ENERGISE

EUROPEAN NETWORK FOR RESEARCH, GOOD PRACTICE AND INNOVATION FOR SUSTAINABLE ENERGY

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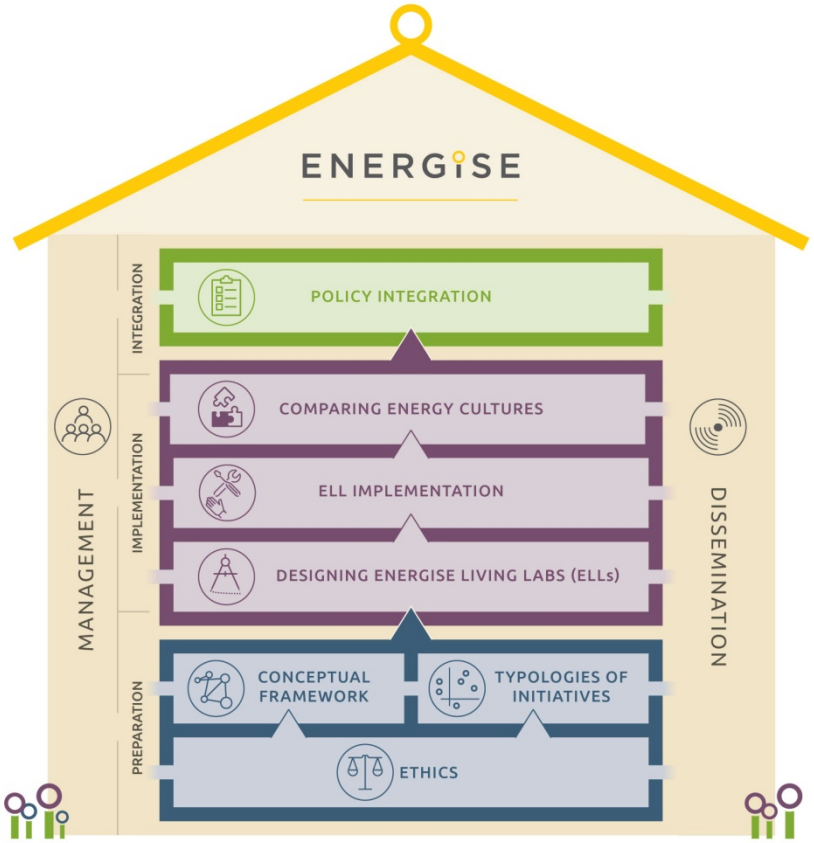
ENERGISE PROJECT

ENERGISE is an innovative pan-European research initiative to achieve a greater scientific understanding of the social and cultural influences on energy consumption. Funded under the EU Horizon 2020 programme for three years (2016-2019), ENERGISE develops, tests and assesses options for a bottom-up transformation of energy use in households and communities across Europe. ENERGISE's primary objectives are to:

- **Develop an innovative framework** to evaluate energy initiatives, taking into account existing social practices and cultures that affect energy consumption.
- **Assess and compare the impact** of European energy consumption reduction initiatives.
- **Advance the use of Living Lab approaches** for researching and transforming energy-related practice cultures.
- **Produce new research-led insights** into the role of household routines and changes to those routines towards more sustainable energy.
- **Encourage positive interaction** between actors from society, the policy arena and industry.
- **Effectively transfer** project outputs towards the implementation of the European Energy Union.



INTRODUCTION

This document is one of 30 national briefs, demonstrating key aspects of national energy supply and demand dynamics. Each brief is comprised of five sections:

Section 1 summarises the energy profile of the country. The section provides basic quantitative information of demand demographics and usage profiles, market trends and energy supply profiles, as well as qualitative reflections on current national energy policy. ***For all the briefs, the quantitative information is derived from ec.europa.eu/eurostat (2015 data), eea.europe.eu (2015 data), and climate-zone.com, unless otherwise stated.***[1] The qualitative reflections are based on a literature reviews and desk-research. References for the literature review and the desk-research are provided in footnotes or in section five.

Section 2 summarises the nationally based sustainable energy consumption initiatives (SECIs) that have been identified as part of ENERGISE WP2 framework (Jensen, 2017). Each SECI has been coded according to the Problem Framing Typology developed in ENERGISE WP2 (Jensen et al, 2017b).

Section 3 provides a *good practice* example of a national SECI that corresponds to category 3: “Changes in Everyday Life” or 4: “Changes in Complex Interactions” in the Problem Framing Typology. Please refer to Jensen (2017) and Jensen et al (2017b) for more information on the way the data for the good practice SECIs has been researched and documented.

