

## EL-EFF REGION

### WP 3: Stakeholder survey

prepared by:

Energy Centre České Budějovice

#### Background

Electricity consumption rises obviously in all sectors. Despite this fact the energy/electricity savings potential is not used sufficiently (energy intensity of the Czech Republic is twice higher than in the developed EU states). The causes could be often found in insufficient financial investments in the public awareness and application of modern, energy efficient technologies for system measuring and regulation.

In household sector the most influential regulation measure seems to be the price of electricity consumption. Because of steadily growing electricity prices efficient appliances are preferred when buying new ones. Also the energy labels are often used for finding the information about the energy efficiency of the appliance.

In industry the energy price includes the final price calculation of the products. Waste or uneconomical use of energy is consequently taken over by the customer. There is missing an obligatory legislative act, which could solve the necessity of electricity consumption reduction. Price motivation seems to be insufficient. No adequate attention is paid to the electricity consumption and to its reduction possibilities.

Electricity prices development has had a growing trend in recent years. This trend is obvious e.g. from the comparison of electricity prices for households:

Year 2006: 0,1048 Euro/kWh + fix charge 1,179 Euro/month + electric input charge = 2,001 Euro/month, 3x25 A

Year 2007: 0,1128 Euro/month + fix charge 1,358 Euro/month + electric input charge = 2,037 Euro/month, 3x25 A.

Similar tendency is observed also in the service and industry sector.

Steadily growing prices influence electricity consumption most of all in households. In spite of this fact the rising tendency prevails in our region. This is caused by demand on house appliances. Many new appliances have been bought in the household e.g. washing machines, fridges, internet connections, air condition etc. This is typical especially for 3 and more person households.

At the moment, there are three main electricity traders in the Czech Republic:

E.ON energie a.s

Pražská energetika a.s.

ČEZ Prodej s.r.o.

Each of these traders operates mainly in particular area (region) with particular distribution low voltage networks.

Liberalization of electricity market was carried out in several steps under the Act Nr. 458/2000 Coll. The electricity market was opened step by step (for consumers as well as for traders) in following phases under the law No. 458/2000 Coll.:

- 1) Since 1st January 2002 - for final customers, whose electricity consumption overtook 40 GWh in 2000 and for licensed electricity suppliers/traders with installed electric power over 10 MW.
- 2) Since 1st January 2003 - for final customers, whose electricity consumption overtook 9 GWh in 2001 and for licensed electricity suppliers/traders.
- 3) Since 1st January 2004 – for final customers whose electricity take-off place is equipped with process measuring instrument of electricity consumption except for households.
- 4) Since 1st January 2005 for all final customers except for households.
- 5) Since 1st January 2006 for all final customers.

Since 1st January 2006 the electricity market is completely opened for all customers including households.

The final electricity supplier is obliged to supply the electricity for households and other small customers for fix prices, which are approved by the ERO (Energy Regulatory Office). These prices are fixed every year. Differences in the electricity prices for households are not significant.

E.g. electricity price - charge D 25d, approved by the ERO for the period: 1.1.2008 - 31.12.2008

| Supplier                              |             | E.ON                            | PRE | ČEZ   |
|---------------------------------------|-------------|---------------------------------|-----|-------|
| Price in Euro per 1 MWh (with VAT)    | High tariff | 182,2                           | 173 | 182,5 |
|                                       | Low tariff  | 66,5                            | 68  | 63,8  |
| Circuit breaker                       |             | Month charge in Euro (with VAT) |     |       |
| Circuit breaker over 3x20 A to 3x25 A |             | 4,68                            | 5   | 5     |

There are rather unimportant differences in the electricity prices in the low tariff as well as in the high one between all suppliers. The electricity prices differences are partly compensated by the charge for circuit breaker electric input. You can choose the electricity supplier only once a year. Small consumers including households have a chance to choose the supplier with the best bid, however due to the unimportant price difference the costs will probably not change significantly.

## Methodology

Stakeholders included in the survey were selected from various organizations that deal with electricity efficiency, consumption and distribution and education. There are representatives of regional administration, schools, distribution companies, professional associations, NGOs and others. Complexed view on the ideas about electricity efficiency on the part of stakeholders is in this way guaranteed.

Stakeholders were approached by phone, explained the reason for survey, told about the EL-EFF regions project and then they were asked seven questions (see Annex 2).

## Analysis of the interviews

Most of surveyed stakeholders have positive attitude toward the electricity efficiency measures in their organization and they know well what there was implemented (except of three, where nothing was implemented).

Measures implemented by stakeholder organizations are:

- installation of LCD screens, of efficient lights, renovation of distribution frames, production of movie about electricity efficiency in buildings (High school of engineering)
- installation of efficient lights and appliances, regular measuring (environmental NGO)
- use of efficient lights, use of lights as little as possible, participation in updating of regional energy concept, consumption monitoring, they suggested to make tenders for the electricity suppliers to supply various buildings in regional ownership (schools, hospitals etc.), projects of change of circuit breakers (Regional energy agency)
- municipality buildings insulation application, gasification, use of efficient lights, LED Christmas tree (Olešník village)
- solar thermal system installation for water heating and space additive heating, use of PV system (Český Krumlov town)
- use of efficient appliances and lights, implementation of electricity efficient measures in schools, they obtained Green light certification (South Bohemian regional authority)
- tariff changes, they moved to new, more efficient building, consulting, distribution of efficient bulbs (electricity distribution company)
- installation of efficient lights, installation of CHP plant (they use the heat for water heating) and PV plant (1,2 kW), efficient equipment of school kitchen, educational activities (High school of electrotechnics)
- installation of efficient public lighting, use of LED, use of efficient lights in the municipality building (Municipality of České Budějovice)
- promotional, consulting activities.

