

Local Community - key and supportive actor with respect to energy savings and environment protection in households

Central and Eastern European countries as democratic EU states have invested local authorities with a number of new tasks and responsibilities, those including energy, are important themes for local authorities, still have not fully organized structures.

In this context, our country has adopted several laws and regulations which establish, that most of the responsibility for proper conduct of human activities in given area, including the energy supply and consumption, is local authority. Similarly, with continuous increasing environmental demands, as exemplified by the developed countries, local authorities have taken measures to increase energy efficiency as one of the main ways of reducing environmental pollution. On the other hand the development of market economy has ordered the implementation of measures to reduce energy costs and simultaneously to provide funds in order to conduct energy efficiency solutions at local level.

Municipal energy management, is required because at this level there are concentrated technological processes and energy use and because energy costs secured a major share of local budget with increasingly pressures, as the introduction of market economy requires the inclusion in energy tariffs, the real cost rates for energy production, transmission and distribution without subsidies or other forms of state intervention.

One of the main objectives of the municipal energy management is the increasing energy efficiently throughout the whole chain from production to local consumption of energy.

This objective has several implications on multiple levels:

- *Financial* - clearly saving energy means saving money. The effect is especially beneficial since a large part of measures to increase energy efficiency investments do not pretend high investment costs and usually result in short pay back periods. A good example is the monitoring of consumption that enables early detection and location of damage and so, repairs can be made before the negative effects take place in the financial plan.
- *Comfort* - energy efficiency measures have favorable effects with respect to ambient conditions.
- *Management of energy* – influences domestic and individual environment through measures aimed at purchase and use of electrical equipment with high energy performance and also save energy for heating (correct and individual setting room's temperature, reducing cold air infiltration through exterior openings , reducing heat loss through exterior walls, terraces and floors due to insufficient thermal



insulation) and a better selection of lighting equipment using economic products.

- *Health* - energy efficiency has a positive impact on living standards of the population. Many times setting proper the interior room's temperature may lead to a reduction of the difference between inside and outside air, so less thermal shock. A major effect is achieved by reducing exhaust emissions and also the use of lighting systems with low energy consumption.
- *Sustainability* - the technological processes of energy production and consumption take effects acting both at local level but also they influence the living conditions of future generations. It is therefore of general interest to secure the monitoring of water, air and soil pollution and to adopt sustainable development strategies.
- *The responsibilities of local authorities* – these are already bound by international agreements to the Conference on Climate Change. These responsibilities incumbent on them just because they are closer to the population and it is easier to deal with the parties directly involved, planning needs and problems of energy efficiency. So local authorities are able to influence the behaviour and attitude of the organizations or of the individuals, in terms of energy efficiency. Thus local authorities are indispensable partners in solving the problems of final energy use by developing an institutional and regulatory framework to boost energy efficiency.

It is now widely agreed that energy efficiency measures with significant effects are located less at energy generation level and in order to gain significant results these have to be met more often in technologies for consumption.

The energy policy of local authorities must have an efficient communication system to ensure direct and continuous contact between both horizontally and vertically, between municipal departments and from the public to policy makers. Communication is to influence people's behavior and can focus on information, education and increased motivation for improving energy efficiency activities. Communication system will provide three major objectives:

- Information through local media notify people about the possibilities and effects of increasing energy efficiency. Due to information, part of population change old attitudes and practices.
- Particular attention should be paid for feed back information in order to determine, through public meetings and consultations between the population and local authorities the degree of support for energy efficiency measures.



- Education is an important component in energy efficiency because the personnel involved and policy makers need to learn the range of technical, economic and financial possibilities for the implementation of energy saving projects.
- Dissemination and awareness campaigns - are tools with long-term results in terms of motivating staff, especially the people involved for activities in order to increase energy efficiency. There are actions during a period of time focused on a strong dissemination the energy savings, usually with visual impact which can be more easily retained by the population.

Local authorities know and apply most of the above and probably more. There is a segment, the least prepared from technical point of view, namely population, which can interfere with important ways to increase energy efficiency and saving the environment such as no cost or low cost measures.