Section 4 provides a brief summary of major nationally specific trends and their implication for energy consumption policies.

Section 5 provides an overview of sources used for qualitative assessments, and can be used as inspiration for further reading.

The national briefs provide contextual socio-material information for the further work to be carried out in Work Package 4, Work Package 5 and Work Package 6 in ENERGISE.

1.1 WP2: TYPOLOGIES OF ENERGY INITIATIVES

ENERGISE WP2 is a systematic criteria-guided review and classification of existing sustainable energy consumption initiatives from 30 European countries (EU-28, Switzerland, and Norway), which provides a comprehensive European database of energy initiatives involving households, and related typologies of sustainable energy consumption initiatives. This extensive synthesizing work guides the selection of Living Lab design elements for ENERGISE and future energy consumption research, policy and practice.

[1] Some piecharts will be empty, as no information is available.

This is done in order to

- Construct innovative typologies of sustainable energy consumption initiatives that can inform further research and action.
- Identify key success factors and related indicators, focusing on individual-level, collective, organizational, institutional and societal aspects of energy consumption, which will inform subsequent WP 3 (Designing Living Labs), WP 4 (ENERGISE Living Labs) and WP 5 (Capturing Energy Cultures).
- Progress the goals of the European Energy Union by creating a publicly archived open access dataset of sustainable energy initiatives across 30 countries in Europe.

Suggested further reading:

Jensen (2017) *Identification of key success factors and related indicators.* ENERGISE – European Network for Research, Good Practice and Innovation for Sustainable Energy, Grant Agreement No. 727642, Deliverable 2.2.

Jensen et al. (2017a) *Establishment of a comprehensive open access dataset of sustainable energy consumption programmes and Interventions.* ENERGISE – European Network for Research, Good Practice and Innovation for Sustainable Energy, Grant Agreement No. 727642, Deliverable 2.3.

Jensen et al. (2017b) *Constructions of typologies of sustainable energy consumption initiatives (SECIs).* ENERGISE – European Network for Research, Good Practice and Innovation for Sustainable Energy, Grant Agreement No. 727642, Deliverable 2.4.

Sources of quantitative statistics (unless otherwise stated):

Climate data:
http://www.climate-zone.com/continent/europe/

Demography data:
http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing

http://ec.europa.eu/eurostat/statistics-explained/index.php/Educational_attainment_statistics

Dwelling type data:
http://ec.europa.eu/eurostat/statistics-explained/index.php?title=File:Distribution_of_population_by_dwelling_type,_2015_(%25_of_population)_YB17.png

Energy demand and supply quantitative data:
http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_consumption_in_households

Final energy consumption of households per capita data: https://www.eea.europa.eu/airs/2017/resource-efficiency-and-low-carbon-economy/household-energy-consumption

MWh conversion data:
https://www.unitjuggler.com/convert-energy-from-toe-to-MWh.html?val=893.9

HUNGARY

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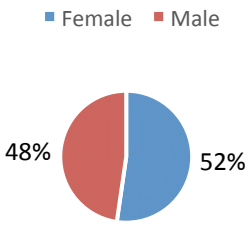
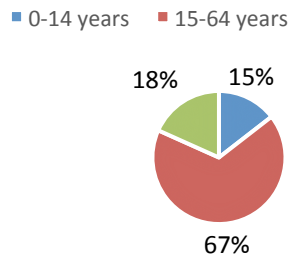
DEMOGRAPHY, ENERGY CONSUMPTION AND ENERGY SUPPLY

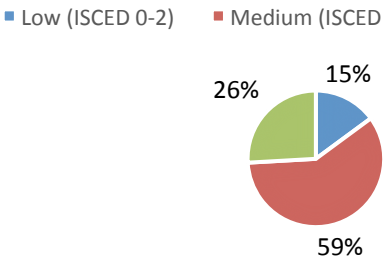
GENDER PROFILE



AGE PROFILE (2016)

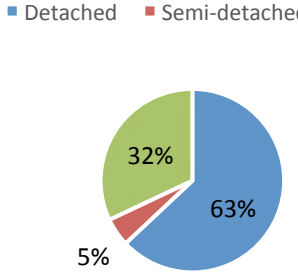


EDUCATIONAL PROFILE (25-54 Y, 2016)

