ENERGY RESEARCH
in the 7th framework programme

COOPERATION

WP 4: Stakeholder interviews

National report Hungary

BARENERGY project, Deliverable D 19
(Grant agreement no.: ***213558)***

by

Andrea Farsang and Alan Watt

CEU Central European University

university of groningen

EDF

SIFO Statens institutt for forbruksforskning
National Institute for Consumer Research

UNIVERSITY OF SURREY

Centre for Sustainable Energy

University of St.Gallen

TNO | Knowledge for business

Content

I. Introduction 4

II. Barriers and Attempts to overcome them 5

1. Area of Domestic Energy Use 5

1.1. Installation of photovoltaic panels (Purchase) 5

1.1.1. Barriers 5

1.1.2. Attempts to overcome the Barriers 6

1.2. Buying Green Power (Purchase) 7

1.2.1. Barriers 7

1.2.2. Attempts to overcome the Barriers 9

1.3. Construction of low Energy Houses 10

1.3.1. Barriers 10

1.3.2. Attempts to overcome the Barriers 10

1.4. Energy efficient Refurbishment 11

1.4.1. Barriers 11

1.4.2. Attempts to overcome the Barriers 12

1.5. Energy efficient Heating Behavior (Use) 13

1.5.1. Barriers 13

1.5.2. Attempts to overcome the Barriers 15

1.6. Other 15

1.7. Summary of Area of Domestic Energy Use 15

2. Area of Household Appliances 17

2.1. Energy Efficient Appliances (Purchase) 17

2.1.1. Barriers 17

2.1.2. Attempts to overcome the Barriers 18

2.2. Cooking and Baking (Use) 18

2.2.1. Barriers 18

2.2.2. Attempts to overcome the Barriers 19

2.3. Summary of Area of Household Appliances 20

3. Area of Mobility 21

3.1. Public Transport (Use) 21

3.1.1. Barriers 21

3.1.2. Attempts to overcome the Barriers 22

3.2. Short Distance Mobility 23

3.2.1. Barriers 23
3.2.2. Attempts to overcome the Barriers 25
3.3. Car-sharing(Use) 25
3.3.1. Barriers 25
3.3.2. Attempts to overcome the Barriers 26
3.4. Hybrids (Purchase) 27
3.4.1. Barriers 27
3.4.2. Attempts to overcome the Barriers 28
3.5. Fuel Efficient Vehicles (Purchase) 29
3.5.1. Barriers 29
3.5.2. Attempts to overcome the Barriers 30
3.6. Other 30
3.7. Summary of Area of Mobility 30
III. Stakeholder Dialogue and Conclusion 31
Annexe 32

I. INTRODUCTION

CEU carried out 33 face-to-face interviews with 17 organisations representing an appropriate balance between non-governmental organisations, businesses, planning organisations, banks and other institutions. The CEU team focused on 2 areas: mobility and green energy. In the field of mobility we carried out 14 interviews with 6 organisations, in green energy 17 interviews with 10 organisations and in household appliances 2 interviews with a single organization.

All interviews were recorded digitally and summarized, and half of them were transcribed. In the selection of the interviewees we tried to identify the person most competent in the topic of the interview, where possible all on the same hierarchical level. However, as in some cases the institution decided on who would be the interviewee and the hierarchical structure was different in the various organizations, the position of the interviewees is not always comparable.

We started to contact the selected stakeholders in November; most of the interviews were carried out in December 2008 and a few at the beginning of January 2009 by three researchers (Gabriella Schneider, Zsofia Szi-Ferenc and Andrea Farsang). The questionnaire (except the question about the proposed barriers) was sent to interviewees before the meeting.

II. BARRIERS AND ATTEMPTS TO OVERCOME THEM

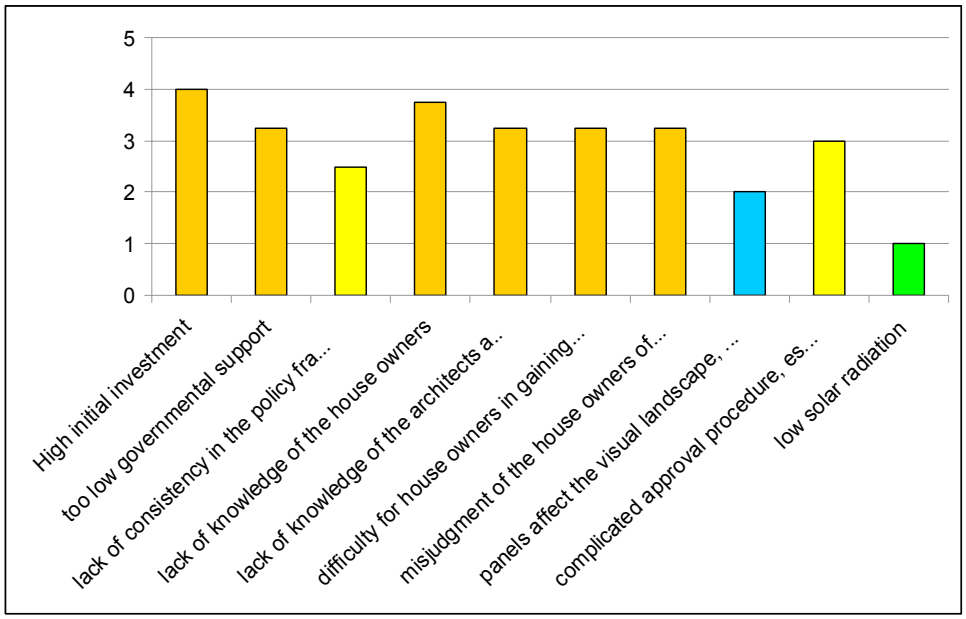
1. Area of Domestic Energy Use

1.1. Installation of photovoltaic panels (Purchase)

In order to represent an appropriate balance of the opinion of different stakeholders, CEU interviewed 4 organisations: Naplopo – a producer of solar collectors; KHEM – the Ministry of Transport, Telecommunication and Energy; MFB – the Hungarian Development Bank; and Greenpeace. In the following sections the opinion of these stakeholders will be presented.

1.1.1. Barriers

i. Graphical ranking of barriers



None of the proposed barriers was ranked with five, as a very important barrier in the list. Among the most significant barriers we can identify economic barriers (high initial investment, knowledge barriers), lack of knowledge of the house owners, lack of knowledge of the architects and installers, difficulty for house owners in gaining access to artisans and solar companies, misjudgment of the house owners of the reliability of solar panels, and political barriers (too little governmental support).

ii. Overview of each barrier:

a. basic overview

- high initial investment
- lack of knowledge of the owners
- regulatory framework of subsidies

- price of energy
- lack of education and awareness
- technical barriers
- no significant demand from the population
- underdevelopment of the market
- quality of services
- regulatory framework of subsidies: crucial question whether there will be governmental support for households to invest in energy efficiency and RES in the current year; the current level of subsidy is 30%, the desirable would be 30-50%
- price of energy: relatively low energy prices in the past
- technical barriers: metering of produced and consumed electricity, critical question is who should own and do the maintenance of the metering devices, what kind of metering devices should be used

b. stakeholders

- regulatory framework of subsidies, price of energy, high investment costs: government and politicians
- lack of environmental consciousness: government, ngos and market players
- awareness raising: businesses and governmental regulations

1.1.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- introduction of support scheme: currently it is 30%, while it was 15% in 2006
- Creation of a new solar energy department/section at the Association of Hungarian Building Engineers
- Introduction of new energy norms for buildings
- Introduction of obligatory energy certification of buildings
- Normative gas subsidy was transformed to subsidy on social and financial basis, but gas support is still much higher than in case of RES
- Electricity law: feed-in tariff, no capacity limitations

ii. Attempts for the future

- Support level should be between 30-50% for the purchase of RES technology such as solar panels
- Increase awareness raising, education
- although the number of producers and products is increasing significantly every year (doubled during the last 5 years), the price of solar panels remains the same. Producers should decrease prices significantly

