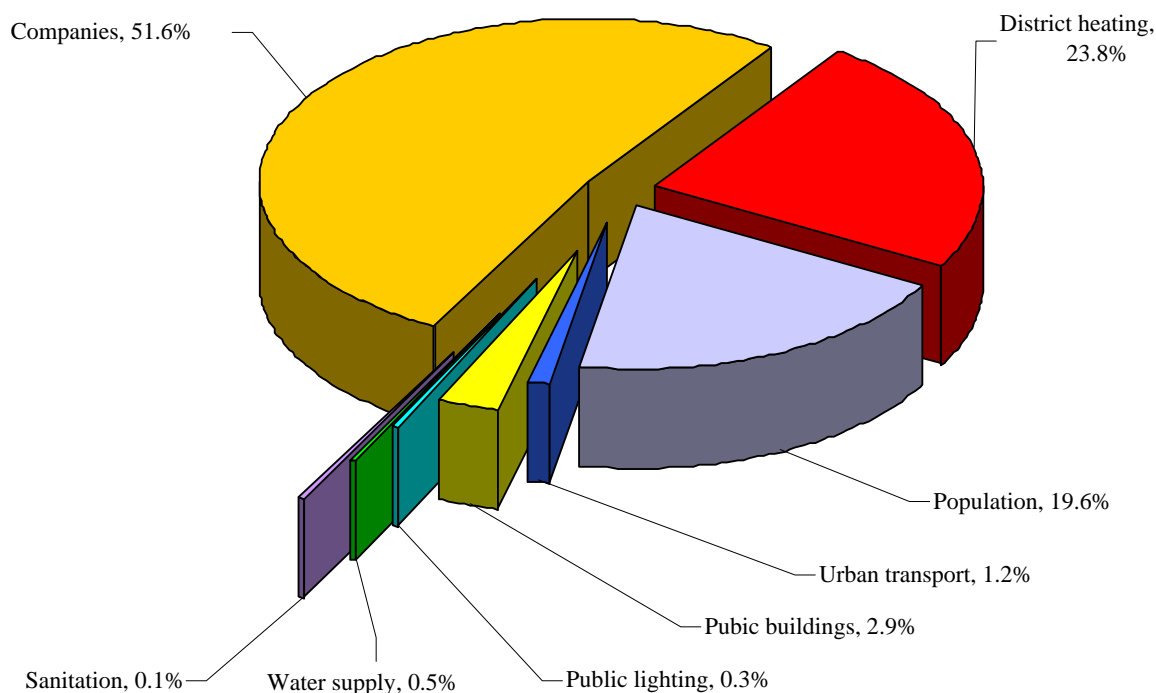
Methodology used in elaborating the Policy

SWOT analysis was used in order to identify the responsibilities that the local legislative authorities have to commit to when determining the energy development of the area. Its results led to devising the mid- and long-term vision of the City, from which the main long-term action lines have been taken out with a view to developing the city under energy security and environmental protection condition.

These statistical data show that the public building sector consumes 90% of the heat generated from centralised district heating and about 55% of the natural gas supplied to the City.

Such distribution shows that the most significant reduction can be obtained following the reorganisation and modernisation of the heat supply source in the city, together with the thermal rehabilitation of buildings and with measures that will reduce the disconnections.

The 2004 distribution of energy consumption values among the main categories of urban consumers (except for the industrial ones) is given in the following graph.



The energy consumption values recorded in 2003-2005 were used in elaborating "Premises of the energy consumption development by types of consumers".

Pollutant emissions within Brasov City

The statistics of emissions from the main public energy consumers in 2003-2005 obtained from calculations is provided in the table below.

[kg]	2003	2004	2005
SO ₂	12,404,834	11,121,408	11,762,114
NO _x	2,861,850	2,595,134	2,414,405
CO ₂	948,175,703	858,840,892	797,411,680
CO	298,721	286,224	292,387



The following table shows the development of annual emissions per capita obtained from calculations using the data received from the end-user.

[kg/year/inhabitant]	2003	2004	2005
SO ₂	43	39	41
NO _x	10	9	8
CO ₂	3,315	3,003	2,788
CO	1	1	1

The development of annual emissions obtained from calculations using the data received from the end-user against the city area is given in the table below.

[kg/year/km ²]	2003	2004	2005
SO ₂	46,404	41,603	44,000
NO _x	10,706	9,708	9,032
CO ₂	3,546,969	3,212,782	2,982,985
CO	1,117	1,071	1,094

The centralised heat supply (combustion of fossil fuels) in the city is a significant pollutant source. However the annual average concentrations of SO₂ registered into the metering points and compared to the admissible average level, did not exceed the medium value, although sometimes daily maximums are recorded higher than the annual average.

