

COMMUNITY POWER FINANCING

Mobilisation of public-private financing for community based sustainable energy projects in Central and Eastern Europe

Expert report on financing mechanisms for community energy projects



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This expertise summarises the results of expert workshops held in the framework of the Community Power project. It was commissioned by CEE Bankwatch to FEBEA (European Federation of ethical and alternative banks). A working group of FEBEA with representatives of Hefboom (Belgium), Crédal (Belgium), Oekogeno (Germany), La Nef (France), Patria Takarek (Hungary) and Open Source Bank (Croatia) contributed with their practical experiences.

This compilation of best practical examples contributes to the development of viable financing and investment schemes for Community Power to be introduced particularly in CEE countries in order to tackle financial barriers that prevent or delay the development of community-owned energy projects in the region. On the basis of their experiences the experts draw conclusions for an optimal mix of financial instruments especially in regard to the financing opportunities provided by the EU budget 2014 - 2020.

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What is Community Power?

Community Power is about ordinary people participating in the production, storage and efficient use of the energy they consume every day. It is when citizens join up to build and invest in energy projects in their communities. These energy projects range from renewable energy production, such as wind and solar, to energy savings projects, such as housing insulation. This makes communities energy independent, more sustainable and reduces the energy bills for local businesses and consumers.



Summary: Experts' key findings

- A. Sustainable community energy projects include both projects to produce renewable energy and projects to save energy.
- B. Community based sustainable energy projects do not stand alone but are part of a comprehensive 'community developing' policy.
- C. The financial aspect is only one element, the aspect of 'community building' is even more important.
- D. Not only the operational phase but also the preparatory one is important.
- E. In order to involve people it is necessary to pay attention to 'governance'.
- F. The more 'vulnerable' the target group, the more the need for financial and other support.
- G. A long-term view is necessary.
- H. It's important that regional and national authorities select these priorities for the structural funds that enable the financing of the community based sustainable energy projects.



Chapter 1: Introduction

Economic and social benefits of community energy projects

Transition towards renewables promises jobs. This is even more relevant if we take into consideration the fact that growing automation and industrial consolidation are likely to reduce the number of jobs in traditional energy sectors.

In addition to climate targets and other substantial benefits common to all clean energy solutions, community energy projects have several distinct advantages not to be underestimated, as they have the potential to further contribute to economic stability and job creation.

Reduced financing costs: people investing in their own energy saving or energy production projects do not expect the same high financial return as traditional investors do. Local savings invested in the project, together with increased availability of risk & return data (incomplete information is one of the reasons for risk aversion of financing in

the sector), will open the market to private investors. Profitable community energy projects will be able to further attract private investments, thus reducing the role of public financing. Local community power projects have huge potential, as they contribute to attracting long-term investments which may reduce the financing costs of renewable energy.

Creation of green eco-innovation clusters and increased competitiveness: if local community projects reach “critical mass”, eco-innovation clusters might develop where small- and mediums sized enterprises follow the same model, thus contributing to the expansion of Renewable Energy schemes and increased energy security and economic stability. In fact, renewable energy prices are less volatile than fossil fuel prices so that might help create a more attractive and competitive business environment.

Greater economic benefit: Community energy brings a higher level of economic benefit to local communities than corporate-owned plants. The actual impact will vary with every community and every project, but generally the higher the local ownership stake, the greater the economic benefit to the local community.

Increased local awareness and involvement in clean energy: citizens' participation allows shaping a common approach to develop community power projects. Engaging local stakeholders at a highly personal level (i.e. as equity owners with financial interests) creates increased support for Renewable Energy Sources projects in specific communities ("Welcome in my backyard"). As such, community projects provide a mechanism to reduce broader social barriers to renewable energy.

Strengthened communities and municipalities: communities will develop expertise in renewable energy solutions, form new relationships and be encouraged to build additional collaboration. Small-scale projects, which are easier to manage as opposed to bigger infrastructures, will result in positive publicity for local municipalities that can "lead by example". This might result in national and international twinning schemes amongst "green municipalities" to exchange views and further contribute to the shift towards renewables.





Chapter 2: Good practices

In many European countries there are already specific judicial and financial schemes in place to finance local projects of renewable energy production and energy saving. Most of them are financed by the private sector but sometimes with the support of the public sector (local, regional, national, European), sometimes in a private – public partnership. Adapted to the specific regional context, those schemes – or elements of them – may serve as models for the CEE region:

In Belgium the development of different types of co-operatives related to renewable energy can be observed. Some of them are more citizens' driven than other, and are established alongside initiatives of the Regions:

REScoops (Renewable Energy Sources COOPeratives), e.g. Ecopower with around

50.000 members financing renewable energy production and the coops supplying its members with green electricity and wood pellets. In this case the co-operative is owner of the assets (see: www.rescoop.be)

Co-operatives financed by its members-producers; (e.g. Biogas Flanders, where citizens don't have the direct access for participation)

Investment co-operatives, created and controlled by private or public renewable energy developers, providing for subordinated loans to projects, e.g. Groenkracht, Aspiravi Samen or Limburg Wind. In this case the co-operative doesn't own the asset, but increased acceptance of local citizens is envisaged.

Management and - purchasing cooperatives buying insulation material jointly, e.g (Duwolim. Individual citizens can't participate directly) (app 2)

In the Brussels region (Belgium) the Brussels Green Loan (le prêt Vert Bruxellois) has been set up by the region. It can be explained as green micro-credit for private persons with low income in order to invest in insulation and installations to save energy. There is support for the financing of the works and an adapted credit form, prefinancing of the energy subsidy, prefinancing of the down payments to the contractor, collaboration with the Brussels environmental agency and an interest rate of 0%. (app 3)

In the Brussels Region (Belgium) there is a regional program for Combined Heat and Power (CHP) in multiple housing units. In order to save 30 – 40% of the primary energy consumption there are a lot of incentives: easy access to the grid, priority for CHP/ renewable electricity; a CHP facilitator available to give advice to property owners; seminars, training, tools, reading material about CHP, investment support for CHP, green certificates for CHP, green certificates for condensing CHP. (app 4)

In France the project movement énergie partagée (shared energy) is growing (www.energie-partagee.org). They founded an association for raising capital and financing local projects for the production of renewable energy and for energy saving. La Nef is an important partner in this project. Crucial is the control over the projects by

the participants. The financial support for projects is only in the operational phase.