- Different existing projects should be interconnected: during the refurbishment of block houses new programs should be developed and offered: e.g. metering in district heating by FŐTÁV (Budapest District Heating Works) or when applying new insulation in block houses the installation of solar panels should be taken into account as well.
- changes in local regulations for construction:
- governmental institutions' activities should be exemplary, guiding

iii. Windows of opportunity

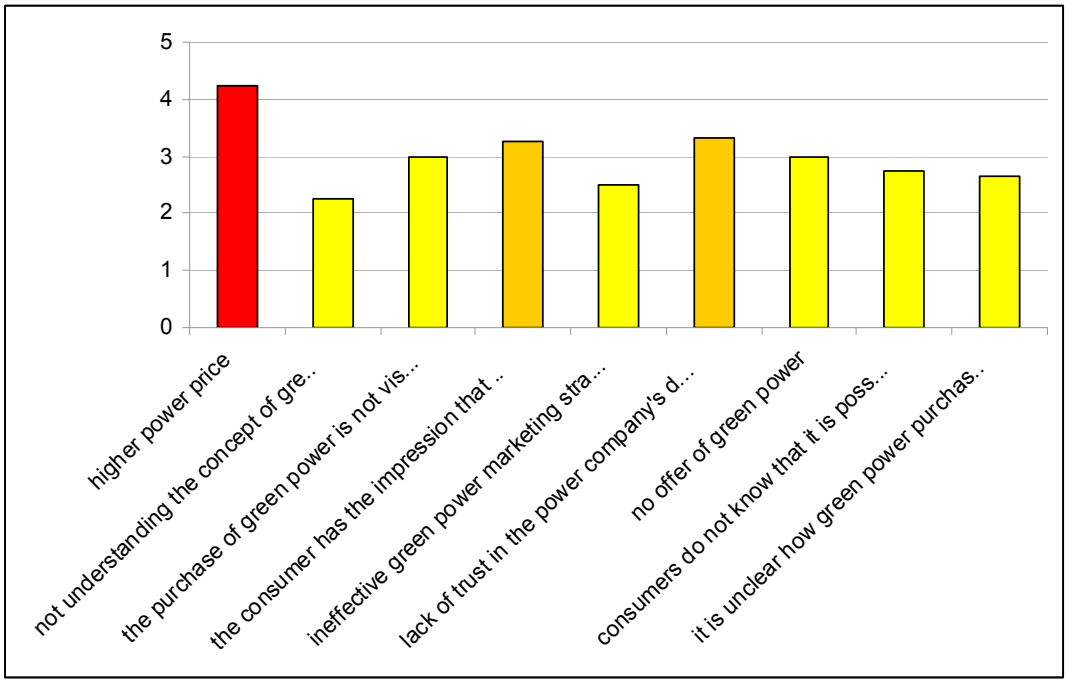
- refurbishment, building of a new house
- Construction of a new house: investing in renewable energy sources, such as installing solar panels can be relatively cheap compared to total costs

Based on the interviews despite several past attempts it appears there are still some very serious economic barriers like high investment costs of solar panels and at the same time relatively low energy prices, high subsidies especially for natural gas and low support for renewable energy sources and investments. Huge emphasis should be put on development programs and subsidies for block houses and for older houses and apartments. Technical barriers are also significant regarding the produced and consumed electricity.

1.2. Buying Green Power (Purchase)

1.2.1. Barriers

i. Graphical ranking of barriers



As a residential consumer currently there is no opportunity to choose among different electric energy sources: everyone gets the same electricity, there are no differentiated tariffs and packages. At the same time high energy prices – while natural gas is heavily subsidized, fuel poverty is significant in Hungary – and lack of awareness are also very strong barriers.

ii. Overview of each barrier

a. basic overview

- green energy always has to be bought, it is obligatory for service providers that distribute it to households in their energy mix!
- higher power price
- the consumer has the impression that he himself doesn't have any influence.
- Lack of awareness: the population is using green energy as it is in the mix they are offered, but do not know about it
- lack of trust in the power company's declaration
- Investor's willingness: the amount of support is maximized to a certain amount of green electricity produced
- There is no real competition on the market therefore there are no green energy service packages.
- Lack of cooperation of NGOs: NGOs are not constructive, contradict each other, unprofessional
- RES is expensive: people think rather short-term, as gas is relatively inexpensive, it is not worth changing

b. stakeholders

- Government and Energy Agency
- market, service providers

- research institutes, such as the Academy of Sciences

Service providers, central government and independent organizations should raise awareness and knowledge of consumers on green energy. Green energy tariffs should also be developed and marketed.

1.2.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- National Climate Change Strategy
- National Energy Efficiency Program: there are contradictions between RES and fossil goals
- Governmental Support Schenme: very low and not motivating
- Green investment schemes for energy efficiency investments
- there were some private programs, initiatives – e.g. www.energiasuli.hu (virtual energyschool) and a few awareness raising campaigns
- Introduction of the feed-in-tariff and quota obligation in 2002: it was a success story - since then there has been a huge RES increase
- Energy efficiency programs and support: although there are some difficulties, they can be regarded as successful

ii. Attempts for the future

- Price for green electricity should decrease
- Peak-time electricity consumption should be more expensive than off-peak
- Introduction of green certificates
- environmental education from primary school to universities: practical information about global environmental problems
- teachers should be educated as well
- a motivating economic environment should be built
- villages should be planned and developed so that they can generate their own energy
- banks: energy efficiency programs, RES support

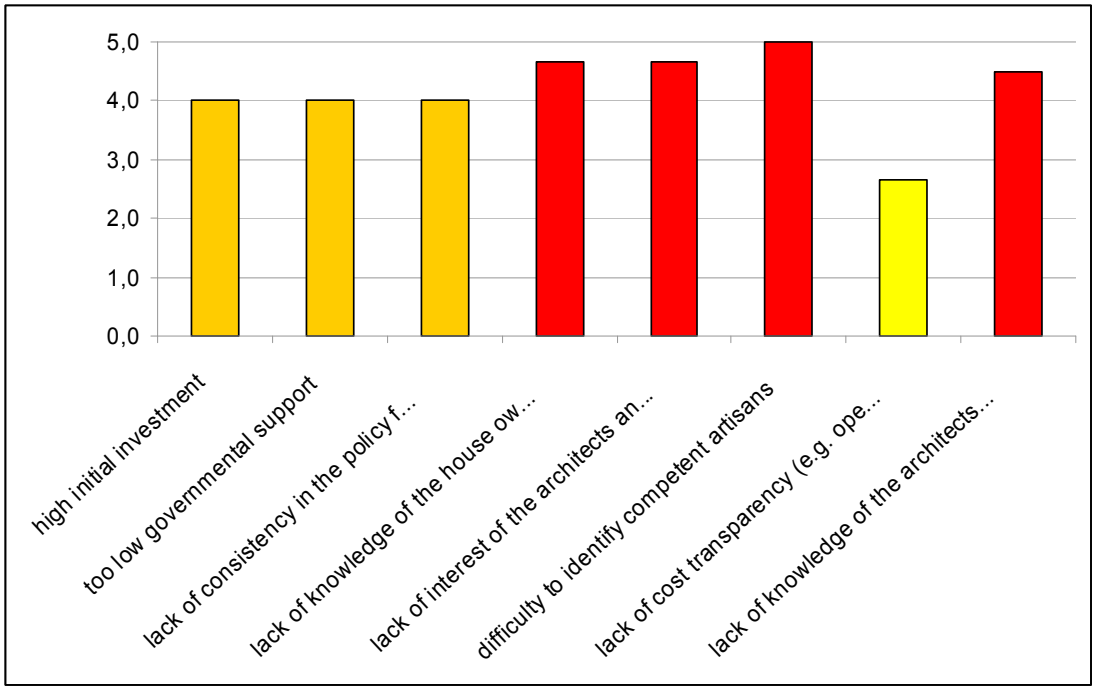
iii. Windows of opportunity

- Purchase of a new home, especially a new house: compared to the purchase price, investing in RES technology might seem relatively less expensive
- refurbishment
- some interviewees did not see any as the price for this technology is unrealistically high, there is no economic motivation and the technology is very expensive as well

1.3. Construction of low Energy Houses

1.3.1. Barriers

i. Graphical ranking of barriers



According to the interviews the main barrier is lack of knowledge among all stakeholders: owners, architects and artisans. At the same time high investment costs and low governmental support are also very strong factors.

ii. Overview of each barrier

a. basic overview

- lack of knowledge of the house owners
- lack of interest of the architects and installers
- difficulty to identify competent artisans
- lack of knowledge of the architects and installers
- High investment costs
- Lack of regulatory background
- No real value when selling the house: the market is not ready yet to pay the price of the development

b. stakeholders

- government
- contractors, developers
- NGOs

1.3.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Energy certification of buildings

