Subtask 2 – Austria: the Energy Hunt (with comparison to €CO_2-Management)

Task 24 – Phase I

Closing the Loop – Behaviour Change in DSM:
From Theory to Practice

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Contents

Introduction to the case story

This document summarises the general observations and lessons learnt based on the empirical analysis of two Austrian energy saving competitions: the Energy Hunt (*die Energiejagd*) and €CO_2-Management. The general objective of both competitions is to save energy in private households, mainly based on change of energy behaviour and small investments in energy efficiency. Nevertheless, the approaches to activate people for saving energy at home was very different: the Energy Hunt is more or less based on bringing people together and helping each other in saving energy to score a reduction of energy of 10% - also based on betting their City Council that they would do better than them. The approach of €CO_2-Management is based on individual information delivered from energy experts and on applying smart technologies (in case of €CO_2-Management smart meters combined with an iPod).

Both case studies are part of Subtask 2 (Case Studies) of Task 24: Closing the Loop – Behaviour Change in DSM: From Theory to Practice. This case study report is based on reports that have been elaborated in the context of these campaigns and includes also feedback from discussions with stakeholders and participants of these campaigns, and interviews with both project managers.

The Energy Hunt: the Energy Saving Competition of Groups of Households

The Concept

The Energy Hunt was part of the energy saving competition "Energy Neighbourhoods 2"[1], funded by the EU within the *Intelligent Energy Europe* (IEE) Programme. It took place in 16 EU Member States: Austria, Belgium, Bulgaria, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Poland, Romania, Slovenia, Spain and Sweden. Austria adopted the slogan and branding of the Belgian partners, who had already implemented the campaign for several years, and called the campaign "The Energy Hunt".

The general idea of the campaign is an energy saving bet between cities and their citizens. A group of five to twelve households promised to save at least 9% of energy (electricity and heat) during a campaign period of four months - normally during the winter period. In order to measure the energy savings, participating households had to meter their energy consumption and to enter the respective data into an online tool. This tool automatically calculated the expected energy consumption of the household until the end of the campaign. In this way, participants got an idea if they would perform well or if they would have to increase their energy saving efforts. All groups of households that managed to reach the energy saving limit of at least 9% were awarded in a special energy-saving ceremony with some smaller prices and certificates.

The energy-saving activities of participating households had to focus on behavioural changes. In addition, some smaller investments in energy-saving products were allowed. Nevertheless, energy-saving activities should not lead to a reduction in the comfort levels of the participants – so that nobody would suffer from low indoor temperatures during winter in order to win the challenge.

A core element of the campaign was the co-called 'Energy Master': Each group had one enthusiastic person who coordinated the members of his or her group and supported them around organisational issues. When it comes to the question of "how to save energy" three levels of support were implemented in the campaign:

a) Energy saving tips (print and online materials)

b) Training of the Energy Masters

c) Support within the groups of households ("friends helping friends")

It was the idea of the campaign that people come together to compare their energy bills, discuss the reasons of variability in energy costs and identify promising measures to save energy. In addition, a mid-term meeting to exchange experience was organised for all participating groups in order to get new ideas on how other households managed to save energy.

In the course of the EU funding, the project was undertaken twice in Austria in the province of Styria: in Winter 2011/2012 and Winter 2012/2013. Another campaign without support of the EU and with some conceptual changes was implemented in the Winter of 2014/2015.

[1] See: http://ec.europa.eu/energy/intelligent/projects/en/projects/en2. The original idea of the campaign based on the

Fig. 1: the marketing of the Energy Hunt

What is the stated aim and target of the intervention?

The *quantitative targets* of the campaign are the reduction of energy consumption and greenhouse gas emissions in households. In addition to these "material" targets, the project also addresses social and individual targets.

The *social target* of the campaign is to bring people together to discuss environmental topics, to define and reach a common goal and to give support to members of their own group or to other participants.

The *individual target* is to change some behaviours of the participants long-time, i.e. to continue after the campaign. This includes buying new energy efficient appliances, checking and fitting the settings of appliances, computers, hot water boilers, heat pumps, turning down indoor temperature etc. and to change some daily routines (like turning off artificial lighting, cooking with a pressure cooker, applying power strips to avoid stand-by waste…).

What is the methodology and theoretical underpinning of the intervention?

The Energy Hunt is based on a *systemic, social approach*, including the individual and material context. Actors of the campaign (the participating households) are operating in an inter-personal network. As the campaign is embedded in a bet on the municipal level, aspects of community cohesion and collaboration are also addressed.

Behavioural changes realised by the Energy hunt are caused by the following models:

a) Change via social networks: groups of five to twelve households are working together to save at least 9% energy in average in all of these households. Members of this group of households meet to exchange information and to support each other. Several groups within a city are betting against the city (the Mayor) to manage to save at least 9% energy.

b) Change by learning: people get informed by the project organisation team (directly via printed information materials, the homepage, newsletters and meetings as well as indirectly by training representatives of the cities and the Energy Masters.

c) Self-regulation & feedback: every household records the individual, current energy data and gets a personal forecast on their achievement of the 9% energy saving goal. In this way, participants are able to check if they are on track or if they have to increase their efforts. In addition, every household gets mobile energy consumption meters to check the level of energy consumption of the electric appliances. Feedback is not coming only from technical infrastructures – feedback is also given by members of the respective group of households, e.g. during the group meetings or discussions with the Energy Masters.

d) Emotion raised by gamification: all groups managing to save at least 9% energy are winners in terms of the project – they have won the bet against their city and are awarded in the course of a final event. Positive press releases are another emotional factor: the campaign is supported by a series of regional or local articles in newspapers. Some of these articles are dedicated to participants of the campaign which is a kind of personal appreciation of their engagement.