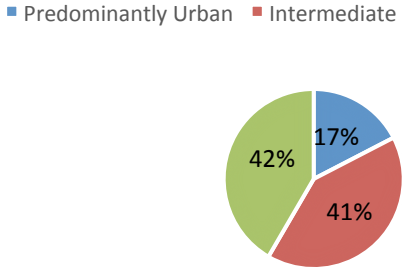


CLIMATE: temperate; cold, cloudy, humid winters; warm summers

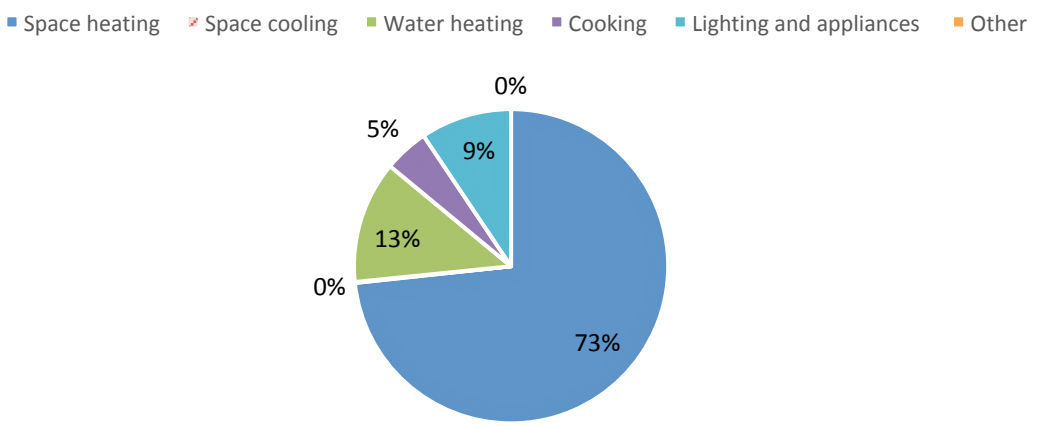
COMMON DWELLING TYPES (2015)



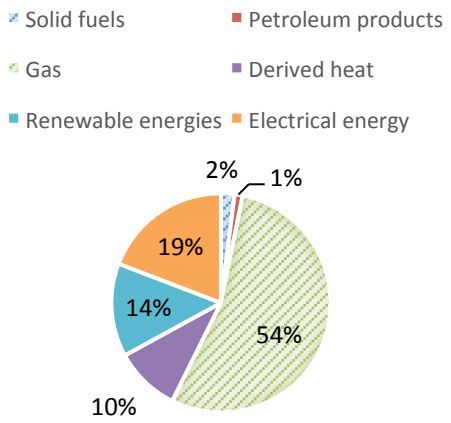
URBAN - RURAL DISTRIBUTION (OCED)



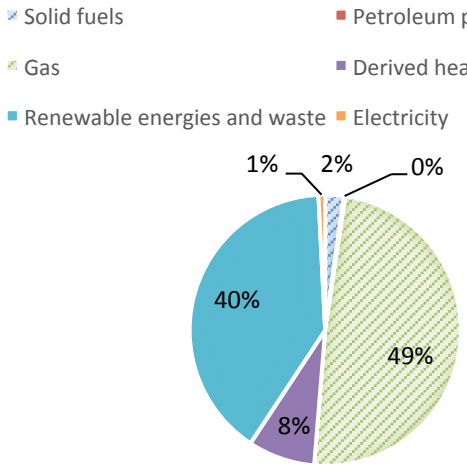
RESIDENTIAL FINAL ENERGY CONSUMPTION BY TYPE OF END-USE (2015)



SHARE OF FUELS IN THE FINAL ENERGY CONSUMP. IN THE RESIDENT. SECTOR (2015)



SHARE OF FUELS IN FINAL ENERGY CONSUMP. - RESIDENT. SPACE HEATING (2015)



FINAL ENERGY CONSUMPTION FOR HOUSEHOLDS, PR CAPITA (2015)

7.037 MWh

ENERGY SYSTEM AND ENERGY POLICY TRENDS

Energy system

In Hungary, at present, six regional grid operator companies and four universal energy provider companies are on the market ("universal" providers serve the household and small-consumers sectors) ('Magyar energiapiac szereplői' n.d.), Gaps and controversies in the governance of energy policies in Hungary are major issues in the national context. With regards to ownership structures, there is an explicit policy by the government to establish a state-owned, centralized infrastructure as the main means for the provision of energy for the household sector.

Particular socio-material aspects that influence energy consumption

A considerable share of the society (around 35%) live under the "subsistence" levels[2] and 21% in fuel poverty (Fülöp and Lehoczki-Krsjak, 2014). Thus the affordability of energy is a major issue and the popular policy of the government is to regulate the price of energy. The level of consciousness is low (the majority of the households do not follow their energy consumption data) ('Meg se nézzük a számlát – energiatudatlanságban a háztartások' 2013) and the household appliances stock is outdated and inefficient on a large scale (APPLiA Hungary n.d.).