- Organization of conferences, professional events in the area
- Establishment of Passive House Alliance

ii. Attempts for the future

- New regulations for the classification of heating equipments and construction standards
- Awareness raising and information campaigns
- Building up a competence/knowledge center
- Decrease VAT of relevant services and products
- Provide non-refundable support
- Increase energy prices
- Educate and train architects and installers
- Build professional bodies, alliances

iii. Windows of opportunity

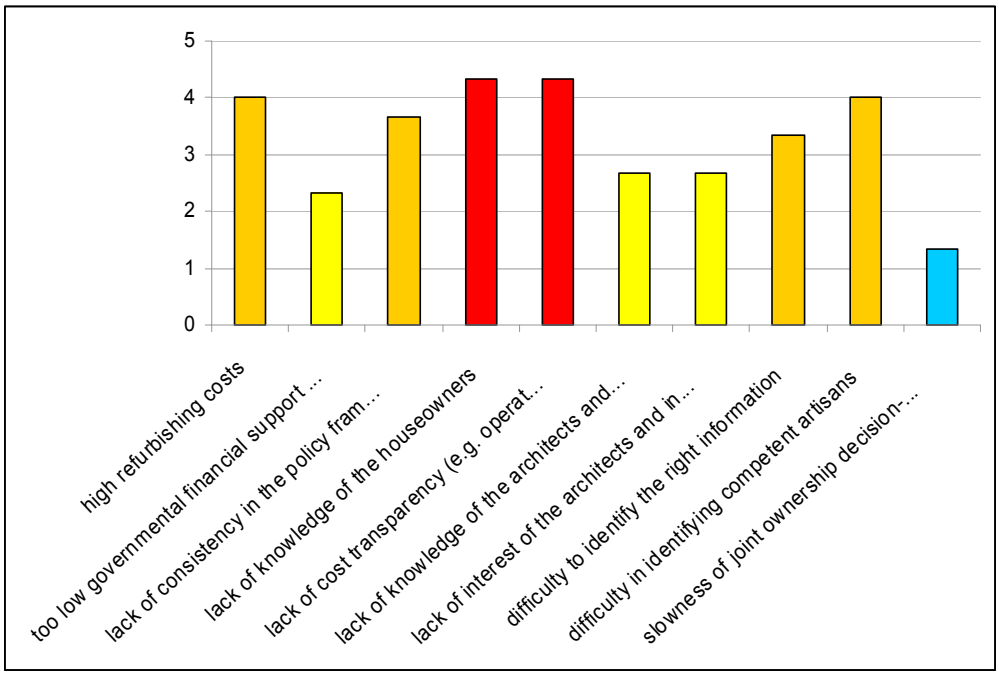
- Retirement
- Birth of a child
- Dramatic change of lifestyle
- Getting married

The demand for low energy houses is very low in Hungary mainly due to lack of knowledge and interest of the stakeholders. Due to relatively low energy prices and high investment costs of energy efficient buildings the return on investment is very low and slow.

1.4. Energy efficient Refurbishment

1.4.1. Barriers

i. Graphical ranking of barriers



The main barriers are high costs and low knowledge of house owners. Operating costs are rarely taken into account when talking about refurbishment; it is rather investment that is an important factor. Since many households already have loans, it is hard to finance energy efficient refurbishments' higher costs.

ii. Overview of each barrier

a. basic overview

- high refurbishing costs
- lack of knowledge of the houseowners
- lack of cost transparency (e.g. operating costs are rarely calculated)
- difficulty in identifying competent artisans
- lack of financial resources: getting a new loan for investing in RES might be risky, as the household might already have another loan for the purchase of their home
- amount and intensity of governmental support: governmental support should mainly go into energy efficiency improvements and energy saving; the application process for support is very complicated;
- 'cultural' barriers: often very difficult joint ownership decisions esp. in case of old buildings in the city centre. People mainly want to carry out refurbishment on their own, only for their own flat/house; in the case of a tenement block it is very difficult to make joint decisions
- most people would rather pay a bit more everyday than invest a higher amount in order to pay less sometime in the future
- gas and electricity is often paid at a flat rate: prices are calculated on the previous year
- no consistency in regulatory framework

b. stakeholders

- consumers to invest in more developed technologies
- government to support developments
- businesses to provide reliable service

1.4.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Panel Plus Program: insulation and energy efficiency improvements for block houses
- National Energy Efficiency Program
- "Lakcimke": campaign and program on energy certification and performance of buildings in accordance with the EU EPB Directive
- Hungarian Network of Eco-counselling Offices (Kötháló): consist of environmental NGOs that provides free eco-counselling to the public since 1997

- Initiatives of municipalities: Alliance of Energy Efficient Municipalities and the Alliance of Climate Friendly Settlements
- Market liberalization: competition among service providers increased efficiency
- Energy Efficiency Fund: refundable support with favorable loan conditions
- Changes of the real estate law: if inhabitants of multiple dwelling units wish to refurbish, instead of the previous 80%, now only 50% of them have to approve it

ii. Attempts for the future

- Information and education for installers with the help of the government and civil society organizations, education about newest technological developments, training and motivating them to bring relevant information about energy efficiency closer to people
- chambers of commerce should disseminate professional knowledge and educate
- New building/constructing regulations needed
- Supporting developments to increase energy efficiency
- Develop competition on distance heating market

iii. Windows of opportunity

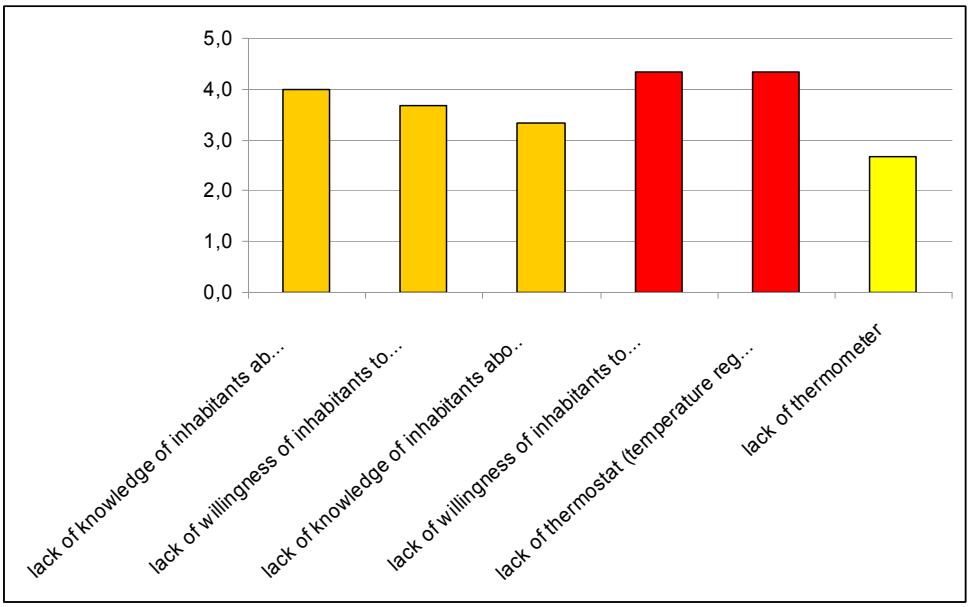
- Purchase of a new home
- “Periods of refurbishment”: approx. every 10 years, and every 30 years for large renovations
- when the next period of governmental support for energy efficiency and RES opens
- significant energy price increases
- Retirement
- Birth of a child
- Change of lifesytle

There are several programs to subsidize refurbishment; however its rate and total budget is rather low. There is no competition in the market of distance heating and no real and easy opportunity to change to energy efficient solutions. New regulation would be needed to support the usage of energy efficient solutions and also awareness should be raised.