€CO_2-Management

The Concept

€CO_2-Management[2] has been set up as a leader-project of the Austrian Research Promotion Agency (FFG). It consists of three sub-projects:

- Sub project 1: dealing with technical implementation of smart meters
- Sub project 2: field test in the area of three energy suppliers (electricity, district heating and gas), supported by individual energy consulting and technical devices like in-home display, green plug or webportal
- Sub project 3: accompanying research and evaluation

€CO_2-Management is based on the idea of a voluntary micro-emission trading system. This system requires an interaction of companies, households, producers, financial institutions and markets for emission certificates. The general process to generate a micro-emission trading system is scheduled in four sections:

1) Households implement energy-saving actions to reduce their energy consumption and their CO_2-emissions
2) The reductions in CO_2-emissions are being proved and confirmed by certificates
3) Demanding companies purchase certificates from initiators of the respective programmes
4) Revenues of sold certificates will be recompensed to participating households corresponding to their reductions of CO_2.[3]

Within the nationally-funded project €CO_2-Management, three utility suppliers (Energie Graz, Energie Klagenfurt and E-Werk Lugitsch) invited their consumers to join the field test of €CO_2-Management. Participants of the field test participants could receive several benefits: they got a free energy consultation at home, a smart meter was installed, an iPod with an app to keep tabs of the energy consumption and further supporting materials (online tool, programmable eco-plug sockets and information materials) were handed over. Furthermore, participating households could opt for a special eco-rate for electricity.[4]

[2] http://www.energie-graz.at/energie/erdgas/smart-metering/projekt-eco2-management

[3] See: Mikroemissionszertifikate, Joanneum Research, 2013

[4] See: http://www.grazer-ea.at/cms/aktuelles/archiv-/auszeichnungen-und-projekte/idart_1236-content.html

What is the stated aim and target of the intervention?

The overall targets of the campaign are:

- Making energy consumption transparent
- Find needless energy wasters
- Save money
- Reduce green house gases and
- Flexible pricing models.

In this context, the project analysed in detail socio-economic aspects of the campaign.

What is the methodology and theoretical underpinning of the intervention?

€CO_2-Management is set up on the basis of *neoclassical economics*: the support of individual people by energy consultants and the provision of information and supporting materials, including incentives (the iPod).

Fig 2: The €CO_2-Management brochure

Implementation

Context and History - an Overview

For many years, Austria's energy system has been characterised by a constant increase of energy demand (see Fig. 3). This increase can be identified in all sectors with the exception of the sector of agriculture ("Landwirtschaft"). For the last ten, years a stagnation of the final energy demand has occurred due to economic crises, high prices of crude oil and weather conditions (relatively warm winters).

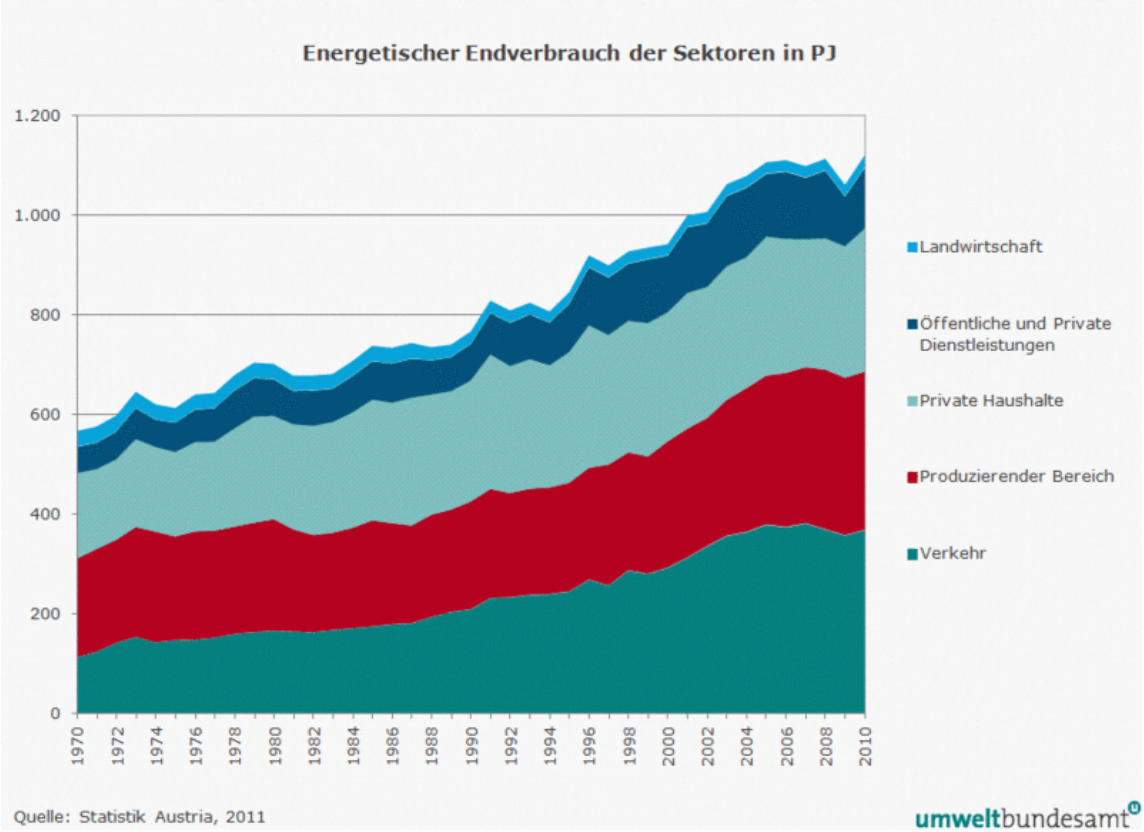

Fig. 3: sectoral energy end use in Austria, Source: Statistik Austria, 2011

Concerning the composition of applied fuels, the share of coal and oil has constantly been reduced which has been beneficial for renewable energy sources. Especially in the sector of households all kinds of coals now more or less disappeared from the energy market. The share of oil for heating has also been significantly reduced by approx. 45% (see Fig. 4).