In Germany Oekogeno designed closed-end Private Equity Mutual Funds with so called silent partners (jointly owned PV-plants: JOPV). Each independent power producer (IPP) is legally designed as a special purpose vehicle (SPV). These SPVs are owned by several investors, the "solar funds". Only members of the co-operative may join these SPVs. The OEKOGENO Projekt GmbH, an affiliate of the co-operative, has designed, planned and realized these PV plants and is now operating the system on behalf of the SPVs.

There are also 'energy service companies' which offer energy demand reduction services, often financed through so-called 'performance contracting', where the energy savings generate cash flow which pays for the installation of the equipment and a margin. (app 5).

In Hungary there are some interesting projects (app 6). Most of them are financed or granted at least partially by EU funds, foreign investors or public authorities. A specific project is the "Village House" model project: renovation of an apartment building with 886 apartments, insulation, replacing windows and installation of solar collectors. The residents/owners are rather poor people without the means to invest. 75% of the total investment of 4 million euro is granted by the EU, the local municipality and the central government. (app 7)





Patria Takarek created “Ecosavings” (Okotakarek) with the long term plan to cover the loans with savings collected at an interest rate below market conditions. These loans with a minimum of €1600 and a maximum of €16 000 have a duration from 3 to 10 years. The demand for such loans depends on the availability of government grants for energy saving measures. The loan usually serves as the person’s own contribution, in addition to the grants covering usually about 30% of the cost of the energy saving measures.

In Croatia (app 8) there are energy cooperatives. A lot of EU funds’ LAC’s (local action groups) are involved in them, with a participation of the local authorities of less than 20%. In solar plants 60 to 80% of the investment comes from the private sector though they can get subsidized interest rates from the Croatian Bank of Development. Good regulatory structures and quality standards are missing.

In the sector of private housing there are many ‘multiple housing units’ where each apartment is privately owned. To invest in renovation or insulation or to install CHP, unanimity of the owners is required, which is virtually impossible. Also the payback period of a loan is too long for a lot owners/residents.

Barriers

The lack of money is only one issue;

- Investments in renewable energy production and energy efficiency need a clear political and societal long-term commitment towards renewable energy.
- For investment funds and investment cooperatives there are several legal and regulatory barriers. A balance between the protection of investors and the access to capital is necessary;
- Access to the grid at a ‘normal’ price is not always easy for renewable energy
- The private ownership of apartments in multiple housing units and the requirement for a large majority or even unanimity with regard to investments prevent a lot of projects from being realized.
- The scale of individual projects is considered to be too small to be commercially interesting. A coordinating body is often lacking.
- Community building and dissemination of the relevant information are preliminary conditions for a lot of projects.
- Energy savings are not considered as conventional ‘assets’ against which a bank will lend.
- For poor people government programs for energy saving es have to cover more than 30% of the cost.
- Not the lack of money but sometimes the lack of loan/credit guarantee mechanisms-represents a significant obstacle.

Conclusions for public-private financing models in Central and Eastern Europe

General recommendations:

- A clear political and societal long-term commitment towards renewable energy and energy savings is a 'conditio sine qua non'.
- To involve people the possibility has to be created for individuals and private agents to create or to participate in specific investment funds or financial vehicles for renewable energy production and energy saving projects.
- It is necessary that renewable energy has access to the grid at a 'normal' price and that a minimum price is guaranteed for several years.
- To implement energy saving and decentralized energy production in apartment buildings (with several owners) a flexible decision making process is necessary in order to avoid that a small minority can block the whole project of renovation, insulation or installation of new systems.
- It is important to create local community based organizations for raising awareness and increasing knowledge about energy saving and the possibilities of renewable energy.
- Local energy agencies can be created in order to inform, to prepare people and projects or to do energy scans or to give certificates.
- When asking for money or investments from non-professionals, a short payback period is preferable.
- energy and the setting-up of investment co-operatives. This makes it possible for both the local community and the local, regional and national authorities to participate. The direct financial return can be limited in order to build up financial reserves.
- Important in these constructions is that the local community (private and public partners) have a majority in the decision-making process .
- The raising of capital, specifically for one project or for one of a more general nature is necessary.
- Financial support from different authorities is necessary at different levels and in different forms.
- To get good results not only the financial instruments but also community building organizations and local energy agencies have to be subsidized and coached.
- Not only the operational phase but also the preparatory phase has to be subsidized and supported.
- European funds and public authorities can give grants or take a participation in the co-operatives and funds. 20% seems to be a minimum.
- Operational funds can have a 'revolving' character.
- A system of 'green loans' can be set up and also a leasing system can be useful.
- Besides grants and participations also interest rate subsidies are possible in order to lower the interest rates and the amount to be paid back.
- A real, more general guarantee fund is necessary.

Specific financial recommendations

- A good method is the creation of co-operatives for the production of renewable



Observations on and recommendations for EU-funds programming for the 2014-2020 EU-budget

The next generation of European Structural Investment funds (ESI Funds) comprises a minimum of 23 billion euros to boost the “shift to a low-carbon economy”.

Investment should promote and support energy efficiency, renewable energy and smart energy management in public infrastructure, the building sector (public and private) and enterprises.

Moreover, smart grids and sustainable multi-modal urban mobility is eligible for EU funding, and particular attention and financial support will be granted to low-carbon strategy, in particular in urban areas.

The regulations concerning ESI funds (i.e. “partnership principle” and “European code of conduct on Partnership”) stipulate that regional and local governments, local business, citizens and other stakeholders should be involved in the decision-making process on investment priorities and investment plans for the 2014-2020 period. Especially a newly introduced bottom-up approach, the so called Community-Led Local Development (CLLD) would allow local governments together with citizens and businesses at the local level to set up their own local sustainable energy development. In addition to grants and direct payments to beneficiaries the European

Commission encourages Member States to enhance the use of financial instruments that foster the up-take of EU funds and leverage private capital.

This policy leads to

the following recommendations:

- a bottom-up implementation of EU-funds must be based on strong political commitment at the local level.

- a Sustainable Energy Action Plan should assess the actual energy consumption, energy flows and the community territory potentials for energy efficiency measures and renewable energy production within the area.

- an optimal public-private financing mix, including European funding can be developed on that basis: soft loans (subsidized interest rates, longer pay-back periods) and risk sharing (loan and capital guarantees) based on revolving funds, direct equity investments (e.g. Energy Saving Companies) or new sources of funding such as financing by citizens (e.g. energy co-operatives).