Still presents a Romanian portal which provides information, referral and advice in order to make advantageous financial decisions when:

- Consumer want to purchase a household appliance, or
- Support the replacement of an existing equipment (which are obsolete worn and old, even working), in order to purchase one that provides the same services, or even more efficient.

It is obvious that such a decision is made only if the costs of the old equipment utilization until its lifetime end, as well as those related to the supplementary environmental impact resulting from the production of a new one are compensated by the savings from the electric energy costs through the lower consumption of the new appliances. In other words, the question is wheather the supplementary costs for the acquisition of a new household appliance are recovered through the reduction in the operation costs. (Electricity costs, costs with water).

topten.info.ro

The existing energy efficiency indicators (as mandatory performance standards regarding minimum energy consumption) eliminate from the market the improper products, promote gradual replacement and determine the consumers towards performant products. However the producers are not determined to improve their products in order to increase the efficiency and is difficult to convince the final consumers and big buyers to acquire the more expansive models but with maximum energy performance.

In order to mitigate the GHG emissions it is important to speed up the rate of innovation and market transformation in order to take advantage on the concept of the lowest „life cycle costs” at final consumers level.

The portal www.topten.info.ro portal aims to achieve this goal.

www.topten.info.ro is an independent and transparent tool which provides a selection of the best 10 products from different categories on the market (refrigerators, washing machines and cars for the beginning). The key criteria for ranking is energy efficiency. The information are available through a user-friendly interface which provides the following information:

- Ten ranked products as well as one representative inefficient product (for comparison);
- The selection criteria;
- User recommendation, purchase tips, other general information;
- Policy recommendations regarding levels for mandatory or voluntary standards, design of incentives schemes;
- Downloads and links to publications, standards, producers, importers and other organizations outside www.topten.info.ro.
- Updating the products list. The national portal www.topten.info.ro emphasizes the most efficient new products as soon as become available on Romanian market.

MISSION

The european portal www.topten.info is a consumer oriented online search tool which presents the best appliances in various categories of products. The key criteria are energy efficiency, impact on the environment, health and quality. As a communication tool it helps emphasize how the energy consumption causes climate change and what can be done personally to mitigate this impact. It has a strong influence for the producers and importers.

www.topten.info was launched in 2000 in Switzerland. Since then other 17 national Topten sites have been established thanks to the **Intelligent Energy Europe** projects: **Euro-TopTen** and **Euro-TopTen Plus**

The information posted on *Topten* (images, functions, prices, no complex calculation, for products available at national levels) targets the consumers and large buyers. www.topten.info serves as a portal to reach all sites of participating countries.

Till now, www.topten.info focused on technical issues in order to raise consumer awareness on potential energy savings. Due to its growth it can now consolidate its political impact by establishing the concept „Best of Europe”. This concept identifies:

- The most energy efficient products in Europe and stating countries where they are marketed.

- It makes explicit and transparent the status quo of efficient technologies on the European market and can thus serve as the European reference on energy efficiency to further negotiate with government and manufacturers.
- The dissemination activities help www.topten.info references to be used as a basis for environmental policy design, labelling strategies, dissemination programmes, minimal efficiency requirements and specifications for multinational buyers.

SERVICES OF www.topten.info

- www.topten.info is a portal providing access to many consumer-oriented online search tool which display the most efficient appliances, electronics and cars in many European countries. With a simple click the best available products in a country can be selected.

The website Topten emphasizes the most energy efficient products, including pictures and functional specifications in order to help consumers to find the information they need to choose among thousands of products (refrigerators, TVs, cars and other kinds of appliances). Now the portal www.topten.info gives access to 17 national websites Topten.

- The target is not mainly the consumer, also the energy policy makers, manufacturers and distributors for such products.
- The website presents also „The best products of Europe”: a selection of the most efficient household appliances, office equipment, energy saving lamps, circulation pumps and cars that are currently available. New categories will be added regularly and policy recommendation are also presented.