1.5. Energy efficient Heating Behavior (Use)

1.5.1. Barriers

i. Graphical ranking of barriers



The main barriers are lack of willingness of consumers to decrease energy consumption since energy prices are rather low and at the same time the lack of any technical possibility in the case of distance heating: people cannot regulate the level of heating.

ii. Overview of each barrier

a. basic overview

- Lack of/low motivation of consumers to be more energy efficient: for some groups energy costs are only a small part of their monthly expenditure, “their internet bill might be much higher” and therefore they are not interested to decrease their energy consumption; other groups might have serious financial problems and therefore not even be able to think about energy efficient heating options
- energy consumption and especially energy savings are not visible e.g. on the monthly bill. It is not possible to identify the connection between a certain act or behavior and the cost saving
- technological barriers: many consumers are not able to control heating temperature (no thermostat)
- Lack of information
- Very old habits based on the perceived limitlessness of natural resources and their low price
- Lack of EU and governmental funding

b. stakeholders

- The most important or key players are in this area the consumers themselves.
- Civil society organizations
- Government
- businesses

1.5.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Support of energy efficiency related developments
- Awareness raising campaigns
- Minor attempts with very low efficiency and without any concept in the background

ii. Attempts for the future

- Support of energy efficiency related developments
- Making a competence center to provide reliable information about alternative solutions
- Distance heating should be made the most efficient and environmental friendly solution
- Reliable information and awareness raising activities
- Governmental support

iii. Windows of opportunity

- Increase of energy prices, especially of gas
- The heating season – both the media and consumers are then more open to talk about energy efficient heating behavior and energy efficiency generally
- Changes in income situation: retirement, unemployment, income decrease
- The topic of climate change itself and its appearance in the media might bring a big change in the future. It is important to run campaigns on energy saving and climate change continuously.
- Retirement
- Birth of a child

The most important attempt for the future would be awareness raising through campaigns, competence centers, etc. The permanent increase of energy prices also helps to change behavior.

1.6. Other

1.7. Summary of Area of Domestic Energy Use

According to the stakeholder interviews there are several strong barriers that limit the more efficient use of domestic energy. The strange thing is that despite low income levels as the main barrier, people do not make efforts to decrease energy use. The reasons – mainly economic and knowledge barriers – are high initial investment costs, relatively low energy prices, lack of knowledge and awareness. Due to low demand from consumers the supply side is weak as well. It is really difficult to find reliable and well experienced engineers and contractors for building works. There were several attempts in

the past to overcome the barriers mentioned above. Both NGOs and the government carried out communication and awareness raising campaigns; however, their effectiveness was rather low. There are also several subsidies and programs to support refurbishment and installation of energy saving appliances, as well as to support the use of renewable energy resources – these programs and schemes were not reliable in the past and their intensity was rather weak as well. Based on the interviews the first step to overcome the limits would be to carry out very effective awareness raising campaigns on the one side – to increase knowledge and demand – and to support both the production and the usage of renewable energy resources.

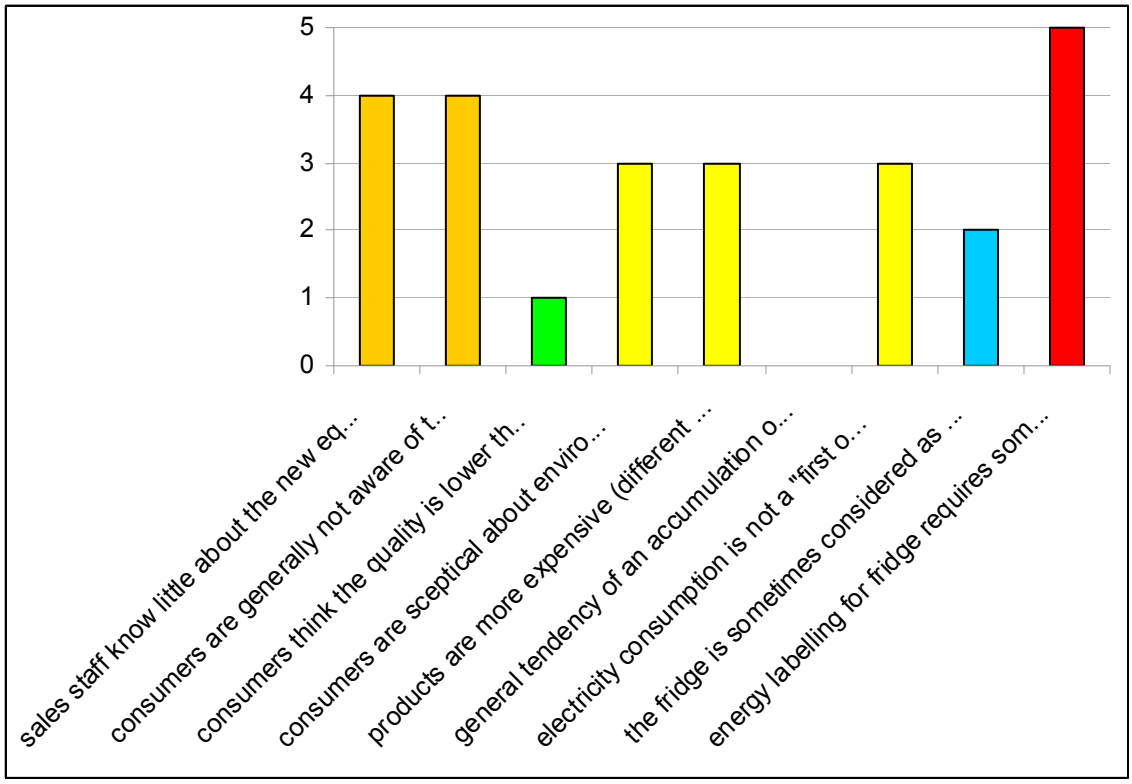
2. Area of Household Appliances

In the topic of household appliances CEU interviewed 1 organisation: Ökoszolgálat – Ecoservices. In the following sections the opinion of this stakeholder will be presented.

2.1. Energy Efficient Appliances (Purchase)

2.1.1. Barriers

i. Graphical ranking of barriers



The most important barrier is the outdated labeling system, since it is almost impossible now to purchase appliances with low energy efficiency according to the current labeling. It means that everyone thinks that all appliances with the label – despite its classification – are energy efficient. At the same time people do not really care about labeling, energy efficiency is not a strong influencing factor of purchase decision. Sales staff should also be much more informed to be able to help consumers' decisions.

ii. Overview of each barrier:

a. basic overview

- lack of awareness and motivation: people wish to follow modern/western lifestyles, consumption patterns

- lack of information: there are no brochures, magazines, books on the topic
- lack of financial resources: low living standard
- lack of information on the lifetime of appliances
- sales staff know little about the new equipment - In the past there were plenty of specialized stores with professional sales staff and people bought electronic appliances at these special stores (but nowadays there has been a shift towards superstores/megastores).
- energy labeling for fridges requires some adaptations: an A-labeled fridge looks quite energy efficient but actually this is almost the worst category still available, as there are A+ and A++

b. stakeholders

- producers: taking higher responsibility
- civil society organization and government: increased control required, need for energy classification for certain product groups (e.g. gas ovens) that have no energy classification as yet

2.1.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Ecolabeling of household products is obligatory

ii. Attempts for the future

- Provision of information: government and civil controlled CSR, credible information
- Motivation, awareness raising: energy efficiency should appear in our educational system (government, civil society, producers or service providers)
- Producers should take higher responsibility but they will not be interested as a longer lifecycle may damage their sales

iii. Where are windows of opportunity and how to catch them?