Private ownership of residential properties is high (about 86%). Around 63% of the population (6.5 million people) live in detached houses, which means 2.5 million households (flats). Households in detached houses often use a mix of fuels for heating (e.g. natural gas and wood), but firewood and even household waste (despite legal restrictions) have considerable, and recently even growing importance ('Sokan térnek vissza a fafűtéshez' 2016). About 20% of the population (2 million people) lives in blocks of flats built by industrial technologies. Implications include: energy efficiency measures require decision at the community level, the energy efficiency of the relevant building stock is low due to technological reasons, etc. The use of district heating and other joint/community solutions are hindered by negative social attitudes towards public or joint ownership schemes.

Current Trends in Energy Policy

The important goals of Hungarian energy policy (MND, 2012) are, most of all, the provision of affordable energy, long-term sustainability, supply security and economic competitiveness. Special emphasis is put on **tackling the energy dependency** of the country by the means of i) energy savings, ii) increasing the share of renewable energy sources, iii) safe nuclear energy and the electrification of transport based on this, iv) creating a bipolar agriculture (food production and energy-geared biomass production), and v) better integration to the European energy infrastructures. To implement these several **thematic strategies, action plans,** etc. have been developed and approved in harmony with but also to meet legal obligations of the EU.[3]

In the context of **energy saving and efficiency**, the main focus is put on the household sector and the buildings stock (for a summary of relevant policies, e.g. national approach to the implementation of the EED, relevant targets, see Slezák et al., 2015). However, during the last few years relevant policy support has been volatile (e.g. relevant policies had been announced and then re-called), sporadic, and actual incentives have targeted the public rather than the household sector.

A characteristic feature of the recent energy policy is the **pivotal role of the government**. In this context such important measures were taken by the Government as setting up a 100% state-owned National Public Utility Company with the goal of ensuring the security of energy supply and

[2] No official governmental statistics is available anymore. For press information see e.g. 'A lakosság jó harmada él a létminimum alatt' 2017, 'A magyarok harmada él a létminimum alatt él' 2017

[3] II. CCS 2015 (currently in the process of Parliamentary endorsement), III. NEEAP 2015, EEOP 2015, Act No. LVII of 2015, Government decree No. 122/2015, Renewable Energy – Republic of Hungary National Renewable Energy Action Plan 2010-2020 (2011), NBEPS 2015, Government Resolution No. 1487/2015, ECARAP 2015. The National District-heating Development Plan is under finalization.

providing cheap energy to the Hungarian economy. (Slezák et al., 2015)

An explicit policy of the government is to **keep energy prices low**, especially in terms of tackling the "utility burden" of citizens. Related measures implemented have included the appointment of a governmental commissioner and the regulation of utility prices for the household sector (Slezák et al., 2015).

Hungarian governments have always been politically committed to **nuclear power generation**. The lifetime of the Paks Nuclear Power Plant (Paks NPP) reactors have got extended, while in January 2014 the government signed an agreement for the construction of two new reactors.

It is an ambition to become a regional leader in terms of **E-mobility** (MNE, 2015). The Jedlik Ányos Plan, the relevant strategy and action plan adopted in 2015, contains both financial and non-financial incentives for market extension and the spread of electrified transportation (Government Resolution No. 1487/2015). The strategic objective is to put into operation 30 thousand electric vehicles in the country by 2020 (MND, 2017).

The development of **Smart Energy Systems/Smart Grids** (My Smart Energy Initiative n.d.): though no central governmental strategy is dedicated to it, it is one of the goals of the 2010-2020 National Renewable Energy Action Plan. The **Smart Cities** concept has been supported both by the central and local governments ('Izgalmas konferencia: élhetőbb városok' 2010, Lados and Horváthné Barsi, 2011). The capital, as well as other major cities, have worked out their Smart City visions/concepts/strategies (for further information see: Debrecen Smart City n.d.; Kiss, 2015; Smart City Budapest n.d.; Szeged City, 2016). However, at present these are in an initial phase of implementation (Kulcsár, 2016; Merényi, 2017). In addition, some cities have exceptionally high ambitions for the development of their energy infrastructure (see e.g. Végh, 2017).