Furthermore, Austria is – compared to EU member states - in the leading position regarding renewable energy sources:[5]

- First position in share of renewables for production of electricity
- First position in share of renewables related to the territory
- Third position in share of renewables related to the gross domestic consumption.

[5] Energiestatus Österreich 2105 – Entwicklungen bis 2013

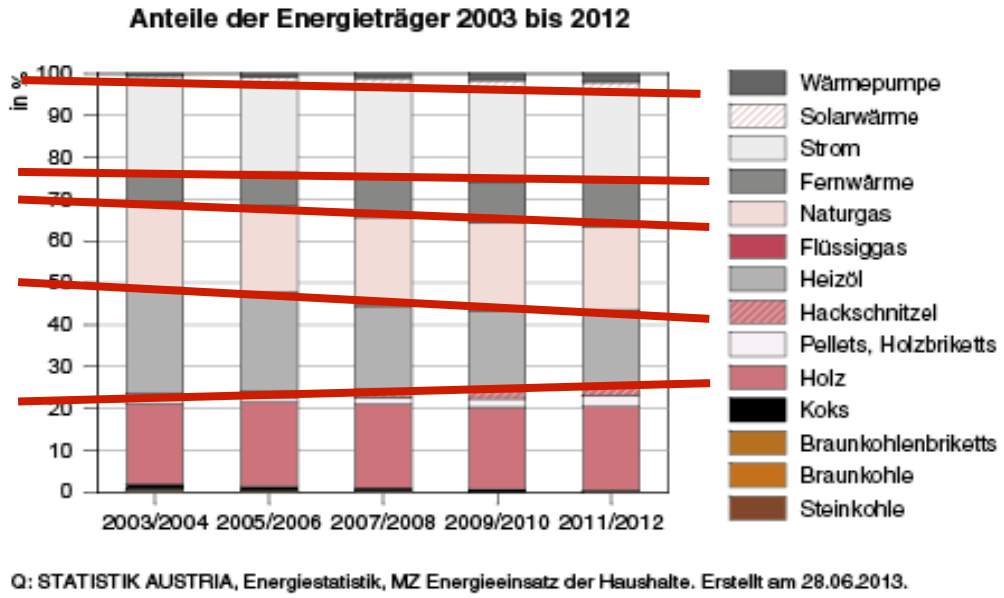

Fig. 4: share of fuels in the sector of households in Austria, Source: Statistik Austria, 2013

Climate change is one of main drivers to increase energy efficiency and renewable energy sources. Statistics highlight that increased average temperatures – one of the effects of climate change – will affect Austria on greater levels than some other countries (see Fig. 5).

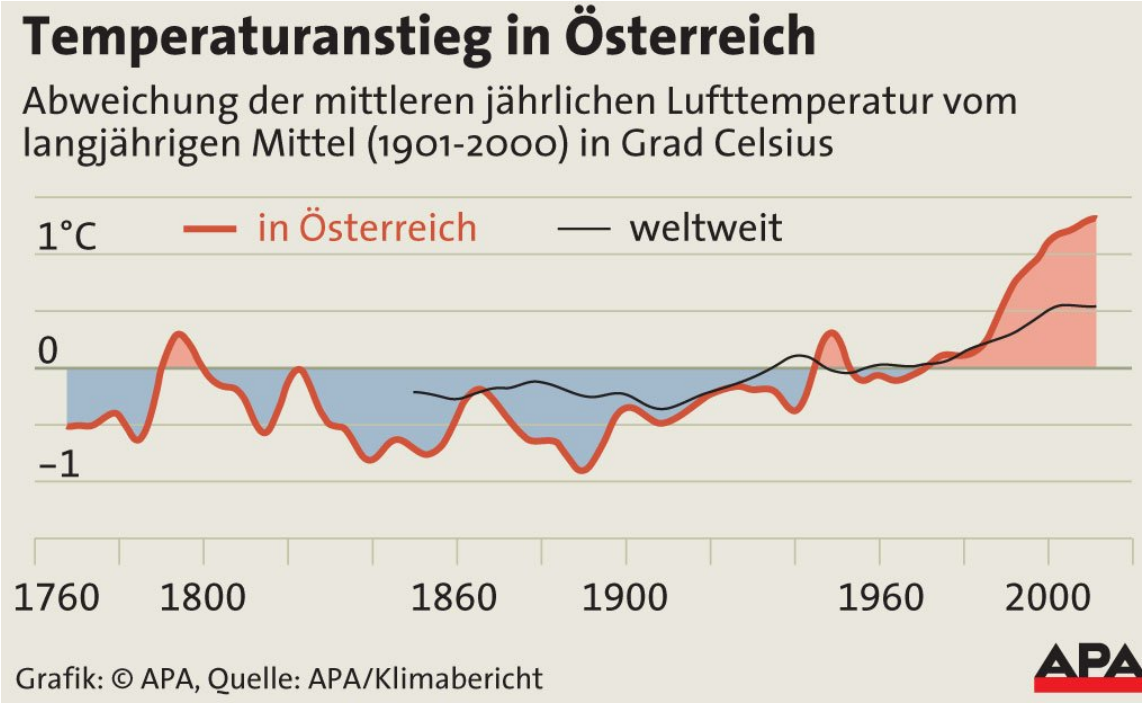

Fig. 5: Increase of average temperature in Austria (red line) in comparison to the world (black line), Source: APA

Nonetheless, Austria failed in achieving its target of the Kyoto-protocol: in 2012, the greenhouse gas emissions represented more than 80 Mio. t – the corresponding target for Austria is less than 69 Mio. t (see Fig. 6). Reasons for that failure are increasing emissions in the transport sector and industry.