For smaller scale energy efficiency and renewable energy projects which involve local governments as well as private businesses, a tailor-made financing mix should include three

elements:

- A grant should facilitate the integration of all stakeholders involved in local sustainable energy projects.

E.g. a Community Development Fund (like in the UK) could finance the mobilization of stakeholders, build their capacity and provide for consultancy (e.g. via an Energy Agency financed with EU funds). Such a fund and “CLLD” should be included in Operational Programs. Moreover, a transfer of good practices from one city to another, capacity building and networking activities are crucial for a massive replication of successful financing instruments/projects. These types of activities could be also financed at the national level drawing on EU-funds, on top of European level exchange programs such as Horizon 2020, Interreg or Urbact.

- Technical and Project Development Assistance (PDA) should be granted to the project developers to set up the project, finance feasibility studies or to prepare the technical documentation. This technical assistance (TA) should come directly from the European Regional Development Fund (ERDF) or other PDA mechanisms (e.g. public development banks or facilities like the European Investment Bank’s “Elena – European Local Energy Assistance”). PDA or TA similar to ELENA should be provided as well from the structural

funds at the national level directly, since EU-wide technical assistance instruments are very useful but can help only a very limited number of authorities. If they existed at national level, more projects/beneficiaries could be covered.

- Soft loans, guarantees or direct financing of the energy efficiency measures and/or renewable energy installations should be provided by one or several “Urban development funds” which should be sourced from EU budget contributions, national funds and private capital. The European Investment Bank’s “JESSICA” scheme (Joint European Support for Sustainable Investment in City Areas) is an example of such a revolving fund. Grants could also be used to mobilize stakeholders’ financing resources. For example a municipality can provide grants to citizens e.g. a subsidized interest rate – soft loan – for refurbishing their house. Subsidies are also necessary for ‘social/not for profit projects’ not viable in the market and for costly EE measures with a very long payback period (e.g. insulation of the building; new windows) while the rest of the deep refurbishment of buildings can be ensured by e.g. an ESCO (energy service company). The European Commission also suggested that local authorities could become “managing authorities” of the EU funds (which is already the



case at the regional level). This would mean that several "Urban Development Fund" could be created by several cities. These instruments should build on existing experiences with JESSICA holding/urban development funds.

The European Commission is proposing a set of "off-the-shelf" financial instruments (e.g. "Renovation Loan", equity for Small and Medium-sized Enterprises or loans for "Urban Development") which allow combining various sources of funding and various financing mechanisms (loans and grants). These financial instruments should be open to a wide range of beneficiaries and address state aid issues as well as co- and pre-financing barriers.

Regional and local governments, communities and local action groups can receive financial support through the next EU budget 2014-2020 to finance energy efficiency and renewable energy projects in their communities.

- It is recommended that local governments, communities and stakeholders become involved in the planning and implementation of the next generation of EU funds investments for 2014 – 2020.

- They have to develop a sustainable Energy Action Plan as part of a broader "Local Urban Sustainable Development Strategy": herein assess and include systematically as well as strategically the needs with regard to energy efficiency and renewable energy investments.

- In order to ensure an optimal financing mix of local energy efficiency and renewable energy projects they have to contact the respective Ministries (Economy/Finance/Regional

Development) in charge of European Structural and Investment Funds to advocate for including direct support and financial instruments into planning documents i.e. into the Partnership Agreements and Operational Programmes: direct support through a separate priority axis aimed at community led low-carbon investments in urban and rural areas and financial instruments such as an "Urban sustainable Development fund".

Appendix 1:

Charter for funding both investment partners and schemes for the development of Community-owned Renewable Energy Sources and Energy Efficiency

For different reasons traditional banks and investors are not always interested in investing in and lending for the development of community-owned Renewable Energy Sources (RES) and Energy Efficiency projects. Therefore it is important to develop viable financing/ investment schemes to be applied in different EU countries in order to tackle the financial barriers. Support from the public authorities will be necessary. The projects have a social, ecological and community-building objective. That is the reason why a charter with fundamental values and criteria for funding and investment schemes and institutions is important.

Important aspects of this charter can be:

- The financing institutions and funds are investing in RES-projects in order to promote social integration, sustainable development, community building and employment.

- The origin of the money, of the funds: a truly social, ethical or ecological fund cannot accept

'dirty' money, that is money deriving from illegal activities, from criminal organisations or mafia, or non-declared money. Also money coming from the armaments industry, highly polluting industries, prostitution and slave-trade, gambling, production and trade of tobacco and alcohol or from the nuclear industry is unacceptable.

- The funds try to set up a real (not only financial) partnership with their investors and their customers. In order to also involve people who are financially weak, governance models with advisory groups (with right of veto) or voting rights accorded to symbolic shares have to be set up.

- The financial institutions are managed transparently and try to involve their investors in the decisions about the destination of their savings.

- The financial institutions pay all the regular taxes in a correct manner.

- By granting a loan not only collaterals/real guarantees are considered but also personal or societal guarantees provided by local networks in which funding is allocated.

- The financial institutions grant and put credit at the service of people and local communities and the exclusive search for profit is not their objective. They even set a limit to the return on capital. Profits are mostly reinvested in their social and ecological objectives.

- The financial institutions are rooted in the territory in which they operate and in their socio-economic networks. This allows the institutions to have full knowledge of their clients and the projects they finance.

- The financial institutions are established in a format that allows for broad participation from their employees and shareholders or members. It assures this core value of participation through properly codified procedures and statutory instruments that enable members and employees (or their delegates) to have a direct bearing on management strategies.

- The financial institutions ensure transparency in salaries, publish them and have a maximum ratio between the highest and lowest salaries.