Gaps and controversies of the recent energy governance are major topics in the country (see e.g. Koritár, 2017). It is claimed that the potential for energy saving is higher than the scenario proposed by the government calculates with, thus national plans are not ambitious enough (Slezák et al., 2015). The expected growth rate of energy consumption is also questioned, and alternative estimations argue that the planned capacity enlargement of the Paks NPP is not necessary in view of the country's potential for energy efficiency improvements (see e.g. Lechtenböhmer et. al., 2016). The regulation of household energy prices is also disputed. It took place without any differentiation (e.g. according to income levels), price reductions have been introduced without effective improvements in the production and distribution of energy, and this way the energy/utilities sector requires cross-subsidization. Finally, lower energy prices disincentivize energy efficiency investments (see e.g. 'A rezsicsökkentés önmagában részmegoldás, elengedhetetlen a magyar otthonok energiahatékonyságának javítása is' 2017).

Finally, it needs to be noted that in line with EU requirements, the process of developing the Integrated National Energy and Climate Plan[4] has begun. It is expected that the Plan, once adopted, may bring some changes in the policy context.

Trends in national campaigns

The governmental energy-related campaign has been dominated in the last years by the "war on utility costs" – an overall populist price policy of the government (Slezák et al., 2015) Besides, in line with the Energy- and Climate Awareness-Raising Action Plan of Hungary, relevant policies have been supported by certain awareness raising activities, even if with lower weight.

Regarding monetary incentives the main financial instrument managed by the central government to promote investments aimed at furthering energy efficiency in households is the so-called "Warmth of the Home Programme" grant scheme. Set up in 2014 it has provided financial support, already in several phases, for instance for the replacement of inefficient household appliances, inefficient doors and windows, etc. However, the available funding has always been sourced out within a very short time (sometimes in a day!), and this fact indicates not only a high interest and need on behalf of the

[4] See more about this process and requirements at https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/governance-energy-union

household sector, but also the insufficient level of governmental support. (Energiaklub, 2013; Fülöp and Kun, 2014)

In addition, soft loans (without interest rate) for energy efficiency improvements are available both for the household ('Már igényelhető a nulla százalékos, lakossági energiahatékonysági hitel' 2017) and for the SME sectors. Some municipal governments also provide various incentives for households within their authority for energy efficiency renovations, especially for apartment blocks (Slezák et al., 2015).

The central government has recently launched the concept and investment programme “Modern cities” that embraces and provides funding for energy-related developments (Governmental resolution 1038/2016, February 2016). The concept, however, is broader, with focus on the infrastructural development of regional capital cities in general (e.g. with regards to public service infrastructure, etc.).

The promotion of energy communities is not amongst the explicit objectives of governmental policies. The concept, however, is implicitly supported in the context of the promotion of renewable energy, as well as via some sporadic policy support aimed at improving the energy efficiency of housing cooperatives. (FoEH n.d.)

While the National District-heating Development Plan is currently under finalization (Papp, 2016), at the practical level several demonstration projects have been implemented recently (BioFuel Region AB, 2015).

OVERVIEW OF NATIONAL SECIS

Below please find a list of Hungarian SECIs that have been researched and documented through WP2 of ENERGISE. The SECIs are researched, selected and documented based on a set of requirements and research interests (please see Jensen 2017 for details). *The list should not be regarded as exhaustive or representative of all kinds of energy initiatives carried out in the country.*

EnergyNeighbourhoods programme (EnergiaKözösségek program)	Changes in Everyday Life Situations
E.ON EnergyNeighbourhoods programme (E.ON EnergiaKözösségek program)	Changes in Everyday Life Situations
Large Family - Small Footprint campaign (Nagy család - Kislábnyom program)	Changes in Individuals’ Behaviour
Small Footprint campaign (Kislábnyom program)	Changes in Individuals’ Behaviour
EcoTeams programme (ÖkoKörök)	Changes in Everyday Life Situations

Energy Check for Low-Income Households project (Csekkcsökkentő projekt)	Changes in Individuals' Behaviour
Szekszárd Climate Club (Szekszárdi Klímakör)	Changes in Everyday Life Situations
Energy Experience (EnergiaKaland)	Changes in Individuals' Behaviour
DIY door and window insulation programme (Szigetelés fillérekből)	Changes in Technology
Biomass briquettes programme (Biomassza brikett program)	Changes in Technology
Wekerle Energy Brigade programme (Energia Brigád/ later Wekerlei Szigetelési Brigád)	Changes in Technology
Passive House Open Door Days (Passzívház Nyílt Napok)	Changes in Technology
Social Electricity Online Platform	Changes in Individuals' Behaviour
Insulation of Homes in the region of Vác (Lakásszigetelés Vác térségében)	Changes in Technology
Spinning Grumbler's World programme (Forgó Morgó)	Changes in Individuals' Behaviour
Washing machine exchange program (mosógépcsere program)	Changes in Technology
Warmth of the Home Programme (Otthon melege program)	Changes in Technology
LED energy saving programme (LED energiatakarékossági program)	Changes in Technology
Programmes for households by ELMŰ-ÉMÁSZ energy provider company (Energy Money-box, Energy Points, enHome GreenLine)	Changes in Individuals' Behaviour
Insulation demonstration project (szigetelési mintaprojekt)	Changes in Technology