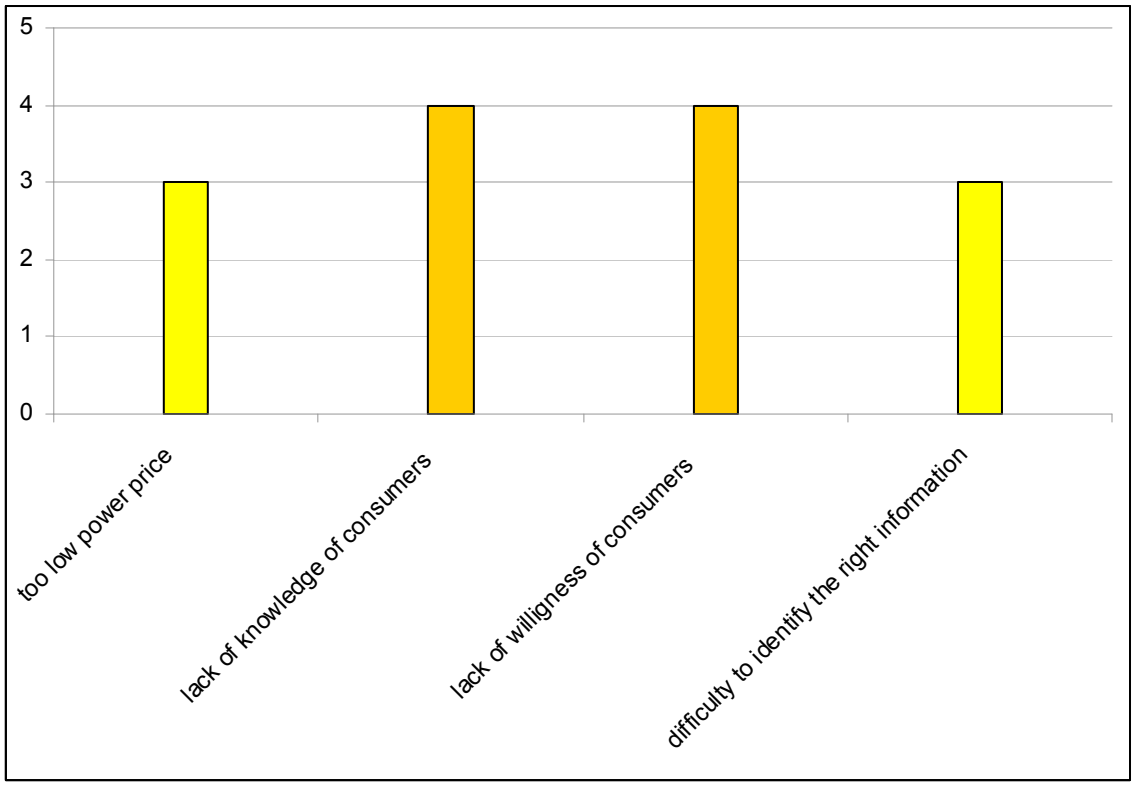
- If someone moves to a new place, a new house or apartment

The most important attempts would be awareness raising and an update of the labeling system.

2.2. Cooking and Baking (Use)

2.2.1. Barriers

i. Graphical ranking of barriers



The main barriers are the lack of knowledge and the lack of willingness of consumers to decrease energy consumption.

ii. Overview of each barrier:

a. basic overview

- lack of knowledge of consumers
- lack of willingness of consumers
- lack of awareness and motivation: people wish to follow, modern/western lifestyles, consumption patterns
- lack of information among consumers: there are no brochures, magazines, books on the topic

b. stakeholders

- Government to make regulation on appliances and to increase prices
- Manufacturers to inform the public/consumers about energy efficiency

2.2.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Campaigns on energy efficiency
- Distribution of information papers
- Increase of gas and electricity prices

ii. Attempts for the future

- Energy efficiency labeling should also appear on gas appliances

iii. Where are windows of opportunity and how to catch them?

- This is rather a general lifestyle question, does not depend on opportunities

As a major project for the future, awareness should be raised via campaigns and communication.

2.3. Summary of Area of Household Appliances

Due to historical reasons people in Hungary are used to waste energy as energy prices were very low in the past. As energy prices increased significantly during the last few years, energy efficiency is becoming a more and more important topic. Although energy efficiency labeling is obligatory for household appliances, its classes should be revised and gas appliances should also be included. Most significant barriers mentioned in the interviews were the lack of information and awareness and lack of financial resources.

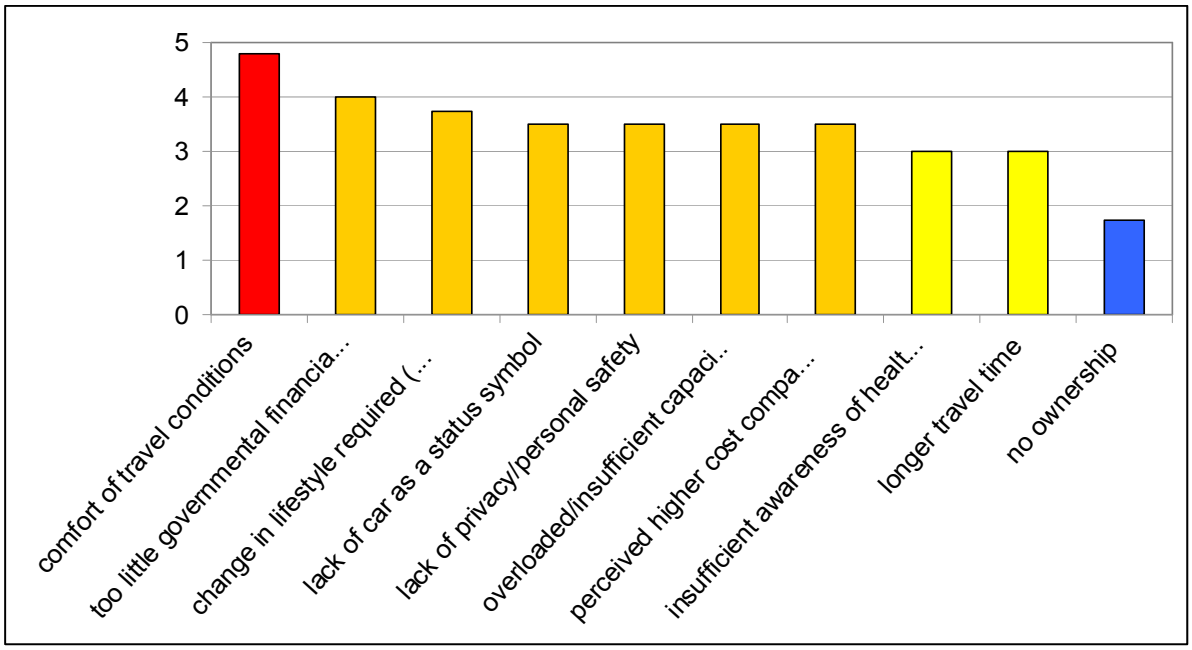
3. Area of Mobility

In order to represent an appropriate balance of the opinion of different stakeholders, CEU interviewed 6 organisations: BKV (Budapest Transport Company), KHEM (the Ministry of Transport, Telecommunication and Energy), VEKE (Urban and Suburban Transit Association), KTI (Transport Research Institute), MGE (Association of Hungarian Car Importers), and Toyota Hungary. In the following sections the opinion of these stakeholders will be presented.

3.1. Public Transport (Use)

3.1.1. Barriers

i. Graphical ranking of barriers



The main barrier was the comfort of travel conditions, while several other barriers were said to be significant. The average age – and therefore their comfort level – of public transport vehicles is rather high, however even newly bought vehicles often lack air conditioning. Travel time in off-peak periods is much longer compared to cars, and due to the old-fashioned price system it is also much more expensive.

ii. Overview of each barrier:

a. basic overview

- Capacity of public transport vehicles
- Lack of comfort, crowded vehicles
- Lack of P+R parking lots – no possibility to park the car and take public transportation

- Bad quality of public transportation

- low frequency of vehicles, interconnection problems: especially in the suburbs and outside districts of Budapest
- No cooperation among different service providers
- Price: equal price for one stop and for the whole line. No differentiation on travel time.
- capacity to pay
- change in lifestyle required (more pre planning/less flexibility)
- Lack of competitiveness (reliability, time, average speed etc)
- Lack of congestion charge
- perceived higher cost compared to driving (lack of consideration of health, space, and infrastructure costs)
- State of changing points, undergrounds, terminal points: dilapidated, dirty, grafitties
- The weakness of civil society
- Budgetary limits, too little governmental financial support/unsupportive regulations or laws

All stakeholders agree about the barriers listed above, there are no significant differences among them – no matter if it is the transport company itself, an NGO or the regulatory body. The main problem is that public transportation on its current level is not competing with cars due to its low budget, crowded vehicles, dated network and relatively high prices.

b. stakeholders

The main stakeholders are the central and local government to develop and finance a long term strategy to increase the role of public transportation.

3.1.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- Reviewed structure of lines, increased quality of service – no experience yet, it's a new attempt (September 2008) (Transport company)
- No real attempts, only slogans (NGO)

- passengers over 65 years do not have to pay for public transportation
- special tariffs for pensioners, students and school groups
- good public transportation network, lines in Budapest, especially in the city centre
- existence of bus lanes, green zones

- some changes in price policy

There are several subsidies for different target groups and public transportation is rather well developed in the city centre. But, outside the centre public transportation has serious problems (crowding, timing, comfort) and at the same time it is very difficult to find a P+R parking lot. It means that getting into the city centre is very much complicated and expensive.

ii. Attempts for the future

- Develop the quality of vehicles
- increase tram lines (number and length)
- cooperation with suburban transport service providers
- Develop P+R parking places,
- make car driving more expensive
- establish low-emission zones in Budapest
- make people more aware of health and environmental impacts of car driving
- new price policy
- more cycle tracks
- more pedestrian crossings
- nicer streets

iii. Where are windows of opportunity and how to catch them?