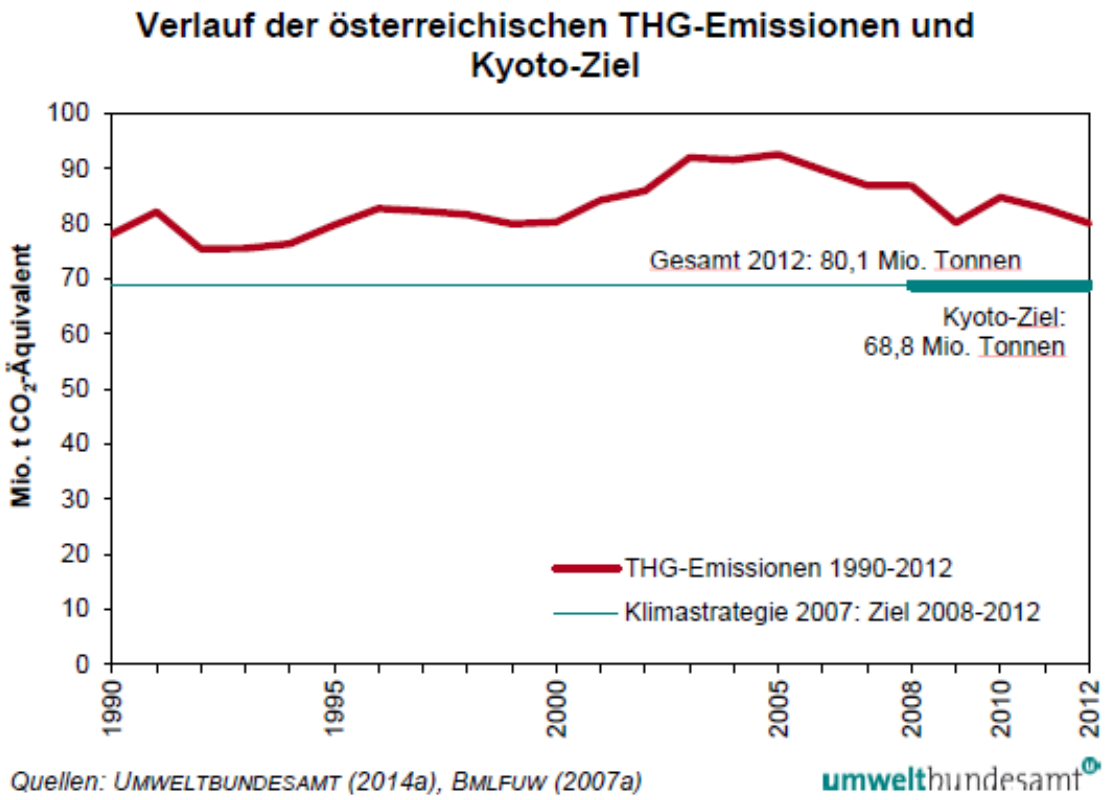

Fig.6: Trend of greenhouse gas emissions in Austria and the Kioto target of Austria, Source: Umweltbundesamt, 2014

The national energy and climate protection policy is organised on three levels of public administration:

1. The federal state has elaborated national strategy plans to increase renewable energy sources and efficiency as well as to improve climate mitigation. In the resent past, a new strategy to deal with climate adaptation has been elaborated. These strategy papers include specific laws like the Climate Protection Law, the Law on Energy Certificates for Buildings or the Law on Energy Efficiency, specific focus of and in research programs (like the Austrian fund for Climate and Fund or the City of Tomorrow Program), awareness campaigns like *klima:aktiv* (see: www.klimaaktiv.at) or subsidy schemes for private households, companies and public bodies. Nevertheless, the federal state has only limited effect due to political systems which transfers a lot of competences to the nine Austrian provinces ("Bundesländer).

2. The nine regional provinces have elaborated their own strategy papers: on the one hand they are responsible for certain laws like the Building Codes, the Law on Coal-Fired Power Plants, the Law on Spatial Planning as well as for the subsidy schemes for residential buildings or renewable energy plants. In addition, most of them they have their own awareness campaigns and energy consultancy firms. That is why each region has its own regional energy agency or a similar institution (see Fig. 7).

Fig.7: Map showing the registered national, regional and local energy agencies in Austria, Source: Managenergy, 2014

3. On the local level, municipalities have important roles when it comes to the implementation of the respective laws. They are key actors to change the infrastructure of the energy systems (e.g. district heating systems) and to implement energy issues in their spatial planning. In addition, they may also have their own awareness campaigns and their own subsidy schemes for renewable energy plants or energy efficient buildings. Most of them have their own energy action plans and some of them are members of the regional programme for energy efficient communities (called *e5*, on international level known as the *European Energy Award*). Most important is their role for awareness-raising campaigns as they have the closest contact to their citizens.

Barriers

There is common knowledge in Austria that climate protection is a core issue for the present age and for the future. This knowledge is accepted by the majority of Austrian population. And it is also evident that energy efficiency and renewable energy sources are promising/necessary strategies to overcome these problems. Nevertheless, this knowledge does not (or only in a limited amount) lead to concrete actions. There are some technologies like solar thermal systems in the past, or the current photovoltaic systems that people are willing to install. But all day energy-efficient behaviour is limited to some “green weirdos”. It is quite interesting, however, that a conscious lifestyle is widely accepted for food and health.

On the political level, one can say that the Austrian political system is somewhat too complicated to have a current overview of, or keep track of all the various laws, strategies, subsidies, campaigns etc. on the national, regional or local level. For instance, there are several subsidy schemes one may apply for for new buildings or for renovating buildings. All of these subsidy systems have their own regulations, thus even if the building owner knows them he/she has to bear in mind the various requirements and different kinds of funding.