The information on www.topten.info targets mainly the big purchasers.

Topten is rigorous and transparent (the selection methodology is available online), independent from producers and commercial distributors and relies on neutral tests and analysis of independent institutions, labels and on standardized declarations by manufacturers.

The portal www.topten.info will integrate the information at European level and analyse them in order to establish recommendation regarding the policy for implementing the most energy efficient products.

Web-sites Topten will cover about 52% from the European countries, with respect to 75% of European consumers (UE-27) and is expected to attract 2,7 million visitors per year from which 50000 in Romania. The project will result in 270 GWh/year energy savings.

The participating countries are:

Austria, Belgium, Czechia, Finland, France, Germany, Greece, Italy, Lithuania, Luxemburg, Netherlands, Norway, Poland, Portugal, **Romania**, Spain, Switzerland

European Website: www.topten.info

Website Romania: www.topten.info.ro

PORTAL'S DESCRIPTION, WEBSITE PICTURES: www.topten.info.ro

The website www.topten.info.ro provides to the consumers, information regarding the most efficient products (from energetic point of view) available in Romania. So, the user has, online access to a useful and quick tool which allows him to choose the product that match very well with his options, high energy efficient and low life cycle costs.

Romania steps at a first stage in TOPTEN websites family with information regarding 2 categories of white goods: refrigerators and washing machines and cars. In the next future the data base will be developed adding other appliances and products (dish washing machines, lamps, office equipment, TV, AC, electric ovens, freezers, vacuum cleaners, cars).

The interface is friendly and easy to work with even by an inexperienced user.

The website provides detailed information regarding:

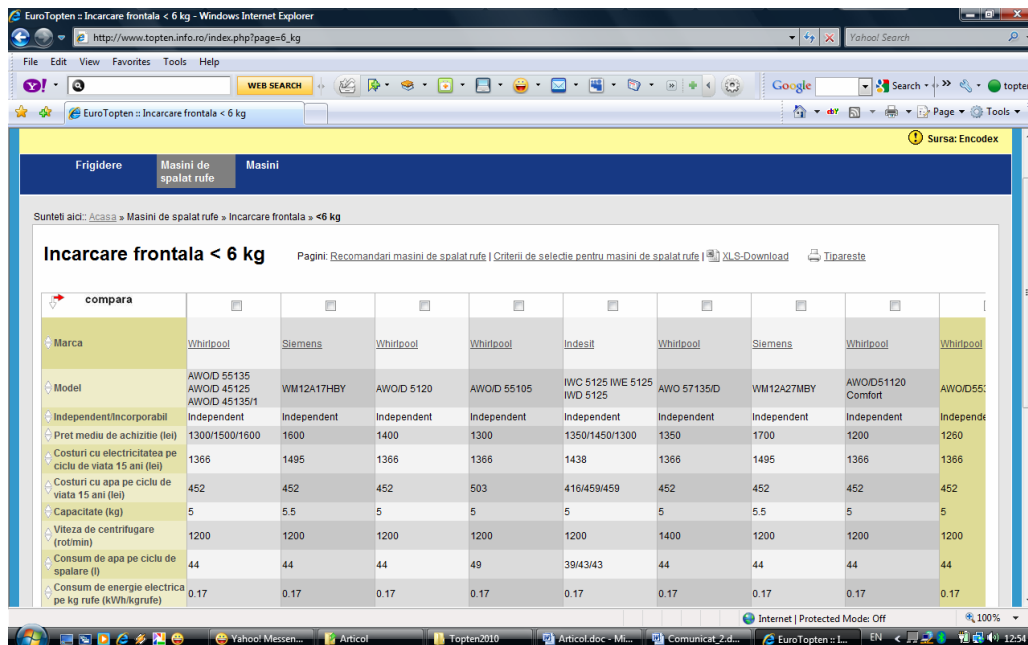
- Refrigerators:
 - refrigerators-freezers
 - ≤300 l freestanding and built-in
 - >300 l
 - refrigerators (with freezer) with two doors
 - ≤270 l
 - >270 l
 - refrigerators (with freezer) with one door
 - ≤150 l
 - >150 l
 - "Side by Side"
- Washing machines:
 - front loading - washing capacity ≤6kg
 - top loading
- Cars
 - mini
 - small cars
 - middle class
 - compacts
 - upper middle class
 - van 5 seats
 - van 6 or more seats

The software allows the selection of those products for which the user wants to receive information from the data base.