Appendix 2: The cooperatives in the sector of the renewable energy
Hefboom

Appendix 3: The Brussels Green loan (le prêt vert Bruxellois)
Credal

Appendix 4: Europe Annual Conference 2013
Cogen

Appendix 5: Renewable energy & energy efficiency Germany
Oekogeno

Appendix 6: Examples community energy projects
Hungary

Appendix 7: Village House model project Patria Ecosavings loan
Hungary

Appendix 8: Time for a change
Croatia

www.communitypower.eu







This is a publication of the Community Power project, a project in 12 European countries aiming to put people at the heart of increased renewable energy. Check out the website of the project at www.communitypower.eu

The partners in the Community Power project are:

Friends of the Earth Europe | www.foeeurope.org

Amigos de la Tierra | www.tierra.org

CEE Bankwatch Network | www.bankwatch.org

ClientEarth | www.clientearth.org

Ecopower | www.ecopower.be

ICLEI | www.iclei-europe.org

Friends of the Earth Ireland | www.foe.ie

Friends of the Earth Scotland | www.foe-scotland.org.uk

Hnutí Duha | www.hnutiduha.cz

Magyar Természetvédők Szövetsége | www.mtvsh.hu

NOAH | <http://noah.dk/>

WIP-Renewable Energies | www.wip-munich.de



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APPENDIX 2

The cooperatives in the sector of the renewable energy

Dirk Dalle, executive manager of Hefboom

Presentation of Hefboom

MISSION

ACTIVITIES

- Savings and ethical investments
- Financing
- Consultancy
- Other services

ORGANISATION: 3 JURIDICAL ENTITIES

FINANCING ACTIVITIES IN THE SECTOR OF SUSTAINABLE DEVELOPMENT

- Several recycling centers
- Organic agriculture
- Wind energy
- Solar panels

The energy sector in Flanders and the added-value of cooperatives

- Energy is very important in a comprehensive social policy
- Climate challenges
- A market with a strong concentration
- High prices
- The benefits go mostly to external investors
- A recently accelerated switch thanks to energy cooperatives and collective purchase of energy
- Pioneer role of cooperatives: sustainable energy, energy efficiency, participation...

Kinds of energy cooperatives

Investment Cooperatives (indirect):

- "Limburg wind"
- "Aspiravi Samen"

Investment Cooperatives (direct):

- "Ecopower"

Producers cooperatives:

- "Biogas Vlaanderen"

Management Cooperatives :

- "Duwolim"
- Limburg wind cvba



Limburg wind CVBA

Founded : 4 May 2010

Founders:

- LRM "oxygen for growth": investment fund partly in cleantech and energy
- Hefboom
- Aspiravi: producer of renewable energy, initiative of 95 local authorities
- Villages in the province of Limburg

Alliance of:

- Expertise in renewable energy
- Social commitment
- Knowledge and expertise in cooperatif entrepreneurship
- Linked with the local community

Acquisition of cooperatif capital:

- For investments in operational enterprises
- With limited risks
- Controlled by the local authorities
- Active in the field of renewable energy
- Specific: windmills in the province of Limburg

Commitment of citizens

Support and promotion of renewable energy and energy efficiency

Investing is possible

- via Aspiravi N.V and Limburg wind(t) N.V.
- Through subordinated loans
- Always linked to a concrete project
- Benefits: dividends /reservations in the cooperatives

Results of the operational enterprises: investments in renewable energy and a potential dividend for local authorities

The founders invested 600.000 EUR : B-shares

Additional capital by private persons or organisations agreeing the same objectifs : A-shares of 125 EUR with a maximum of 3.000 EUR per person.

| Date | Nombre d'actionnaires | Produit | Nombre d'actions | Capital |
|------------|-----------------------|----------|------------------|------------|
| 31/12/2010 | 2.568 | Action A | 45.005 | 5.625.625 |
| | 12 | Action B | 120 | 600.000 |
| | 2.580 | | 45.125 | 6.225.625 |
| 31/12/2011 | 3.455 | Action A | 61.108 | 7.638.500 |
| | 12 | Action B | 120 | 600.000 |
| | 3.467 | | 61.228 | 8.238.500 |
| 27/11/2012 | 4.245 | Action A | 84.632 | 10.579.000 |
| | 12 | Action B | 120 | 600.000 |
| | 4.257 | | 84.752 | 11.179.000 |

Aspiravi Samen cvba

Founded in 2011

Founders: Hefboom, Aspiravi, local authorities

Activities in all provinces of Flanders

Start of the acquisition of capital: beginning of 2012

| Date | Nombre d'actionnaires | Produit | Nombre d'actions | Capital |
|------------|-----------------------|----------|------------------|-----------|
| 27/11/2012 | 1.189 | Action A | 22.425 | 2.803.125 |
| | 10 | Action B | 100 | 500.000 |
| | 1.199 | | 22.525 | 3.303.125 |

Ecopower cvba

Founded in 1991

Investment Cooperative in renewable energy

Wind energy, hydrologic energy, solar energy and biomass

Promotion of renewable energy and energy efficiency

Supplier of renewable energy since 2003

On 31.12.2011: about 36.000 shareholders

About 40 million € capital from shareholders

Biogas Vlaanderen

Cooperative of 8 farmers

Fermentation of manure to biogaz

Energy supplier since 2003

A policy of joint purchase, sharing technical expertise, sharing data, joint actions of advocacy



Samen Sterker cvba (province of Eastern Flanders)

Objectifs:

- Lower prices for the energy for the consumers
- promotion of sustainable development

Activities:

- joint purchases for buildings with big energy consumption (insulation of roofs, insulating windows...)
- Applying concrete actions for energy efficiency (for instance insulation) through social economy enterprises
- Consulting for cheaper loans and for actions for energy efficiency
- Support to acquire specific subsidies

Duwolim cvba

Cooperative created by people with expertise in joint purchases, interesting loans, sustainable building and the struggle against poverty.

Activities:

- Facilitate the renovation of buildings in order to have more energy efficiency
- Visits at home by an energy consultant
- Support for the administrative procedures and the requests for subsidies
- Soft loans
- Special attention to vulnerable people



APPENDIX 3

The Brussels Green loan (le prêt vert Bruxellois)

Silverberg Antoine, Chargé de projet Prêt Vert Bruxellois, Crédal

Presentation of Crédal.

Community based :

- Beginning of the eighties, campaign banks-apartheid
- 1985, creation of Crédal (CREDit ALternatif)
- Crédal, better than a bank !
- Cooperative with social purpose
- Values of solidarity and ethics
- Capital of more than 21 billion € for projects with an social added value

Network of :

- more than 1850 cooperative members-investors,
- about 75 volunteers
- about 900 clients (individuals, social workplaces, non-profit organisations, social economy enterprises)
- Partners
- Strong values: solidarity and struggle against exclusion

Credit activity in 2012 :

- Crédit Solidaire : 152 loans, 15.165.000€;
- Microcrédit Professionnel : 93 microloans, 675.000€;
- Microcrédit Personnel : 628 loans, 3.232.700€;

LE PRÊT VERT BRUXELLOIS

Since 2008, loans with an interest rate of 0% to finance activities for energy efficiency :

Insulation and ventilation

- Of roofs, outerwalls, floors
- Super-insulating glass
- Controlled mechanical ventilation

Heating

- Gas boiler with condensation (HRTop) and chimney intubation
- Instant warm water system on gas
- Thermal regulation



Beneficiaries?