The calculation of pollutant emissions in 2003-2005 was used in the elaboration of "**Review on the development of emission levels**".

Priorities identified for Brasov City

a. Assessing the results and the resources required in order to implement the Action Plan

1. Municipality – initiator of local development regulations and projects

The local public administration has to set a positive example in the efficient management of energy; The directive 32/2006 of the EC recommends such authorities to carry out pilot projects in the field of energy efficiency and to encourage their own employees' and rest of the community to save energy. With a view to achieving the manifold outcome desired, recommendations are for such activities to be properly described to citizens and/or trading companies, with emphasis on the quality/cost ratio.

The specific objectives recommended in this respect are:

- Providing a safe energy supply;
- Increasing competitiveness;
- Reducing the environmental impact of economic activities;

The application of specific measures that will increase the energy efficiency will help local authorities to provide cost reductions, reduced dependency on energy suppliers, and reduced CO₂ emissions.

2. Municipality – energy generator and distributor

Activities that would reduce the energy consumption will involve the latest technologies. These are also bringing other benefits as well such as increase of output or of the value of properties. The implementation of activities in the field of energy efficiency will also be accompanied by a reduction of the bad environmental impact such as the local air, water and soil pollution.



3. Municipality – energy consumer

It is highly important to determine the city's demand of energy and fuels in the following 10 years as this will contribute to correcting and updating the strategic lines established under the Local Energy Strategy. The demographical, social and economic changes- and not least the technological ones- will determine important modifications in the current consumption pattern, hence the need to provide a permanent monitoring followed by a periodical reconsideration of the local power demand.

4. Municipality – motivating factor

The direct outcomes are obtained when a consistent dialogue has been established with the city inhabitants. When information and awareness & consultation campaigns have been improved, this will result in an increased number of activities related to energy efficiency.

The indirect outcomes will consist in the population's support to elaborate the Energy Policy of the city and in an easier adaptation to the requirements of its implementation.

b. Conclusions

The importance of this strategy consists of identifying possibilities and means of energy efficiency in the sectors under the authority of the local public administration and its recommending proper programmes for their implementation.

The complex reviews performed under this study have identified the activities to be taken into consideration by the public administration of Brasov City, substantiated under a two years' Action Plan that should be accompanied by their intense monitoring.

Financial resources and partners

Due to the lack of experience and novelty of this approach, ABMEE subcontracted an authorised institute to perform the analysis and create the Energy Policy. The staff of ABMEE worked closely together with the staff of SC TRAPEEC SA, the subcontracted institute. The value of the contract is 10.000 E.

Partners:

The Brasov City Hall and the specific public services

The utilities companies : SC Electrica "Transilvania Sud" SA (electricity), Distrigaz SA (gas), SC CET SA (district heating), Compania APA (water)

Results

The estimated results are:

1. The potential reduction of energy consumption is estimated to maximum 10% during implementation of new local regulations (an amount calculated against the annual average energy consumption of local public services and of residential consumers in the last 5 years).
2. The GHG emissions reduction is estimated to about 20%, expressed in kg/year/km².
3. The potential reduction of energy consumption during implementation of the priority measures in the Action Plan related to the Energy Policy of Brasov City is estimated to 20% (an amount calculated against the annual average energy consumption of local public services and of residential consumers in the last 5 years).
4. Improved information and awareness & consultation campaigns are estimated to result in an increased number of activities related to energy efficiency. This direct outcome is achieved through a consistent dialogue with the city inhabitants. The potential indirect outcomes will consist in the population's support to elaborate the Energy Policy of the city and in an easier adaptation to the requirements of its implementation.



Lessons learned and repeatability

The barriers encountered:

- the lack of understanding the importance of urgent action and synergy as the base for sustainable development
- the lack of data in any format or the access to the available data

After being submitted for analysis by the City Council the Energy Strategy must be implemented. The short-term costs are high, but action must be taken in order to support the sustainable development by promoting rational use of energy and environmental protection in the city of Brasov.

Contact for more information:

Organisation / Agency: Agency of Brasov for the Management of energy and Environment - ABMEE

Main contact: Mrs. Camellia RAȚĂ

Address: nr.8, Eroilor Bdlv, room 12, 500007 Braşov, Romania

Tel: +40268 474 209

Fax: +40268 474 209

E-mail: office@abmee.ro

Web Site: www.abmee.ro

A printed version is available upon request (250 pages)