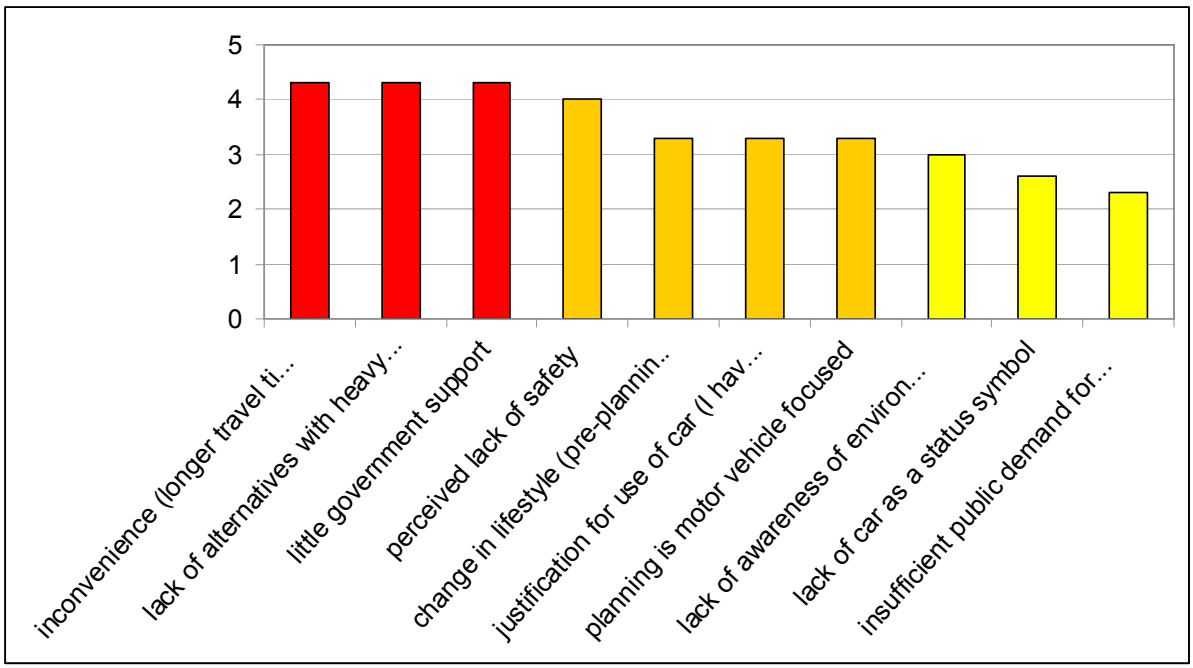
The notion of “windows of opportunity” is hardly understood, interviewees rather proposed some possible solutions here as well, like

- Public transportation should appear in new residential development areas even before the construction is finished. Public transportation should be a plus when choosing/moving to a new flat
- if economic conditions change, driving a car might become more expensive
- charging of external costs of car driving and congestion

3.2. Short Distance Mobility

3.2.1. Barriers

i. Graphical ranking of barriers



There were three barriers ranked over 4 points. As mentioned above, the time-schedule of public lines is hardly user-friendly. At the same time the pricing policy is also against short trips since the tariff is the same for three stops and for fifteen.

ii. Overview of each barrier:

a. basic overview

- inconvenience (longer travel time, waiting for the bus, etc…
- lack of alternatives with heavy items (furniture, etc…)
- change in lifestyle (pre-planning) required
- planning is motor vehicle focused
- Bicycle is not the best solution: no infrastructure, no culture
- Lack of parking places at metro stations, P+R
- Bad quality of public vehicles
- driving a car is still too easy in the city center, and sometimes cheaper than public transportation
- No cooperation among parking companies
- Lack of cheaper midi-buses for off-peak hours
- justification for use of car (I have it, I should use it)
- lack of awareness of environmental, health, space, and financial benefits of walking or biking short distances (planners and community)
- little government support
- perceived lack of safety

Stakeholders agree that poor network of public transportation outside the city centre – and the lack of P+R lots at the same time is a very strong factor of the relative weakness of public transportation. Driving into the city centre

and parking there is quite cheap. Riding a bicycle is still very dangerous and uncomfortable due to the lack of infrastructure.

b. stakeholders

The main stakeholders are the central and local government to communicate and to support the use of public transportation and non-motorized transportation. Infrastructure for bicycle riding should be developed.

3.2.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- more pedestrian-crossings in junctions
- some changes in pricing policy, like introducing the section ticket on overground transport (currently it can only be used in the underground)

ii. Attempts for the future

- less changes among vehicles
- new pricing policy (time based)
- more cycle tracks
- more pedestrian crossings
- nicer streets
- develop public transportation

The most important and useful attempts would be to develop further the pricing policy of public transportation and at the same time to make streets more bicycle- and pedestrian-friendly with many more crossings, bike-lanes, etc.

iii. Where are windows of opportunity and how to catch them?

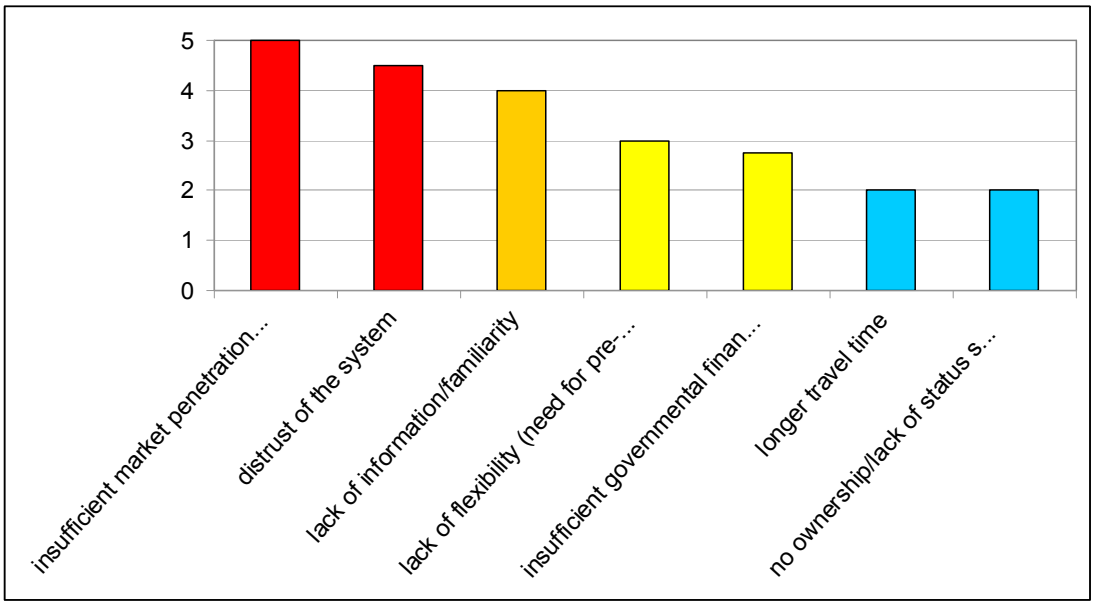
The notion of “windows of opportunity” is hardly understood, interviewees rather proposed some possible solutions here as well, like

- Awareness raising
- Develop public transportation and non-motorized road networks in residential areas
- make parking more difficult in the centre

3.3. Car-sharing(Use)

3.3.1. Barriers

i. Graphical ranking of barriers



The main barriers are all based on historical background: car-ownership is a marker of social status and at the same time public values and the importance of public ownership are weakening.

ii. Overview of each barrier:

a. basic overview

- lack of interest
- distrust of the system
- lack of flexibility (need for pre-planning)
- different place of living
- mobility habits and reasons are very age-dependent: child nursery, kindergarten, school, do shopping, etc.
- car sharing and pooling decreases significantly the biggest benefits of own car: freedom of time and space
- lack of information/familiarity
- lack of / need for infrastructural, technological features: common database, parking lots, gps

All stakeholders agree that currently there is little prospect of such a service in Hungary. Owning a car is very important and reflects a modern lifestyle and the feeling of freedom. This is something that people would not give up to save the environment even if it would save money for them.

b. stakeholders

The main stakeholders are the central and local government to support the development of these services

3.3.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- There were no attempts yet

ii. Attempts for the future

- Awareness raising
- Support and incentive scheme based on quantification of environmental, energy and climate change benefits of car sharing
- There should be a complex research carried out in this field in the future. Research done in other countries can only be used with limitations due to differences in income and travel habits. An assumption of one of the interviewee was that it might work among young people in Budapest.

iii. Where are windows of opportunity and how to catch them?