People in the Brussels Region who are :

Owners

- living in their own house
- a lessor of a house and living in his own house
- a lessor of 3 renting outs in the building where he is living

Tenants (tenancy renovation)

Maximum amounts

Individual/ 1.088€ net/month (net)

OR

30.000 € gross/year (gross income)

+5.000€/person to support

+5.000€ if candidate <35ans

Married people or cohabitants / 1.484€ net/month (net income)

OR

60.000 € gross/year (gross income)

+5.000€/person to support

+5.000€ if candidate <35ans

- Net = net monthly wage
- Diminished with the monthly rent or monthly mortgage + rental income
- Diminished with 193€/child to support

How Much?

Maximum amount of the loan: 20.000 €

Per family and per dwelling/year

The maximum amount of the Green Loan (Prêt Vert) is decided by the administration of 'Brussels Environment' and based on an estimate !

The +

- Support for the financing of the works and an tailor made credit
- Prefinancing of the energy subsidy granted by the Brussels Region
- Prefinancing the down payments requested by the entrepreneurs
- Interest rate : 0 %

Procedure:

The client contacts the « Maison de l'Energie Huis ». (MEH)

The MEH is controlling and, if necessary coaching the client in order to :

- Introduce a request for a renovation subsidy
- Introduce a request for an energy subsidy
- Introduce a request for green loan (PVB).

Le Prêt Vert Bruxellois: figures

- Septembre 2008 - 30/09/2012
- demands for information : 925
- contacted peoples : 418
- granted credits : 346
- granted amount : 3.152.617€
- medium amount of credit : 9.112€
- medium monthly amount : 187€
- medium term of credit :50,5 months

• Subsidized activities :

83% insulation

17% heating

• Kinds of accommodations :

88,8% owners

11,2% tenants

• People :

individuals : 54%

Cohabitants : 46%



APPENDIX 4

CHP in multiple houses: next step after condensing boiler in the efficiency path

Ir. Ismaël Daoud: Political Advisor Sustainable Building & Energy to the Brussels Energy Minister Huytebroeck

Presentation of COGEN.

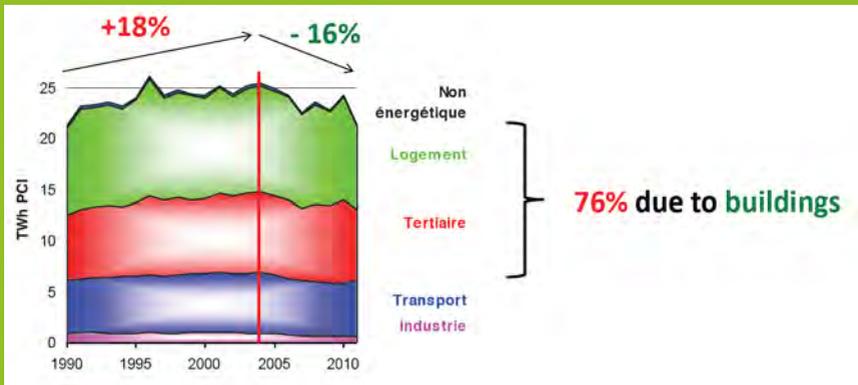
Who's who ?

4 Energy Ministers in Belgium...

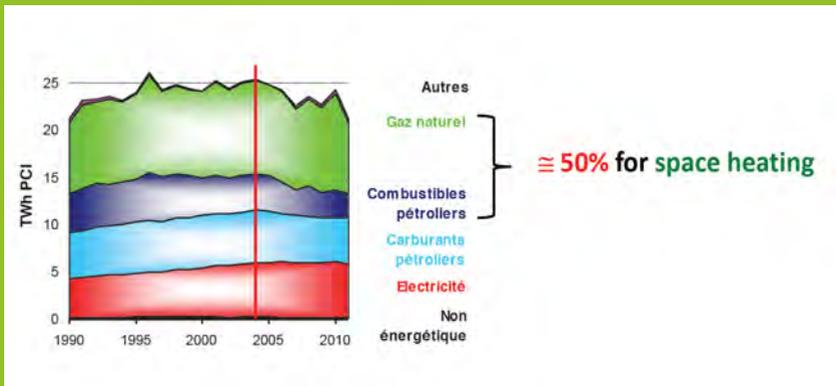
- Federal : Mr. Melchior Wathelet
- + 3 regions :
- Vlaanderen : Mrs. Freya Van den Bossche
- Wallonie : Mr Jean-Marc Nollet
- Brussels : Mrs. Evelyne Huytebroeck

Brussels-Capital region

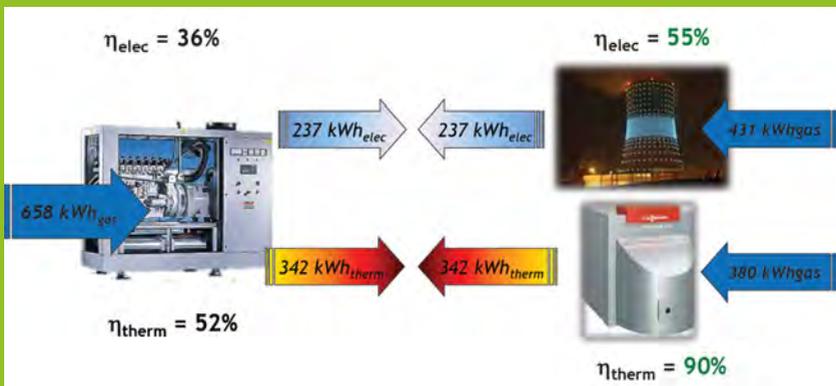
Energy Consumption 2011 : 21.4 TWh



Brussels-Capital region
 Large potential for CHP



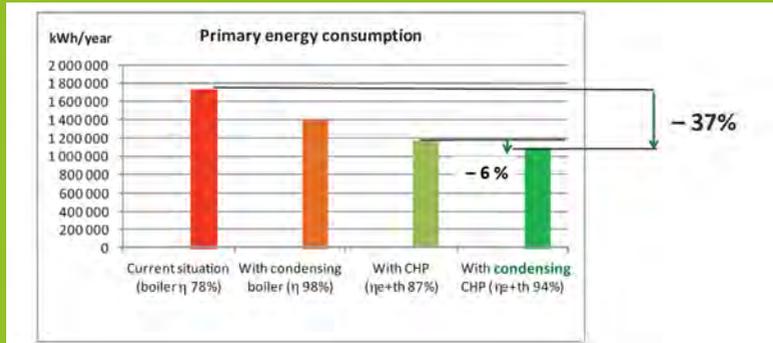
CHP : reference values
 About 19% primary energy saving



CHP in multiple houses ?