As awareness campaigns are implemented by all levels of public administration, they are implemented more or less separately from each other. There is no overall strategy or know-how exchange platform to increase the effects of such activities. All of these campaigns start from the beginning and improve their performance by trial and error.

Methodology

This case study is based on the evaluation report of the project “Energy neighbourhoods 2”, on the final report of “The Energy Hunt in Styria” provided to the regional government of Styria and by the accompanying research of the €CO_2-Management report.

Limitations

The biggest limitation of both campaigns “The Energy Hunt” and “€CO_2-Management” is the self-selected target group, which was similar in both projects. It is still the problem of all of these campaigns that it´s not the “normal”, everyday people who join such campaigns. In fact, the majority of participants have already been interested in environmental issues before the respective campaign started. This probably counts even more for *€CO_2-Management* as the recruitment of participants has been implemented by the respective utility companies. In the campaign *The Energy Hunt*, the campaign organisation team could expect to have recruited some people who have not been familiar with energy efficiency at home because the recruitment of the campaign has been done by interested Energy Masters who have compiled their teams from their circles of friends.

The Story of …

The Energy Hunt

Once upon a time… Households all over Europe were very energy inefficient. Austria was slightly better than some other countries, but people still liked to have 23C inside their flats when it was -20C outside
Every day… Clever policymakers were trying to come up with new ways to make people more energy efficient
But, one day… The EU's Intelligent Energy Europe programme had a great idea and funded an 'Energy Hunt' programme where neighbourhoods from 16 countries all over Europe were pitted against their City Council with the goal of saving 9% energy
Because of that… 8 Styrian cities took part in this programme for Austria, called 'Energy Neighbourhoods 2', with 35 neighbourhoods all up participating in the energy hunt
But then! They realised it was quite difficult to get people to monitor their own energy consumption, as this project didn't have any fancy smart meter technology. So they needed to find the early adopters and make them 'Energy Masters' who were leading the other households in the neighbourhood in the competition and made sure they were monitoring their consumption.
So, finally… they realised that bringing people together in a group with a common goal and a strong social learning component inspired them to save quite a lot of energy – up to 26% in the winning household! 20 households saved more than the 9% of energy they bet against their Mayor.

Fig. 8: the story of "The Energy Hunt" by Dr. Sea Rotmann in: Subtask 1 'Monster' report, November 2013

€CO_2-Management

Once upon a time… Many people in Austria lived side-by-sde and didn't care much about energy. They just paid their energy bills without thinking, no matter how high they were
Every day… They behaved like the day before, because they didn't see any difference on their annual electricity bill if they tried to save any energy
But, one day… They got a smart meter installed and wise men came to their house and gave them advice on how to save energy and they also showed them how to use their smart meter to see the impact of their changed behaviour. They even gave them an iPod with a feedback app installed. The wise men also gave them brochures about energy efficiency with lots of numbers and graphs in them and told them there are different tariffs for their electricity and then the wise men left
Because of that… The people were quite motivated to save energy and made many plans to change their behaviour
But then! After a while, they forgot about all their plans. They also forgot about the smart meter and the wise men and even the intelligent iPod with the feedback app, which ended up hidden in their kitchen drawers
Because of that… The savings went down and only increased when the wise men announced that they would return and ask them how it was going.
So, finally… Overall, the savings were around 6%, which was better than nothing but the effort was huge compared to the savings which were much

Fig. 9: the story of "€CO_2-Management" by Dr. Sea Rotmann in: Subtask 1 'Monster' report (2013)

Main results so far

The Energy Hunt

Three Styrian cities participated in the first campaign in Winter 2011/2012: Graz (the capital of Styria, approx. 270,000 inhabitants), Weiz and Gleisdorf (two smaller cities in Eastern Styria, approx. 11,000 inhabitants). In these three cities, a total of 18 groups of households bet against their cities to manage to save at least 9% of energy. In total, 110 households participated in this first campaign.

In the second period (Winter 2012/2013), the campaign increased its regional scope to the whole of Styria including eight cities: additional to those from the first campaign also Bruck an der Mur, Hartberg, Kapfenberg, Leibnitz and Leoben (all of them district capitals in Styria, approx. 7,000 to 25,000 inhabitants). The number of participating households increased to 267, and a total of 39 groups. Compared to the first campaign, the average numbers of households per group was lower in the second run.

The overall results of both periods are more or less the same: in the first period, the average energy savings were about 10%, in the second period about 11%. Thus, counting all participants the campaign succeeded in passing over the 9% limit. Best performing households reached energy savings of 19% in the first period and 26% in the second period.

Nevertheless, not all groups stayed the course of the campaign. Approximately 5% of participating groups dropped out of the campaign during the challenge. And not all of the “finalists” managed to reach the 9% limit. Some groups even did not save any energy during the campaign. In most of these cases this was related to additional members in these households (babies), different circumstances (e.g. retired people or vacations in the reference period).

Compared with the international participants of the “Energy Neighbourhoods 2”- project the results in Austria have been more or less average. Nevertheless, the national energy savings fluctuated vastly between 3% and 27%. It is quite evident that the success of such campaigns is directly linked to the strategy of the campaigns and the partnerships for dissemination.

On the international level, some very impressive individual savings occurred: up to almost 65% (see Fig 10). Of course, these results are caused by some individual framework conditions and cannot be considered to be realistic for the majority of households. For Austria, the organisation team did not expect such high savings – until the third edition of the Energy Hunt: the winning household managed to save energy by more than 67%!

