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Report on best practices and applicability of collaboration forms between public authorities, citizens and Energy Service Companies

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A Guideline for Developing User Manuals of Innovative Energy Efficient Houses

Work Package 1

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EMI Non profit company for Quality Control and Innovation in Building [EMI]

Prisma Commercial investor

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1. INTRODUCTION

Goals

In general, Concerto projects have the ambition to support CONCERTO communities using a bottom up approach to identify different barriers [from a financial, technical, legislative/regulatory point of view, or due to low acceptance at community/district level] and suggest to local policy makers alternative tools and actions to overcome them to be successful in their demonstration policy recommendation/position papers at national and European level or other kind of actions] and other advice upon request. CONCERTO Plus policy experts are currently working with monitoring and socio-economic experts to draft a common framework for sustainability assessment.

The goal of Community Action Plans is to establish a sustainable community.

Concerto projects help each other in achieving that goal, by exchanging good practices, by giving advice initiatives, facilitation and on implementation of practical policies, measures and projects. Of major concern is cooperation with social and private investors, including energy production and distribution companies, energy service companies and pv-cooperatives. Also, support from local citizens is important and can be improved through information and participation.

The goal of Green Solar Cities project is to develop specified actions for each project area in both cities. The community action could improve the application and sustainability of demonstration projects. We are aware that we should also work on the social integration with the surrounding areas.

Definitions

Definition of Community Action Plan [CAP]

[as was adapted by project partners during the meeting in May 2009]

CAP is a mission statement about sustainable quality for the city, for the CONCERTO area and for demonstration projects, on how to reach the goals of the Concerto project, with support from relevant stakeholders.

Actions to reach this goal

- Bringing stakeholders together to investigate and collect ideas
- Agreeing on priorities
- Defining strategies to develop cooperation

Output is agreement on action and including a work plan that deals with facilities like finance, technical support, communication, organization, timetable and management of the process.

The output is monitored. Indicators are about the social, physical and economic performance and include:

- Sustainable quality: CO₂, materials and waste, water, extreme climate protection
- Perceived social quality of the community

An Asset-Based Community Development [ABCD] typically shares its findings on capacity-building community development through interactions with community builders and by producing practical resources and tools for community builders to identify, nurture and mobilize neighborhood assets. The work involves nonprofit research, policy development and education organization pioneering in all aspects of recycling, waste water, sludge, composting, solar technology, and ecological housekeeping. It also advocates a new civic agenda to create communities that work for everyone and promotes the principles of

collaborative problem-solving and consensus-based decision making. Communities are helped to design and implement innovative strategies that enhance the local economy as well as the local environment and quality of life. Support includes sustainable information.

See also:

Action plan for the promotion of renewable energy sources in the EU;
Movement toward transition towns [that started with Kinsale in Ireland] [Louise Rooney, 2006, Kinsale Adopts Energy Descent Action Plan]

Definition of ESCO: Energy Service Company

[based on <http://en.wikipedia.org/wiki/ESCO>, accessed July 24, 2009]

An energy service company [ESCO] is a professional business providing a broad range of comprehensive energy solutions including designs and implementation of energy savings projects, energy conservation, energy infrastructure outsourcing, power generation and energy supply, and risk management. The ESCO performs an in-depth analysis of the property, designs an energy efficient solution, installs the required elements, and maintains the system to ensure energy savings during the payback period[1] The savings in energy costs is often used to pay back the capital investment of the project over a five- to twenty-year period, or reinvested into the building to allow for capital upgrades that may otherwise be unfeasible. If the project does not provide returns on the investment, the ESCO is often responsible to pay the difference.

The following steps characterize the nature of an ESCO and describe an ESCO's functions:

[based on <http://www.energymanagertraining.com/announcements/DefinitionofanESCO.pdf> accessed July24, 2009] [where *C- compulsory and *O – optional]:

C*

1. Appraisal of the energy conservation potential in a client firm,
2. Preparation of a detailed project report [financial grade paper] and listing of recommendations to reduce energy consumption and costs. -C
 - 2.1 Joint selection of measures from the list for implementation. – C
 - 2.2 Establishment of clear PMV protocol for individual projects and overall facility impact- C
3. Detailed project engineering of selected measures by ESCO.-C

O*

4. Financial closure through ESCO,
 - 1: Bank borrowing by the client with performance bank guarantee, support from ESCO
 - 2: Direct investment by the ESCO with payment security from client

C*

5. Implementation of selected measures by ESCO,
6. Joint monitoring and verification of impact and observation of reduction of energy costs over a specified agreed time period; Or 3rd party verification by an accredited organisation,
7. Payment of ESCO by client based on investment costs, interest, professional service fees, as well as performance based success fee,
8. Hand over of project to client after recovering of all costs, as well as other payments, or as per a termination settlement as per mutual agreement.