Climate ticket (Klímajegy)	Changes in Technology
Renovations are Imminent (Küszöbön a felújítás)	Changes in Technology
Nearly Zero Energy Buildings (NZEB) Open Doors Days (Hatékony Ház Napok)	Changes in Complex Interactions
Solar Days (NAPOS napok)	Changes in Technology
Campaign promoting sustainable lifestyles (fenntartható életmódot ösztönző kampány)	Changes in Individuals' Behaviour
GreenHome demonstration, training and community centre (ZöldLak Bemutatóközpont)	Changes in Complex Interactions
Gödöllő Climate Club	Changes in Complex Interactions
Community Power (Friends of the Earth Hungary)	Changes in Complex Interactions
Staccato Project - "Village House"	Changes in Technology
Carbonarium	Changes in Individuals' Behaviour
Community wind turbine in Vép	Changes in Complex Interactions
Community biomass heating plant in Pornóapáti	Changes in Technology
"Jövő/Menő Erőnyerő"	Changes in Technology
Masonry heater building workshop in Ete	Changes in Technology
Smart metering multi utility pilot project	Changes in Individuals' Behaviour

Smart Synergy Project	Changes in Individuals' Behaviour
"Lakcímke" (Energy Certificate)	Changes in Individuals' Behaviour
The Geoterm Vácrátót project and "How big is your footprint" exhibition	Changes in Technology
Livable Future Park	Changes in Technology
Green Block	Changes in Individuals' Behaviour
Panel 2050	Changes in Complex Interactions
Energy efficiency information office in the 14th district of Budapest	Changes in Individuals' Behaviour
Living Well interactive website (Jól lakni)	Changes in Individuals' Behaviour
Green Walk	Changes in Technology
Passive Social Housing in Budapest	Changes in Technology

‘GOOD PRACTICE’ EXAMPLE OF HUNGARIAN SECI

Gödöllő Climate Club

Brief Description

The Climate Club[5] members live in or around Gödöllő, a town in Central Hungary. The Club was formed in 2009 by GreenDependent Association, a local nonprofit organisation, as part of the Changing Behaviour FP7 project[6]. The Club started as a pilot project, but is ongoing to this day (May 2018). The core activity of the Club is its monthly meetings where members discuss climate change, energy-related and environmental issues, ideas and concerns in an informal setting. Alternatively, Club members invite experts to have a discussion/ give a presentation on a given topic of interest. There have been 10-30 core members in the Club, who have regularly attended the meetings, and another 200-250 people and organisations on the club mailing list.

Contextualization

The Climate Club was established in order to raise awareness of climate change issues in households, establish links between climate change and household consumption, and create a sense of responsibility for consumption and lifestyle-related emissions in households (GreenDependent, 2009a). In the Europe Union households are on average responsible for 25.4% of energy use[7]; however, the figure for Hungary is higher: 31.6% (IEA, 2017).

As the findings of the above-mentioned research project about motivating behaviour change related to energy use pointed towards the importance of small groups, when initiating the club (Heiskanen et al., 2010), GreenDependent decided to experiment with an informal group format using the inspiring examples of EcoTeams, Carbon Rationing Action Groups and transition town initiatives. The table below summarizes how small groups, and in particular the climate club, can help overcome barriers to behaviour change.

Capacities	Description	Barrier to behaviour change	How the Climate Club can help overcome barrier
Personal	Individuals understanding of the issue, their willingness and ability to act, their values skills and enthusiasm	Lack of knowledge and understanding, lack of willingness and skills, helplessness	Sharing and creating knowledge Providing advice, skills, motivation and encouragement Members can see that ’others are doing their bit’ Assurance that being `green` is normal
Infrastructural	Facilities and structures enabling sustainable living available in the community	Current socio-technical infrastructures	Creating knowledge network on the carbon intensity of lifestyles and the low-carbon solutions available in the community Limited impact on ‘hard’ infrastructure at the moment
Organizational	Values held by formal organizations in the community	Social conventions, helplessness	Challenging existing institutions Changing taken-for-granted beliefs about modern life and creating a supportive environment for problematizing current lifestyles
Cultural	Legitimacy of sustainability and low-carbon living in the community	Social dilemmas, helplessness	Creating a community of individuals prepared to change their lifestyle and promote these changes to others and by doing so creating legitimacy for sustainable and low-carbon values and living