Country		National winning team	%	kWh	CO2 (tons)
Greece	1	7ο ΓΕΛ ΝΕΑΣ ΣΜΥΡΝΗΣ (1)	64,79%	37 295,99	26,78
Latvia	2	Ādamiela2	51,43%	11 975,00	1,08
Bulgaria	3	AUGUSTA	47,98%	9 759,00	7,42
Spain	4	TRULLASETS	46,83%	8 783,99	1,84
Romania	5	Grupul Teodorescu	37,14%	43 567,00	9,63
Ireland	6	Emly Tidy Towns	36,51%	7 801,10	4,10
Belgium	7	De Ijsberen	34,74%	90 854,38	30,53
Germany	8	Grill 13	34,40%	2 420,78	1,36
Italy	9	Gli Etruschi	33,94%	28 493,00	8,60
France	10	Sociowattkillers	28,87%	15 409,89	3,20
Austria	11	Wohngemeinschaft Parkring	25,66%	9 245,31	3,86
Slovenia	12	SPL	24,62%	12 907,00	2,22
Hungary	13	Győr és környéke	22,82%	34 297,58	10,77
UK	14	Abbey	19,93%	10 159,20	4,86
Poland	15	Monster Eco Power	18,49%	55 77,82	1,90
Sweden	16	Snåljåparna	15,46%	7 720,00	0,15

Fig. 10: the final European results of Energy Neighbourhoods 2, source: Energy Neighbourhoods brochure, October 2013

Comparing both rounds of Energy Neighbourhood, one can recognise that the second round has been more effective than the first round: the energy savings have been higher in the second round (for the top results and even the low level results) – see Fig. 11 and Fig. 12.

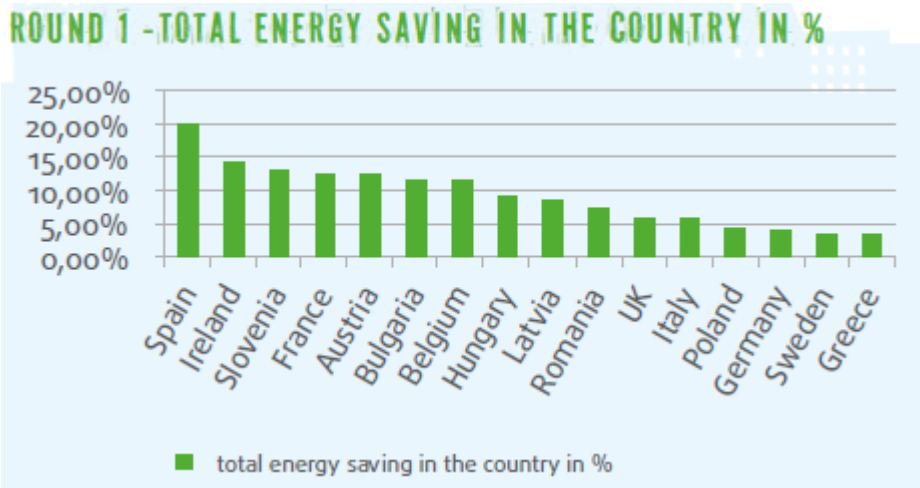

Fig. 11: the national average energy savings in round 1 of Energy Neighbourhoods 2 (Source: Energy Neighbourhoods brochure, October 2013)

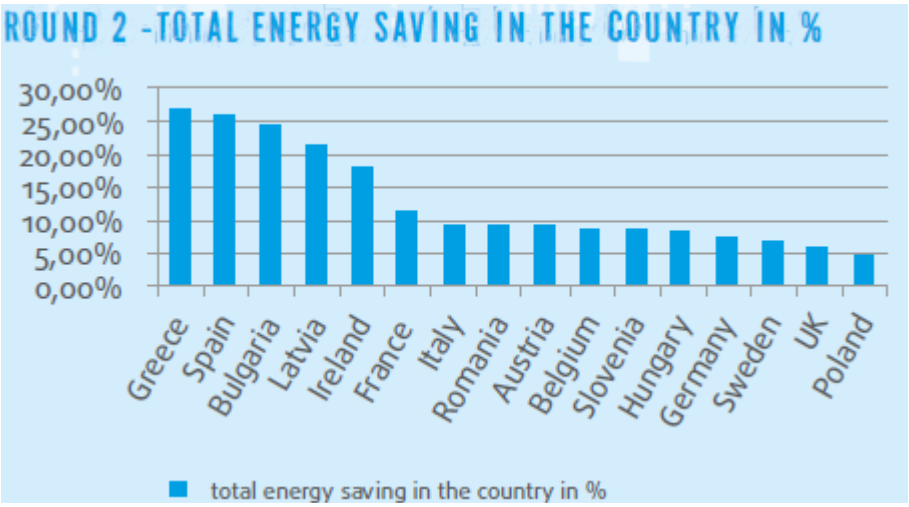

Fig. 12: the national average energy savings in round 2 of Energy Neighbourhoods 2 (Source: Energy Neighbourhoods brochure, October 2013)

€CO_2-Management[6]

In total 253 households joined the €CO_2-Management field test, they gained energy savings of 6.8% in average. Excluding the energy consumption for hot water, the energy reduction was even higher: 7.8% in average. This is due to the fact the participating households did not save energy for hot water: in average this consumption was increased by 9.8%. There occurred a wide range of deviations: some households managed to save more than 30% but there were also households that increased their energy consumption by more than 30%!