Final step in the energy efficiency path ?

Example : 127 apartments building with new condensing boiler & condensing CHP



CHP in multiple houses ?

THE priority for Brussels

- A lot of (very) old heating installations (low efficiencies...)
- EPB Directive impulse the necessary renovation of them
- Energy prices is increasing continuously
- CO₂ emissions must be reduced
- Nuclear power plants must be replaced by local electricity production (CHP)
- We need to create jobs
- ...

SOLUTION : CONDENSING CHP COMBINED WITH NEW CONDENSING BOILERS

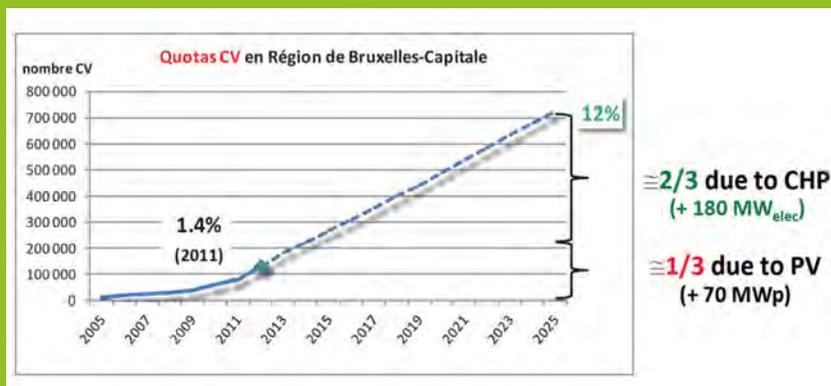
CHP in multiple houses

Panel of incentives in Brussels

- Easy access to the grid, priority to CHP/renewables electricity...
- “CHP facilitator” available to give advices for buildings owners
- Seminars, training, tools, guides... about CHP
- Investment supports for CHP : up to 4 500 € $\times \sqrt{\text{Power}_{\text{elec}}}$ + 20% bonus if combined with new condensing boilers and new regulation
- Green certificates for CHP : about 70 €/MWh_{elec}
(in addition to the price of selling electricity to the grid)
- Green certificates for condensing CHP : about 110 €/MWh_{elec}
(in addition to the price of selling electricity to the grid)



Long term perspectives
10 x more green electricity in 2025



We need you...
... to help us to develop CHP in Brussels !

Thank you for your attention

Evelyne Huytebroeck

Ministre bruxelloise de l'Environnement, de
l'Energie et de la Rénovation urbaine

Ir. Ismaël Daoud

Conseiller Politique Construction Durable et Energie

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APPENDIX 5 : OEKOGENO

Freiburg, September 13th 2013 Katrin von Döhren
Presentation of OEKOGENO

While Germany's energy use has remained relatively stable, renewables have accounted for an ever greater portion of the electricity consumed, helping to limit Germany's greenhouse gas emissions. It has been estimated that the EEG itself has directly saved more than 33 million tons of carbon dioxide from being released in to the atmosphere.

Main stakeholders/ actors in renewable energy in Germany

- The Federal Ministry of Economy and Technology: The BMWI has the lead responsibility for the formulation and implementation of energy policy. It is e.g. responsible for feed-in-tariffs, promoting the portfolios of RES (photovoltaic, wind on-shore and off-shore, biomass). Currently however the trend is to get rid of the "the Legal Framework for the Promotion of Electricity Generation from Renewable Energy Sources" EEG. It will highly depend on September election results. Although worldwide called a success story for renewable energy sources, in 2012 tariffs have been adjusted in such a way, that photovoltaic projects (except very large scale) are kicked out of the portfolio and the "Energiewende" or energy turnaround to renewable energies has almost come to a hold. It is now openly discussed to disestablish the German FIT law.
- Federal states: They are responsible for comprehensive regional planning, infrastructure, building standards, licensing and a big variety of approval structure and therefore have a big influence on planning timelines, reliability and expenses.
- Communities/ municipalities: communities are important drivers in the development of renewable energies. They can benefit at the same time because, as a rule, previously "imported" energy will be replaced by local energy sources, technologies and services. Simultaneously, a series of value added steps take place within the community itself and can generate positive local economic effects. Up to now, little is known about the real impact on local economies, i.e. which of the value added steps generally take place in the community and to what extent. Concerning the different possibilities and potential to generate local value added by different renewable energy technologies, the knowledge gap is even greater. This is particularly surprising, since communities are increasingly recognizing the benefits of renewable energy and want to raise its potential. Moreover, a slight trend towards '100% renewable energy communities' can be identified on a local and regional level. This highlights the high demand for such information and knowledge.



- KfW: Another state-related actor is the German Bank for Reconstruction and Development - KfW, which provides loans at reduced rates for investment in renewables, energy efficiency and generally for investments in environmental measures through private banks.
- Private investors: At least the production of renewable energy is solely based on private investors, since the energy market was passed to private hands 1998. Especially in the field of national grid, which are held by the big 4 energy suppliers cartel in Germany market condition can not to be judged as competitive. The big 4 are so far obliged to connect renewable energy producers to the grid. Additionally electricity from renewable energy sources is to be purchased ahead of electricity from other sources. Only 5% of the renewable energy plants are in the hand of the big 4. This clearly demonstrates, the energy transition needs to be moved bottom-up. Initiative needs to come from the regions.

Investment climate for renewable energy:

Major factors that influence the investment in renewable energy and energy efficiency are a clear political and societal long-term commitment towards renewable energy. Commitment, stability, reliability and predictability are all elements that increase confidence of market actors, reduce regulatory risks, and hence significantly reduce cost of capital. Recent changes in feed-in tariffs structure have an opposing trend. Discussions around killing the instrument of feed-in-tariffs as a whole and the current structure, where project, that need 1,5 to 3 years project development cannot be sure, what tariff, they will get, has brought at least smaller scale projects in wind energy and especially photovoltaic almost completely to an end.