Source: Vadovics − Heiskanen, 2010

[5] You can find out more about the Gödöllő Climate Club at http://klimaklub.greendependent.org/en.html
[6] More information about the Changing Behaviour project is available at http://www.energychange.info/
[7] Source: Eurostat, Consumpiton of energy, data for 2017: http://ec.europa.eu/eurostat/statistics-explained/index.php/Consumption_of_energy (Last access: 26 April 2018)

The Climate Club was part of an informal network of similar initiatives in Hungary (called KLIKK or Climate-friendly Small Communities); and as a result to this day has links with transition town initiatives in Hungary. The Climate Club also has a twin club in the UK: the Fownhope Carbon Reduction Action Group. Both of these contacts played a great role in establishing and strengthening club identity as well as inspiring action.

Aims and objectives

The choice of objectives was first of all motivated by low awareness of households about the link between every day behaviour and practice and climate change.

The most important aims of the Gödöllő Climate Club are (GreenDependent, 2009b):

1. to raise awareness of climate change issues in households, establish links between climate change and household consumption, create a sense of responsibility;
2. to draw on existing methodologies for measuring household consumption and carbon emissions, adopt the most suitable one in the context of Gödöllő town and test it;
3. to involve households in a carbon emission reduction programme;
4. to create a supportive community for change at the household and community level.

Methods for intervention

In the Changing Behaviour research project successful and less successful demand-side management programmes were studied in an effort to establish general success factors (Mourik et al., 2009; Vadovics − Boza-Kiss, 2013). An attempt was made to plan the methodology for the Gödöllő Climate Club to incorporate many of the success factors in order to create lasting change.

As people's knowledge, experience and interest can have a wide spectrum, and they are motivated by a number of different factors, methods and tools were developed to allow for flexibility, for household-specific intervention and for increasing attractiveness, too. Besides, many different types of communication channels were used. Creating a community has always been important so that participants do not feel alone in their efforts, besides, they can share experience and learn from each other, too.

Steps of implementation

There have been two main phases in the history of the Climate Club: its establishment in the framework of the Changing Behaviour project, and its operation afterwards. During the establishment phase besides the regular monthly meetings, a variety of tools and materials were also created, and their use thoroughly evaluated (GreenDependent, 2009b). This phase lasted from May 2009 to June 2010.

Following this, since September 2010, activities primarily mean the monthly Club meetings and occasional participation in local events (i.e. seed swaps). Some members continue to keep a record of their energy consumption and/or started participating in the Small Footprint[8] and/or EnergyNeighbourhoods programmes[9] organized by GreenDependent.

From September 2010 onwards until today the Climate Club was funded by GreenDependent Association, its members and the local municipality, the latter mostly through providing meeting space free of charge.

[8] See more at http://www.greendependent.org and http://www.kislabnyom.hu

[9] More information about these programmes is available at http://intezet.greendependent.org/en/node/120 and at http://intezet.greendependent.org/en/node/297

The role of the households

The Climate Club is a small group of dedicated individuals who appreciate the additional knowledge and the sense of community as a primary value provided by the monthly meetings. It is also clear that most members feel closely associated with the group, and have a feeling of ownership, which seems to be increasing with time. (Vadovics − Boza-Kiss, 2013). Households were not involved in the design phase of the pilot project, as it was based on 'best practice methodology' identified in the Changing Behaviour project. Apart from this, however, they are invited to take an active role:

- The monthly meetings provide a chance to discuss progress together, exchange ideas and experience. The result of these discussions is an input for planning future activities.
- Participation in local events is also decided by the members, and they also assist with organisational matters.
- Members also contribute in the form of homemade foods and drinks for the meetings.
- Finally, the Club provides space for information exchange and visits to members' retrofitted homes.

Results/outcomes, success of the initiative

Because of its more informal nature, there was no comprehensive study done on the carbon footprint reduction or energy saving achieved by the Gödöllő Climate Club members, but there are indications that most members achieved at least 10% reduction in energy use since they joined the Club. (Vadovics − Boza-Kiss, 2013)

Overall, the initiative is considered to be a success story by GreenDependent Association. It started as a one-year pilot project, and is still running after 9 years, because Club members wanted to continue meeting and discussing environmental and energy issues, as well as to take action. Moreover, its methodology formed the basis of several larger-scale campaigns, such as the Small Footprint and EnergyNeighbourhoods programmes. At the same time, it is felt that members could be somewhat more active, that is take the initiative more often. Moreover, the pool of regular Club members could be wider. (GreenDependent, 2009c and 2010)