6 Statistical data are taken from the report: €CO2-Management Sub3 – Sozioökonomische Begleitforschung, Wegener Center, 2013

Findings and conclusions, strengths and weaknesses of the case study

Findings and conclusions

Both campaigns – *The Energy Hunt* and *€CO_2-Management* – have been effective in making little changes to our everyday habitual behaviours. For both campaigns, the most popular list of energy saving actions – the "Top 10" - are:

1. Installation of plug boards which can be switched off
2. Turn off lights (when leaving the room) and replacement of old lamps by LED or energy saving lamps
3. Hang up clothes to dry instead of using a tumble dryer
4. Unplug all appliances such as phone chargers and turn off all standby
5. Increase temperature of refrigerator
6. Turn off old but still in use appliances (e.g. old top-opening freezer in the cellar)
7. Replace old appliances by top energy efficient products
8. Reduce the heating thermostat
9. Boil just the correct amount of water for hot drinks or meals
10. Shorten time duration for showering and turn off the water for breaks during showering

In terms of effectiveness it can be stated that there is a strong need for people with some authority and leadership. In this sense, in *the Energy Hunt* campaign the 'Energy Master' has been of great importance depending if a group of households has been successful or if the group failed. In the *€CO_2-Management* project the responsibility of at least one person in the respective household has been of more importance.

Besides the engagement of the persons in charge, the campaigns have been effective for different kinds of people: *€CO_2-Management* has been of interest for "technophile" households (iPods, smart meters and web-portal have been the attractive to them), *The Energy Hunt* has addressed a larger diversity of people as households have been part of a team in which different knowledge and experiences have been put together. Being successful in *The Energy Hunt* campaign has been much more of a question of the social skills of the Energy Master.

Finally, the results of the evaluation of both campaigns highlight the importance of using multiple drivers appropriate to the target audience to assist behaviour change and should always be borne in mind when carrying out projects of this kind. In *€CO_2-Management* most people had lost interest in checking their energy performance on the iPod or on the Web-portal. In *The Energy Hunt* similar effects have occurred – it´s quite interesting that in advance of the mid-term meeting or at the end of the campaign, the feedback systems have been applied more frequently. Thus, being attractive to people over a longer period is not only a question of the usability of these tools. On the one hand an overall goal is needed and on the other hand accompanying, reinforcing activities during the course of the campaign are needed.

Lessons Learned

The project team of "Energy Neighbourhoods 2" has highlighted des following: *"The social aspect of the project and the commitment of the Energy Masters have been identified as key factors for the success of the project. Saving energy together, motivating each other to keep going and being supported by an Energy Master who knows the participants well, are elements that really keep the team together and are vital to the neighbourhood's success and the success of the project overall. The term neighbourhood does not necessarily mean that this competition is just for neighbours, natural groups that already exist such as a circle of friends, colleagues at work or an existing group tend to work better than groups that come together just for the project.*

The Energy Neighbourhood *project has shown that small changes in behaviour can contribute to significant home energy savings. For this project to work, however, and to bridge the gap between knowledge on how to save energy and making actual changes to attitudes and practices, there are other key elements that need to come together: the provision of relevant energy advice; ensuring that the project is fun and motivational – the use of competition and the social aspect of working as part of a team scored highly in this respect; a working calculation tool and continuous support from the organiser of the project. It was these elements for which the partners in the participating countries were responsible and which helped to ensure the overall success of the project."*

For Austria some additional lessons learned can be drawn:

1) *Recruitment of participants/Energy Masters*: the main issue is the recruitment of participants. As soon they are on board, they are happy being part of it. Convincing people to get on board of the campaign (and to lead a group of households) is currently the main barrier for the campaign. There is strong need for new strategic partnerships to achieve multiplier effects and to increase the benefits of being part of the campaign.

2) *The overall goal*: the minus 9% goal is not very attractive and does not reflect the social dimension of the project – it´s too "neoclassic-economical". Socially-driven or health-related goals like "Our world record in energy saving" or "We are saving a nuclear power plant from being built" will be more attractive.

3) *Social elements*: So far even *The Energy Hunt* campaign has limited offers for social interaction. These interactions are most relevant in terms of keeping track of the campaign and being active in terms of energy efficiency.

4) *Complexity of the campaign*: Especially the start of the campaigns is difficult, particularly to establish baselines: you have to check your previous energy behaviour, check your energy bills, fill in data in the web-portals, read regularly the current stand of your energy meters etc. This "intro" is a barrier for many people leading to a first drop-off. Thus, there is a strong need to reduce the complexity of the campaign in the beginning and train the participants in an entertaining way to keep completing these actions.

5) *Usability of online tool and information material*: People need an individually-tailored set of information and easy to understand online tools without boring user guides.

Comments of Participants

As mentioned, the Austrian Energy Hunt has been part of an EU-funded project – more or less the same energy savings campaigns have been conducted in 16 European countries (see www.energyneighbourhoods2.eu). In this section we present some of the remarks of the participants from all over Europe.[7]

What we learnt about our water needs?

Antonina, „Energomaniacs", Poland, 1st round

I sincerely admit that it was only during the competition, that I noticed the opportunities of saving water in our house. Previously, my knowledge of actions related to saving water were limited to changing the bathtub for a shower during the renovation of our house, reducing water consumption while brushing teeth and making sure the dishwasher was fully loaded before turning it on. During the competition, I learned about huge savings which could be generated by converting widely available drainers in our taps to water saving aerators. The cost of these was relatively low in comparison to the savings achieved – both in terms of water and money.

Saving energy with my family

Participant from Germany, 1st round

At the start of Energy Saving competition I had thought that 9% energy savings could be achieved by us easily – no problem. But after entering the first metering data in the online tool and checking our consumption I realized that as a lone wolf in my family and with measures such as "light off" and "no stand-by" etc. I would have virtually no chance to reach the reduction target. So it became clear: I had to get my family on board in order to reach the 9% target and had to convince them to change their behaviour as well. The whole family needs to participate when it comes to energy saving! Not at all easy – but we try.

Lutgart, "Zomergem", Belgium, 1st round

I think it's really interesting to participate in Energy Neighbourhoods since you always get the possibility to learn something new and the tips are really useful. Every method to save energy is more than welcome. It is nice to participate in a group, because you are not alone and you have great social contacts with neighbours. You stimulate each other to do better and you learn a lot from the tips of other people. Thanks to the tips, I saved energy and got a lower energy bill from my energy supplier.