The notion of “windows of opportunity” is hardly understood, interviewees rather proposed some possible solutions here as well, like

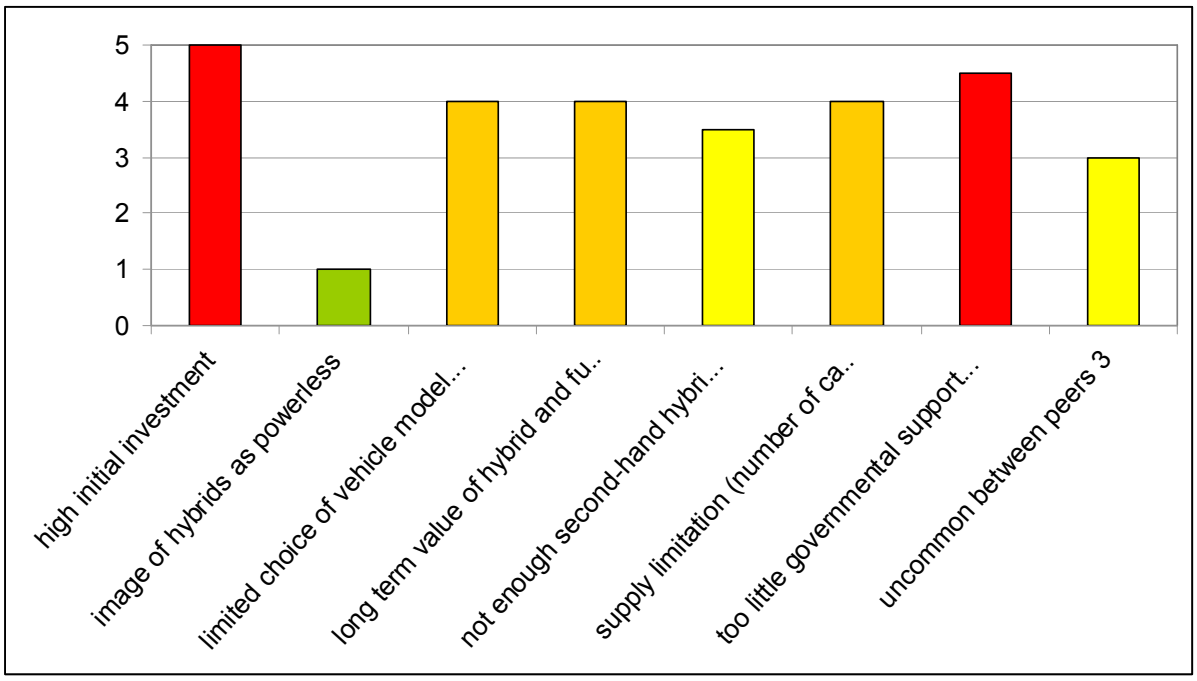
- incentives and support for companies to make development in this direction
- awareness raising about energy efficiency and environmental protection and problems

Despite all attempts and opportunities several years should be passed to see real demand on this kind of services.

3.4. Hybrids (Purchase)

3.4.1. Barriers

i. Graphical ranking of barriers



The main barriers have the same background: low income level of households and the relatively high cost and low supply (no small-class vehicles with lower price) of hybrid cars.

ii. Overview of each barrier:

a. basic overview

- lack of environmental awareness
- Income level/ high initial investment
- Lack of information on technology, fear of technology
- Lack of governmental support, except for registration tax
- Lack of information on lifetime cost efficiency
- Other manufacturers without relevant technology, their bad communication efforts
- long term value of hybrid and fuel efficient cars is unclear to consumers
- not enough second-hand hybrid cars (most cars bought in Switzerland are bought second-hand)
- limited choice of vehicle models (too few producers/ugly models)

All interviewees agreed that the main barrier is financial and the lack of environmental awareness: “why should people pay 6,000 euro extra for the same type of car? “.

b. stakeholders

The main stakeholders are the central and local governments to support the parking of these cars and to minimize taxation. The car industry should decrease the prices of these cars, while the corporate sector should realize its role and possibilities to use efficient cars.

3.4.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- The Association of Hungarian Car Importers achieved the decrease of registration fee for hybrids
- Toyota ran a mobility week: a free Prius ride on main bus lines

ii. Attempts for the future

- Governmental support
- Positive communication
- Free parking
- Not charging development costs on hybrid’s price

iii. Where are windows of opportunity and how to catch them?

The notion of “windows of opportunity” is hardly understood, interviewees rather proposed some possible solutions here as well, like

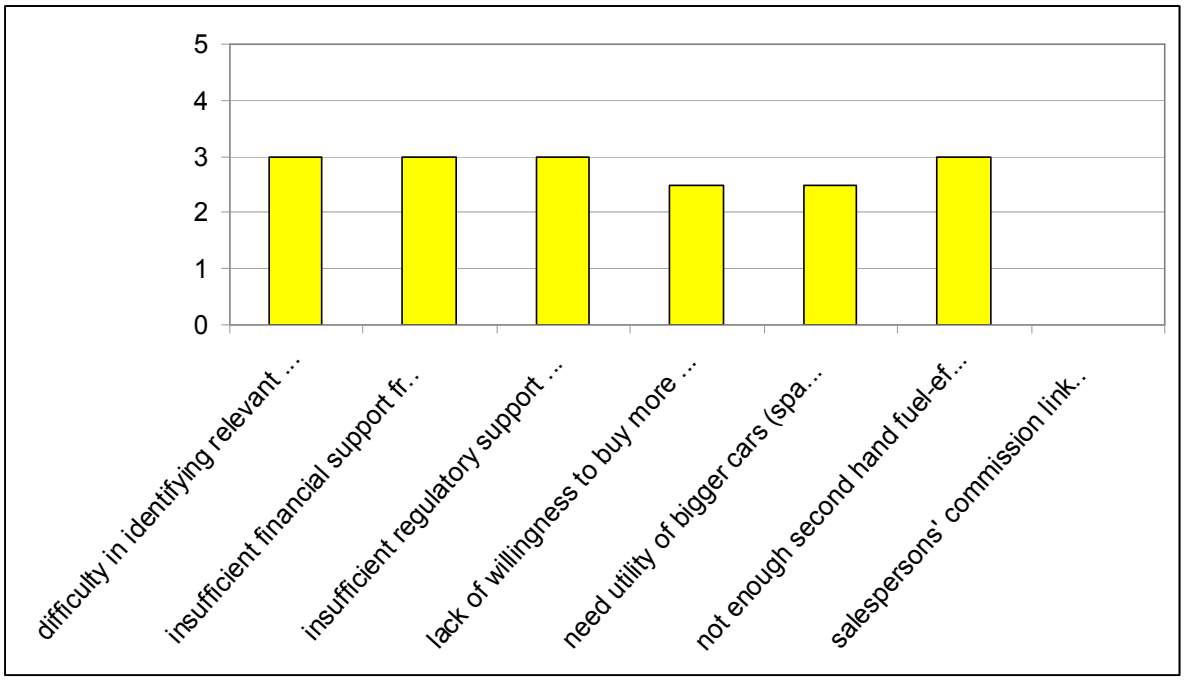
- Hybrid technology should appear in smaller and cheaper cars as well
- New credit possibilities to purchase hybrids

Despite some attempts to decrease the price of hybrids they are still very expensive to buy. Central and local government should support the purchase and use of these cars by lower taxes and free parking. Car manufacturers should develop smaller and cheaper cars to make the technology more available for people.