Additionally it far more difficult to loans from a bank, as they have no experience in what it means for a renewable energy plant to sell electricity directly to users, which is required since 2013. Additionally there were major legal changes in collective investment funds, that in the name of investors protection discourage Private Equity Mutual Funds as a financial model for public participation. It restricts for example the debt financing to a leverage of 60%. The very complex legal environment is actually very challenging for small organizations, as they might not have the resources to further stay on top of the required know-how.

Legal Environment to taken into account for collective funding:

- German Banking Act

Pursuant to the German Banking Act (Kreditwesengesetz), anyone intending to provide financial services in Germany commercially or on a scale which requires a commercially organized business undertaking requires a written license from the German Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht – “BaFin”). Offering of investment products (Vermögensanlagen) means providing financial services within the meaning of the German Banking Act (Kreditwesengesetz) and therefore, as a general rule, would require a license by BaFin. Making use of this exception comes with certain downsides as such investment products (Vermögensanlagen) are rarely tradable and the operator of them is not allowed to offer any trade market for such investment products (Vermögensanlagen).

- German Securities Prospectus Act (Wertpapierprospektgesetz)

Entrepreneurs issuing securities or investment products (Vermögensanlagen) to investors can be subject to a prospectus requirement, i.e. a requirement to publish a prospectus that needs to be approved by BaFin under the German Securities Prospectus Act (Wertpapierprospektgesetz) in case securities are offered (e.g. shares in stock corporations) or under the German Investment Products Act (Vermögensanlagegesetz) in case investment products (Vermögensanlagen) are offered (e.g. silent partnerships).

- AIFM-D implementation, which replaces the German Investment Products Act

An “AIF” is defined in the AIFMD to mean, broadly, a collective investment undertaking (not registered as a UCITS4) that raises capital from a number of investors with a view to investing it in accordance with a defined investment policy. New rules and regulations impose a big administrative burden on collective investments that increase operating expenses and even exclude some players from the market.

OEKOGENO: Our financial models in the past

For implementing renewable energy plants in the past OEKOGENO designed closed-end Private Equity Mutual Funds with so called silent partners (jointly owned PV-plants (JOPV)). Since the feed-in law EEG is in force (2000) the procedures to realise PV feeding into the grid are well established. Each independent power producers (IPP) is legally designed as a special purpose vehicle SPV. These SPV are owned by several investors – the “solar funds”. Oekogeno has realised 8 solar funds with 12 solar plants so far. One of the the solar plants is located in France. All systems are outperforming the 20 years prediction.

Realizing projects means to combine technical know-how with detailed knowledge of legal conditions and an expertise in the requirements of financing institutions – OEKOGENO eG (eG in German means cooperative) combines this know-how.

From the various legal forms existing OEKOGENO chose the GmbH&Co. KG (limited partnership with a limited liability company as general partner) with silent limited partners. Only members of the cooperative may join this SPV. The OEKOGENO Projekt GmbH, an affiliate of the cooperative, has designed, planned and realized these PV plants and is now operating the system on behalf of the SPV’s.

Energy efficiency EE

Measures to reduce energy consumption and bring down CO2 emissions in the building sector have been on the political agenda for years.

Private-sector financial institutions are very interested in EE which is consistent with existing sustainability commitments or renewable energy lending programs, yet find it difficult to get the level of scale and financing opportunity required to make specific energy efficiency activities



commercially attractive, particularly in the context of project finance. In general, there was little evidence of dedicated activities by private sector financial institutions in this area. Where grant-finance and/or subsidized EE services and finance are available, public sector Financial institutions still require external marketing to clients and internal marketing to other parts of the financial institution in order to create interest and demand for those products and services. This may reflect the relative lack of track record of many FIs in the area, although it should be noted that some financial institutions, notably in the public-sector, have made extensive, market leading efforts to mainstream EE throughout the financing activities of their Energy service companies are generally companies, which offer energy demand reduction services, often financed through so-called "performance contracting", where the energy savings generate cash flow which pays for the installation of the equipment and a margin.

There are the following challenges and barriers:

1. Scale – individual projects are considered to be too small to be commercially 'interesting' for mainstream private-sector. Incentives to streamline and aggregate individual EE activities are needed to enable project finance scale.
2. The "asset" problem – energy savings are not a conventional 'asset' against which a bank will lend. In other words, cash-flow from energy savings is not a familiar form of revenue or collateral to back lending (although clearly any additional equipment provided would be an asset). This means that financial institutions need to become familiar with the nature, as well as the performance and credit risks of energy savings financed projects in order to be comfortable with providing debt. Despite not being uniformly available, partial-risk loan guarantees aimed at reducing these risks and facilitating finance such as the KfW model represent an effective approach.
3. Lack of loan/credit guarantee mechanisms – linked to the above, loan/credit guarantee mechanisms can play a key role in facilitating finance, particularly for smaller scale projects. Experience from some actors, however, indicates that the guarantee schemes that exist today are for larger amounts and involve a "tedious and long process for approval". Developing lean credit guarantee mechanisms tailored to smaller-scale projects would help address this deterrent to EE lending activities.
4. EE targets alone, even if stringent, however, are insufficient if they are not incentivized appropriately, implemented on the ground effectively or integrated with other parts of a sustainable energy policy to ensure policy signals are not conflicting.

OEKOGENO is searching for project partners in this field, but taking into account the complex environment and our approach to best realize such a project in a jointly owned legal design we have not been successful so far.

Freiburg, September 13th 2013 Katrin von Döhren



APPENDIX 6 : Examples community energy projects

HUNGARY

PROJECT NAME

Mórahalom for Climate Protection

CONTACT DATA

Balog László
6782 Mórahalom,
Milleniumi sétány 2.
tel: 62-281-022, fax: 62-281-244
balog@morahalom.hu

DESCRIPTION

Geothermal cascade system development, solar panel & thermalwater heating system, PV development, LED lighting, Eco counselling house

PROJECT PARTNERS:

Mórahalom municipality, Homokkert Nonprofit Ltd., Mórahalom Water Quality Municip. Assoc., Kiskunsági National Park, Homokhát Eurointegration Regional and Development Nonprofit Ltd. University of Sciences Szeged

FINANCING

Environment and Energy Operational Program, eur 1,912,000, 50% intensity.
(+ Concerto pilot project utilizing the natural gas coming up with the thermal water: 2 CHP gas motors producing electricity for the thermal bath)

MAIN ELEMENTS

heating and warm water of 11 public buildings (owned by municipality) and the newly built Colosseum Hotel. Cascade payback time: 11 years, shortened by the 2 gas motors.