John Powell, Crossgates Wasters team, UK, 1st round

Although we have never been 'extravagant' with our electricity usage it has been a good experience making not only the paymaster but the whole family aware of not leaving electric items on or questioning ourselves "do I need to use that?" Some simple and easy measures we use is when boiling the kettle only boil what is required; when using the grill turn it off before the food is totally cooked, there's plenty of heat left when cooling down to complete the cooking. Also don't leave items on standby. Standby for what? It's costing your dearly. These are only a few suggestions but when applied across the whole household it's then that dreaded meter starts to slow down. It's been a remarkable journey watching how other family members adapt to the concept of saving energy. Remember you don't have to starve with candles flickering, huddling up in blankets like penguins in the Antarctic, just think ahead of yourself, why light up another room with televisions or other items left on, when you are probably only using one or two rooms - "shut it down".

Why is it good to compete as a group?

Romonya, Hungary, 1st round

Our small community has decided to enter the Energy Neighbourhoods competition to reduce our energy consumption. It wasn't really the competition itself but the possibility to save some extra money that motivated us in the first place. I was pretty sure that we had at least a dozen things that we could do better in order to save energy. Unfortunately, we take on quite a number of bad habits during the years and we don't even notice how wasteful our lives become. I'm not a hugely

[7] These remarks are taken from the Brochure of the *Energy Neighbourhoods 2* Project, October 2013

sociable person, but I can feel that this initiative has so much advantage to it that I don't want to be left out. Reading the info packs and collecting ideas individually is not enough, it's much better to "work" as a member of a group. Notwithstanding the fact that if we would like to achieve something – anything – we've got to join forces. I was sceptical in terms of decreasing my energy consumption, I didn't really see what I as an average person could do, but as I got deeper into this topic and as I see the enthusiasm of the other members of the group, I don't feel hopeless anymore. Furthermore, I got to know really nice people with whom I can talk about other things too, and we even organize common programmes for ourselves and this is the most important of all.

How energy-saving lamps influence your TV -viewing behavior

Hunting, Austria, 1st round

By combining behavior change (no wasteful consumption) and some small technical changes (new cooking pots, better illumination, power outlet strips with toggle switches, etc.), I managed to reduce my energy consumption significantly. I started off with reducing my energy consumption for illumination. So the first step was to make my own experiences with energy-saving bulbs and LEDs. By doing so, I can now confront potential skeptics of this new technology with my own experiences. That makes arguments a lot easier.

The Christmas Challenge

Marko Odič, Energy Neighbourhood "Števci", Slovenia, 1st round

The 1st Climate Challenge was set up in one of the most energy consuming months, December. From this month on we were supposed to reduce energy consumption. I decided to observe my personal energy consumption in my home, e.g. energy consumption for heating, water usage while cooking, maintaining a high standard of personal hygiene, washing dishes and doing laundry. These observations helped me to understand "the energy profile" of my household. I realized which energy fields have a significant impact on the energy consumption.

You never know what you'll find!

Ian Miller, Hewlett Packard Energy Neighbourhood, UK, 2nd round

I joined the Energy Neighbourhood group at work mostly not to save the planet but to save my own money. Energy costs keep going up and my income is not. I borrowed the group electricity meter and walked around the house turning things off and on to see what made a difference. Turning the printer off properly made a small difference, shutting down the broadband router and network drive did not make much of a difference, so I kept looking. Using the kettle and shower used noticeable amounts of electricity so I try and minimize those. I thought I had things under control. Karen (Energy Neighbourhood Project worker) said my electricity usage was unusually high for a house occupied by only two people. I kept walking around my house looking to see what was switched on and could not find anything unexpected. My daughter had returned to university after being at home over Christmas and so her bedroom in the loft conversion was unoccupied. While I was there I thought to check the electrical heater for the room and found it was on. It had been on continually since December! I've now switched it off and look forward to lower electricity usage and, importantly lower bills.

Vicente Maravilla Moreno, Energy Master of the group Menys és més (Algemesí), Spain, 2nd round

In total we are now 10 families in the group, with very different profiles but a special relationship has been created, so we deal with the saving challenge with a high dose of irony and sense of humor. We have created a "whatsapp" group through which we share our experiences at home, doubts, concerns and more than one joke. We have also set up a casual meeting on some Fridays, in a bar, where we share some beers and anecdotes. To sum up, with the excuse of the saving and the concern for the environment different persons have gathered together, some of them didn't know each other before this experience and now we have another interest to share.

The handy protocol for energy saving!!

Vassiliki Dourali, "Friends for Saving", Greece, 2nd round

We established a simple but handy protocol! It is quiet heavy to characterize a set of simple rules as a "protocol", but endorsing these simple rules affects positively energy consumption and leads to energy saving! It may sound funny but we have also invented the characterization "energy hooligan". We usually use it to characterize those friends and neighbors who were not keen on

participating in "Friends for Saving" at the beginning and they still keep consuming energy at their homes in the way they used to!! Taking into account that it is quite "heavy" for someone to be characterized as a "hooligan", we hope we will manage to make them be keen on changing habits and be more energy and environmentally aware in the future. Our motto is "Stop being such an energy hooligan! It's simple!"

Let the Low-Energy Lights shine during Christmas

Julia Persson, Team Mammorna, SWEDEN, 2nd round

In Sweden we have a lot of Christmas lightning for decoration, in every window, in all the trees in the garden we let the lights shine. This year we turned off the light during the daylight hours and we didn´t let them shine the whole night by using timers. But as a family with a 9 month baby, our house is flooding in lights already in the early morning hours, but of course… there is just low-energy light that shines.

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