By selecting one category of products a window will display information regarding that product. For example, if the user selects from the main menu “**Washing machines/Front loading/□ 6 kg**”, the result will be:

There will be displayed the characteristics of the products from the selected category, that can be found in the data base: brand, model, price, life cycle costs with energy, with water, loading capacity, speed, water consumptions per washing cycle, energy consumption per kg laundry and per washing cycle, height, width, depth, energy class, washing class, water extracting class, picture etc.

The products are ranked in accordance with selection criteria. Initial, the products are displayed with respect to energy efficiency index, but the user may sort ascending or descending on any data presented, by a simple click on the arrow in the left.



The screenshot shows a web browser window displaying the EuroTopten website. The page is titled "Incarcare frontala < 6 kg" and shows a comparison table for front-loading washing machines. The table has columns for various specifications and a "compara" (compare) button. The specifications listed include:

- Marca (Brand)
- Model
- Independent/Incorporabil
- Pret mediu de achizitie (lei)
- Costuri cu electricitatea pe ciclu de viata 15 ani (lei)
- Costuri cu apa pe ciclu de viata 15 ani (lei)
- Capacitate (kg)
- Viteza de centrifugare (rot/min)
- Consum de apa pe ciclu de spalare (l)
- Consum de energie electrica pe kg rufe (kWh/kg rufe)

The table displays data for several models, including Whirlpool, Siemens, and Indesit. The "compara" button is highlighted, indicating the user can click it to compare the selected products.


The soft provides a comparison tool between two or more products from the same category. In order to use this option the user will check the corresponding boxes for the products he wishes to compare. By a click on “compare”, another window will be displayed with information regarding selected products. Printing options for the displayed information are available.

EuroTopten :: Frigider cu congelator cu doua usi - 270 l - Windows Internet Explorer

http://winervap/modules/ProductGroups/showDetail.php?plid=98pid[]=999pid[]=100

File Edit View Favorites Tools Help

Close Print



Marca	Whirlpool	Indesit
Model	ARC 2353 AL	TAAN 2
Independent/Incorporabil	Independent	Independent
Pret mediu de achizitie (lei)	1092	1040
Costuri cu electricitatea pe ciclu de viata 15 ani (lei)	1636	1832
Volum total net (litri)	212	251
Volum frigider net (litri)	171	195
Volum congelator net (litri)	41	56
Inaltime (cm)	143	150
Latime (cm)	55	60
Adancime (cm)	58	66
Temperatura de functionare (* C)	16-32	10-38
Indice de eficienta energetica (%)	40.36	41.39
Eticheta energetica	A+	A+
Consum de energie electrica (kWh/an)	211.7	237

Done Internet 100%

CONCLUSIONS

- www.topten.info.ro is an important tool for energy policy makers and for the other stakeholders on romanian market for electric equipment
- www.topten.info.ro enables the increase in offer of products of high energy efficiency
- www.topten.info.ro enables the increase in demand of products of high energy efficiency
- www.topten.info.ro enables the increase of market sector with products of high energy efficiency
- www.topten.info.ro enables the better efficient use of products of high energy efficiency
- Overall: energy consumption reducing and GHG emissions mitigation.
- By a simple click you'll find your „efficient decision”.

BIBLIOGRAPHY

1. ADEME, France – *EURO-TOPTEN EIE/05-021/S12.419612*, 2006-2008
2. ICI, ICEMENERG – *Project CREFEN*, 2008
3. ICEMENERG, OEN – *Data base*
4. Euro-Topten Content Management System