PROJECT NAME

Újszilvás - public institutions with geothermal systems

CONTACT DATA

dr. Petrányi Csaba
2768 Újszilvás,
Szent István utca 6.
tel: 06-53/387-001
fax: 06-53/587-519
ujszilvas@ujszilvas.hu

DESCRIPTION

Instead of the former natural gas system, a geothermal energy system (geothermal heat pump based district heating system) was set up in the municipality house, the community cultural centre, the nursery and the school of the Újszilvás city

PROJECT PARTNERS:

Újszilvás municipality, NNK Ltd., EDF Démász

FINANCING

Norwegian Grant (85%)

PROJECT NAME

EnergyNeighbourhoods2

CONTACT DATA

In Hungary: Edina Vadovics, GreenDependent, info@greendependent.org
(Project in 16 EU countries: www.energyneighbourhoods.eu/en)

DESCRIPTION

Energy efficiency and energy saving project/campaign targeting households
Please see details in English at <http://www.managenergy.net/resources/1257>

EN2 is a project in which in each country an expert organization (energy agency, NGO, etc.) invited households - with the support, and depending on participating countries, contribution of municipalities – to participate in an energy saving competition. Households could join the programme and competition through forming so-called EnergyNeighbourhoods, which are communities of 5-12 households

PROJECT PARTNERS:

- Municipalities
- Households
- Volunteers to coordinate the EnergyNeighbourhoods
- In some countries utility companies to provide consumption data and meter readings.
- The media

FINANCING

IEE and (optionally) community investment

MAIN ELEMENTS

9% energy savings per households, in the 2nd round: 17 groups participated in the competition, their results: 182262 KWh savings in 119 households (similar savings in the 2st round, 18 groups)



PROJECT NAME

Bio briquettes

CONTACT DATA

Ms. Nóra FELDMÁR, industry ecologist, feldmar.nora@igazgyongy-alapitvany.hu

DESCRIPTION

Bio briquettes. Using local materials (preferably waste p.eg. agricultural waste) and hand-operated machines operated by locals in a low-cost investment, the local community can produce its sustainable biomass briquettes for heating/cooking. Strong energy poverty link: former unemployed Roma people produce the briquettes, the product is used by the local community.

PROJECT PARTNERS:

Involved: municipality of Told, local Roma people,

Technology founded by the <http://www.legacyfound.org/>. Similar in 45 developing countries, but also in Hungary (local community in Told village.)

HU coordinator: Igazgyongy Foundation, partners: Community Social Cooperative (Household Green Energy division) and Bridge Program

FINANCING

British Council, Karpatok Foundation, Ökopolisz Foundation

MAIN ELEMENTS

1500 briquettes/day, <http://igazgyongy-alapitvany.hu/alapitvany/biobrikett-program/>

PROJECT NAME

Biomass power plant, Pornoapati

CONTACT DATA

<http://www.youtube.com/watch?v=yeHJ1PTzbiw>, <http://www.4biomass.eu/en/best-practice/project-biosolar-in-pornapti>

DESCRIPTION

Bio briquettes for "district heating" of 97 household in the village of Pornoapati. Bio briquesttes are made of wood waste from local sources. The small power plant provides the heating for the 97 houses.

PROJECT PARTNERS:

The participating individuals created a local cooperative to run the central heating plant.

FINANCING

Total costs app. 1.2 million EUR. 14% is own contribution of the local individuals payed from loan. 86% is grant from Phare CBC, local municipality, and government. The loan was taken by the local municipality from the bank, and the individuals are paying it to the municipality.



PROJECT NAME

Wind turbine in Vep

CONTACT DATA

“ Szélerő Vép Kht., 9751 Vép
Alkotmány u. 39.

Rudolf Piller - Tel: +36 30 853 1719 - piller@szel.hu

E-mail: info@szel.hu

Web: www.szel.hu “

DESCRIPTION

mainly community-invested wind turbine in Vep, energy produced is being used by the community of Vep

PROJECT PARTNERS:

private, business, see http://energy-bestpractice.eu/hun/magy/main_hu_vep.html

FINANCING

Phare CBC, bank loan and community investment, total eur 862,000.

Ownership of the turbine: 5 individuals (30%-30%-30%-5%-5%)

MAIN ELEMENTS

600 kW , 950 000 kWh/year, supply to the grid. Payback time

(with Feed-in tariffs in 2005 and the Phare CBC): 6 years. 600 t co2/year saved



APPENDIX 7 : Village House model project Patria Ecosavings loan

HUNGARY

Renovation of an apartment house (306 apartments),

insulation, changing windows, and installation of solar collectors.

Financials:

Total investment: app. 4 Million EUR

Sources:

EU grant (1 Million EUR)

Local municipality (0,8 Million EUR)

Central government (1,2 Million EUR)

Residents/Owners (1 Million EUR), mainly from loan, but small own contribution also. The loan is on preferential terms: duration of the loan is 8 years. Government pays the interest in the first 5 years. Owners of the apartments pay the full amount in the last 3 years. Owners opened a "home savings" account, where they are saving money (app. 10 EUR/month) during the first 5 years. This amount will be used to pay back the rest of the loan.

Patria Takaréék – "Ecosavings" (Ökötakarék) loans

Preferential terms for private households for energy saving or renewable energy investments.

Pátria Takaréék has created a special framework to cover the costs of the modell product "Ecosavings". The cost of the preferential terms of the loans are covered by the bank. Pátria Takaréék considers the "Ecosavings" products as special products to fulfil its mission. (Long term plan is to cover the loans with savings that are collected on an interest rate below the market conditions, so the bank should not pay the costs, but current experience is that the amount of savings is not sufficient to cover the loans yet.)

Duration of the loans: 3-10 years

Possible size of the loans: 1600-16000 EUR

Reference interest rate: Hungarian central bank interest rate (BUBOR)

Actual interest rates depends on how big energy saving could be achieved. BUBOR-1,25% can be achieved.

Experiences of the few month: the demand for the loans depend on the availability of government grants for energy saving actions. The loan ususally serves as a source of own contribution, as a suplement to the grants that usually cover about 30% of the cost of the energy saving actions.