Shared understandings related to initiative

There is a shared understanding between the initiator and the Club members that low-carbon living is good and desired. Energy saving is put into the global context of climate change. It has become customary among members to say *“since I started coming to the Club, I’ve stopped using... I’ve given up... I’ve saved...”*, so success in saving and being proud of it has become part of the Club identity (Vadovics − Boza-Kiss, 2013, p.15). This was reinforced by awarding membership certificates. Low-carbon living is also manifested at the meetings, to which members are bringing homemade cakes and drinks with preferably local, seasonal and/or raw ingredients. No disposable cups, plates, cutlery are used. The carbon footprint of the Club events was also calculated and the results shared with members between 2009-2014.

At the same time, it should also be noted that the initiators do not propose one single route to low-carbon living, instead emphasize that there are many different ways to reach it, depending on the households' unique circumstances. The variety of tools provided by GreenDependent at the beginning also served the purpose of a 'menu' from which

households can pick the tools best fitting their situation. The emphasis on diversity has helped to attract people, but at times makes communication challenging.

CONCLUDING REMARKS AND POLICY IMPLICATIONS

The Hungarian SECIs reviewed in the ENERGISE project are very diverse in terms of their objectives and target groups, the type of organizations implementing them, the methods they apply, their funders, etc. They are diverse also in terms of to what extent and how energy policies at the time of their conception and implementation have had an impact on them.

On the one hand, energy policies define SECIs as support and funding available for SECIs is to a great extent determined by policy objectives. Also, some SECIs are specifically created to help the implementation of policies, or prepare various stakeholders for the implementation of a particular policy. Good examples of this kind of SECIs are the *"Lakcímke" (Energy Certificate)* project which educated the general public about the energy certificate when its use became mandatory, or the *Nearly Zero Energy Buildings (NZEB) Open Doors Days (Hatékony Ház Napok)* project which prepared the general public, architects as well as members of the media for the introduction of the Energy Performance of Buildings Directive. There are also less technology-oriented projects in this category that are intended to bring about attitude and behaviour change to more generally prepare the general population or specific target groups for the impacts of climate change and motivate more sustainable energy use patterns. Such projects were the *Small Footprint campaigns*, the still ongoing *EnergyNeighbourhoods* programme or the *Green Block* campaign.

On the other hand, SECIs also often respond to needs that are not met by policy, want to go beyond what is requested by policies and even challenge policies. Consequently, these kinds of SECIs are often funded from sources other than the national government: from private foundations, companies or local governments (municipalities), from European frameworks, and less often from community funding (e.g. crowdfunding). Examples of this type of SECIs include the *Biomass briquettes programme* created to provide an alternative, environmentally-friendly fuel source as well as employment opportunities for a community living in energy poverty, the *Wekerle Energy Brigade programme* that taught and helped households insulate their doors and windows themselves, partly using community resources, or the very innovative *Climate ticket (Klímajegy)* initiative that made it possible for individuals and organizations in a specific region to voluntary compensate their carbon footprint through supporting local sustainable energy projects (e.g. installing solar panels, planting trees).

The example of the *Gödöllő Climate Club* discussed in more detail above is a SECI which is interesting for various reasons. First of all, it was conceived as a pilot project in a European research project. The methodology that was piloted and evaluated in the project was later used for the development of larger (national and international) projects, for example for the *Small Footprint campaigns* and the *EnergyNeighbourhood projects* also described in the ENERGISE database. Then, since the Climate Club is still active after 9 years, it is a good example of how a pilot project can turn into a continuous project, partly run by the community, and partly by the organization that piloted it originally. An important lesson learnt is that well-planned projects with impact can continue successfully beyond the pilot stage. However, this continuation was fully dependent on the organization

managing it, and there was no support provided by either the national government or the European Commission, the original funder.

Finally, bearing in mind that the SECIs collected and reviewed in Hungary are not the only examples to be found in Hungary, it is still worth noting that the majority (around two thirds) of them focus on the more technological aspects of sustainable energy consumption, for example creating more efficient buildings, lighting and electronic equipment, and only around one third of them deal with the social aspects of energy consumption such as how energy is used, what it is used for, and the communities in which energy is used. Thus, there seems to be a more general need for policy to take this into consideration for both the development of new policies and funding provided for initiatives.

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http://www.klimaklub.greendependent.org/en.html (page of the Gödöllő Climate Club, containing a wealth of materials and a description of its history)

http://www.energychange.info/ and http://www.energychange.info/six-best-practice-pilots (website of the Changing Behaviour FP7 project)