On the contrary, stakeholders have no good knowledge of recently approved legal measures, surprisingly seven of them knew about no recent legal measure and some had just vague notions. Only the representatives of NGOs or professional associations had detailed information about events in electricity efficiency legislation. They named mostly the energy law updating, decree of energy labelling of appliances, decree of energy labelling of buildings, environmental tax reform – higher charge of electricity, obligatory audits.

Except lack of financial resources, most of stakeholders meet no barriers in implementing the electricity efficiency measures in their organization, only there where the organization is in the building as a tenant they have no motivation and necessary conditions.

As for general barriers, stakeholders see the biggest problem in **the lack of financial resources** for the implementation of electricity efficiency measures.

Other barriers are:

- lack of knowledge
- low education and lack of interest among public and public indifference to the subject
- incorrect price policy and economic-political aspects as e.g. monopolization of energy production and distribution

- non-existence of tax-allowances for efficient appliances or high costs of them, in general high investments into energy efficiency
- insufficient selection of efficient appliances on the market
- low price of electricity
- administrative barriers.

Two stakeholders said that there are no barriers, who wants, saves.

Stakeholders suggest as efficient measures in households:

- more education and more discipline
- larger use of efficient technologies
- use of renewables
- reduction of electric heating systems
- the increase of electricity prices
- tax allowances
- efficient cooking
- reduction of TV watching
- more urge of the state in the field of electricity efficiency
- increasement of electricity prices
- reduction of use of stand-by and electronic clocks
- objectiv information from producers
- best practises promotion.
- 

Some stakeholders had no sufficient knowledge about the situation in agriculture to pronounce themselves about efficient electricity measures.

Suggested measures are:

- use of renewables, drying with the use of solar or biomass energy
- energy self-sufficiency of farmers
- recuperation of energies
- finalization of privatization
- installation of insulations, audits
- from the part of subsidy policy to condition the subsidy acquirement with the implementation of energy efficient measures
- the increase of electricity prices
- change of old inefficient technologies
- education.

To the last question about their possible contribution to the electricity efficiency, most of stakeholders answer was their own example, promotional and educational activities and some more specific answers were:

- change of electric water heating system to solar thermic system (High school of engineering)
- installation of efficient lights and appliances
- information of dissemination among citizens in cooperation with NGOs (Olešník village)
- project of „Green administration“ with NGOs (South Bohemian regional authority)
- recommendation of efficient measures to planners and designers
- sponsoring of efficient projects (electricity distribution company)

- reconstruction of cooling equipment at the ice stadium (Municipality of České Budějovice)
- automatic switching off of the city festive lights (Municipality of České Budějovice)
- thematic broadcasts.

## Results & conclusions

Stakeholders are open to electricity efficiency measures implementation and they are ready to cooperate in activities leading to the reduction of the electricity consumption. As one can see from the answers, especially when it concerns their organizations, stakeholders have quite clear ideas and implement specific and efficient measures. In the general questions, they are not often so sure and they rely more on expert opinions, including NGOs. They rely on the NGOs also in the field of education and promotion of electricity (and all energy) efficiency and they consider it very important as the lack of knowledge and discipline among the general public is according to them one of the main barriers. That is a positive notion for the implementation of the Action plan. As it is mainly composed of educational issues, there can be in this way a larger cooperation between regional government, NGOs and professional associations with arguably bigger impact.

Main measure in the agriculture sector according to stakeholders is to reach the energy self-sufficiency of the farmers via the use of renewables. This will cause the reduction of electricity consumption from an external network and the possible change of farmer behaviour because they will need to use their own electricity as efficiently as possible.

## Annex 1

List of persons interviewed (names, company/institution)

Ing. Marcel Gause – director of High school of engineering, Tábor

Ing. Edvard Sequens – director of Calla, environmental NGO

Ing. Hana Hricová – directress of Regional chamber of agriculture

Ing. Vladimír Štěpka – director of regional office of State energy inspection

Ing. Karel Srdečný – energy consultant, Ekowatt, NGO

Ing. Jiří Neuwirth – Seven, Regional energy agency

Ing. Jiří Stráský – director of South Bohemian chamber of commerce

Jana Píchová – mayor of Olešník village

Ing. Jan Vondrouš – member of city council of Český Krumlov town

Ing. Luboš Průcha – South Bohemian regional authority, department of regional development

Ing. Jiří Schandl – regional department of Czech chamber of authorized engineers and technicians

Tomáš Kubín - E.ON

Ing. Jan Staněk – director of High school of electrotechnics, Hluboká n/Vlt.

Ing. Josef Vlček – Municipality of České Budějovice

Dan Moravec – Regional broadcasting, České Budějovice

## **Annex 2**

### List of questions asked

- 1) What electricity efficiency measures were implemented in your organization?
- 2) What legal measures have you noticed in the recent time?
- 3) What barriers in the implementation of electricity efficient measures do you meet in you organization?
- 4) What barriers in the implementation of electricity efficient measures do you see in general?
- 5) What would help to increase the electricity efficiency of households?
- 6) What would help to increase the electricity efficiency of agriculture?
- 7) How can your organization contribute to electricity efficiency trend?