3.5. Fuel Efficient Vehicles (Purchase)

3.5.1. Barriers

i. Graphical ranking of barriers



ii. Overview of each barrier:

conflicting opinions

- lack of willingness to buy more efficient cars (less prestigious cars)
- Tax regulations (minimal difference in CO2 emission based taxation of cars)
- Other manufacturers without relevant technology, their bad communication efforts
- Some environmentalists who deny everything about cars
- difficulty in identifying relevant information (info overload)
- insufficient financial support from government
- insufficient regulatory support from government
- need utility of bigger cars (space, horsepower)

- not enough second hand fuel-efficient cars (most cars bought in Switzerland are bought secondhand)

- salespersons' commission linked to CO2 emissions (higher commission for higher emitting cars) None of the interviewees understood this question)

The two interviewees (the Association of Car Importers and Toyota) did not agree at all on several questions concerning tax regulations, financial support, communication and the supply of second-hand cars. What they agreed on is the fact that people are not willing to buy more efficient cars: this is not a factor in the purchase decision.

b. stakeholders

The key stakeholders are the corporate and the governmental sector to increase their green purchase. At the same time car manufacturers should not charge development costs on these efficient cars

3.5.2. Attempts to overcome the Barriers

i. Attempts to overcome the Barriers

- PR and CSR activities with low efficiency

ii. Attempts for the future

- Awareness must be raised because it's still rather a slogan than real attitude to be environmentally responsive,
- Lowering prices

iii. Where are windows of opportunity and how to catch them?

The notion of "windows of opportunity" is hardly understood, interviewees rather proposed some possible solutions here as well, like

- These cars are expensive for private people, the initial window would be the corporate and governmental sector.
- More money should be spent on communication as well

There were no real attempts in the past to increase the sales of energy efficient cars. Since their price is rather high it should be responsibility of the corporate sector to increase their green purchase.

3.6. Other

3.7. Summary of Area of Mobility

In Hungary only two of the five investigated areas are important, the use of public transportation and short distance trips. Income level of households defines the very low demand for hybrids and fuel efficient cars. Car sharing -

due to historical and cultural reasons – has absolutely no demand according to the stakeholder interviewees.

While public transport is underdeveloped (except for the city centre) and expensive, car driving is relatively cheap and due to historical reasons cars mean more to people than only a mode of transportation, it is a symbol of modern lifestyle. Due to these reasons, until one of three main factors (price, time and comfort) can compete with the advantages of cars, public transportation won't be able to reach more people or even to keep its passengers and relatively high share (~60%) currently. Most of the interviewees mentioned infrastructural barriers and asked for governmental support to solve the problems. Some attempts were made, but with low efficiency and limited results.

III. Stakeholder Dialogue and Conclusion

As we interviewed a wide range of stakeholders including businesses, NGOs, political authorities and planning institutions, it is not surprising that they had different opinions on some questions or, more precisely, put their emphasis on different barriers.

While NGOs ranked consumer awareness and the lack of policy measures the highest, businesses emphasized the weakness of the market structure, while political authorities and planning institutions highlighted infrastructural and awareness barriers.

Most of the respondents agreed on the importance of consumer awareness raising in all areas and on the significance of serious economic barriers (high investment costs) – especially in the case of green energy (PV panels, green power and low energy housing), hybrid/fuel efficient cars, and to some extent even in the case of public transportation.

Strong criticism was articulated regarding political barriers, current governmental subsidies (their reliability and intensity) and priorities in ensuring a sustainable energy future – e.g. while the government subsidizes natural gas heavily, support for RES technology is very low, which discourages people from investing in green energy. On the other hand it was agreed generally that the current subsidy structure is very important to address fuel poverty. Addressing fuel poverty and keeping energy prices low is a key political issue that inhibits making long-term decisions and sustainable strategies, so this is a politically difficult and sensitive area.

Most of the respondents felt that infrastructural and cultural barriers are also key especially in case of public transportation or possible new initiatives such as car-sharing or car-pooling.

We can conclude that in the area of green energy the most significant barriers were of an economic nature, infrastructure and knowledge. For household appliances the most significant barriers mentioned in the interviews were knowledge and economic ones, while in the field of mobility most of the interviewees mentioned a wide range of barriers, mainly infrastructural, economic, information, cultural and social barriers and recommended governmental support to solve the problems.

Annexe

- List of the interviewees

MOBILITY (14 interviews, 6 organisations)

Organisations

1. BKV (Budapest Transport Company) – András Tarsoly, head of division, service planning, December 20, 2008
2. VEKE (Urban and Suburban Transit Association) – Dávid Vitézy, spokesman, head of tranpsport development, December 11, 2008
3. KTI (Transport Research Institute) – Miklós Kovács, head of the division Environment and Energy, December 9, 2008
4. KHEM (Ministry of Transport, Telecommunication and Energy) – Dr. Miklos Szoboszlay, Head of division, December 30, 2008
5. MGE (Association of Hungarian Car Importers) – Dr. Gábor Győző, acting chairman, December 10, 2008
6. Toyota Hungary – Mr. György Goizer, head of the division environmental protection, December 5, 2008

Public transportation (4)

BKV (Budapest Transport Company)
VEKE (Urban and Suburban Transit Association)
KTI (Transport Research Institute)
KHEM (Ministry of Transport, Telecommunication and Energy)

Short distance trips (3)

KTI (Transport Research Institute)
BKV (Budapest Transport Company)
VEKE (Urban and Suburban Transit Association)

Car sharing (3)
KTI (Transport Research Institute)
VEKE (Urban and Suburban Transit Association)
KHEM (Ministry of Transport, Telecommunication and Energy)

Purchase of hybrid cars (2)

MGE (Association of Hungarian Car Importers)
Toyota Hungary

Purchase of fuel efficient cars (2)

Toyota Hungary
MGE (Association of Hungarian Car Importers)

HOUSEHOLD APPLIANCES (2 interviews, 1 organisation)

1. Ökoszolgálat (Ecoservices) – Ildikó Bóbis, environmental advisor, January 6, 2009

Energy Efficient Appliances (Purchase) (1)
Ökoszolgálat (Ecoservices)

Cooking and Baking (Use) (1)
Ökoszolgálat (Ecoservices)

GREEN ENERGY (17 interviews, 10 organisations)

1. Naplopók (Producer of Solar collectors) – Mr. Pál Varga, December 10, 2008
2. KHEM (Ministry of Transport, Telecommunication and Energy) – Mr. Ferenc Bohoczky, December 8, 2008
3. MFB (Hungarian Development Bank) – Mr. István Kovács, (December 17, 2008) January 5, 2009
4. Greenpeace – Mr. Balázs Tömöri, January 6, 2009 (December 17, 2008)
5. MVM (Hungarian Power Companies) – Mr. Vilmos Civin, December 8, 2008
6. MEH (Hungarian Energy Agency) – Mr. Csaba Kovács, December 10, 1008
7. ELMŰ-ÉMÁSZ (Budapest Electricity Companies-North-Hungarian Electricity Works) – Mr. Norbert Boross, December 8, 2008
8. Energia Klub (Energy Club) – Ms Zsuzsanna Király, program and project manager, December 16, 2008
9. FŐTÁV (Budapest District Heating Works) – Mr. Róbert Balog, December 5, 2008
10. KVVM (Minsitry of Environmnet and Water Management) – Mrs. Dr. Istvánné Csoknyai, lead advisor, clean air protection, December 9, 2008

Installation of photovoltaic panels (Purchase) (4)
Naplopo (Producer of Solar collectors)
KHEM (Ministry of Transport, Telecommunication and Energy)
MFB (Hungarian Development Bank)
Greenpeace

Buying Green Power (Purchase) (4)
MVM (Hungarian Power Companies)
MEH (Hungarian Energy Agency)
Greenpeace
ELMŰ-ÉMÁSZ (Budapest Electricity Companies-North-Hungarian Electricity Works) –

Construction of low Energy Houses (3)
Energia Klub (Energy Club)
FŐTÁV (Budapest District Heating Works)
KVVM (Minsitry of Environmnet and Water Management)

Energy efficient Refurbishment (3)
KHEM (Ministry of Transport, Telecommunication and Energy)
Energia Klub (Energy Club)
FŐTÁV (Budapest District Heating Works)

Energy efficient Heating Behavior (Use) (3)
Energia Klub (Energy Club)

FŐTÁV (Budapest District Heating Works)
KVVM (Minsitry of Environmnet and Water Management)