Definition of PV Cooperatives

A Photovoltaic's Cooperative is a business organization owned and operated by a group of individuals for their mutual benefit. The cooperative owns and manages pv-arrays and the risks and returns are for its members.

Co-operatives are businesses. While they may have social objectives, they are first and foremost businesses that are created to earn a profit for their members—their investors. They

are not charities. Co-operatives can be and often are pioneers in new fields. However, co-operatives cannot develop projects of any meaningful size by appealing to “green fringe” investors, those who are willing to invest without expectation of a return.

The co-operative can easily meet social and community objectives, as well as being one of the least expensive structures to launch. The co-operative would own the assets and earn a return from those assets.

Other forms:

- a. a joint venture between private investors [citizens] and businesses.
- b. ESCO takes care of the engineering and exploitations
- c. Tax-exempt charity, organised to maximise tax savings [by depreciation reduction] and by collecting a subsidy from a charity, in return for a donation of [part of] the pv array] to the charity.

A number of barriers, principally economic, need to be overcome before PV deployment can occur and ambitious programmes that aim on millions of PV covered roofs become reality [Based on <http://www.iea-pvps.org/about/motiv.htm>, accessed July 27, 2009]

Current PV prices are too high for self sustaining commercialization;

Non traditional benefits of PV have not yet been accepted;

Lack of awareness of the PV potential for electric service application, sceptical attitude of utilities;

Infrastructure is inadequate for broad market acceptance - from standardized package to marketing, to installation and operation;

Lack of market understanding; no business plan, unclear product [selling equipment, power, service];

Lack of clear technology winners increases uncertainty and risks;

Assessment of strategic, competitive advantages available in relation to alternative technologies is missing.

A number of means of financing PV arrays have been assessed in terms of their relevance to the social housing sector. This analysis has identified a number of appropriate mechanisms, as follows:

- Feed-in tariff – a feed-in tariff that is set by government regulation is the most effective way of stimulating PV uptake, as it drastically reduces risk to a project developer.
- Solar stock exchange – It has been shown that the local green energy market can be used to provide funds for a feed-in tariff to encourage project developers to invest in PV. In this case the market demand for green energy limits the level of the tariff.
- Third party finance – this can be appropriate for social housing groups that do not have the access to capital to install PV systems. The social landlord can simply lease the roof space for the PV system or it could take a stake in the system or could lease the system from the finance provider.
- PV financed through service charges – there are some examples where the PV electricity is used to provide communal services to the tenants of the social housing block and is partly financed through increases in the tenant’s service charges.

Definition of Financial agreements

Quality appraisal of dwellings [energy included in quality level = economical value

No-more-than-else principle [NMTE-principle]

Energy cost + rent/mortgage = total cost of living

Financial constructions

"First-Out" and "Shared Savings" Contracts

With the first-out performance contract, the ESCo retains all of the energy savings until the project is paid for or until the end of the contract, whichever occurs first. Typically, the contract stipulates a maximum return to the ESCo on its investment. If the ESCo realizes this return before the contract expires, the contract terminates. If the ESCo does not realize this return before the contract expires, the contract terminates in any event, and payments to the ESCo cease. In estimating the full costs of a project, the ESCo must declare its investment up front, including all costs and mark-ups. Percentage margins allowed to the ESCo are fixed. As noted above, at the end of the contract or when the contract has been paid for, the department retains all subsequent energy savings. The Treasury Board requires that the length of time and the financial returns of the contract be justified by the usual cost-benefit analysis.

With a shared savings performance contract, the ESCo and the department or agency each receives an agreed-upon percentage of energy savings over the lifetime of the contract. Although departments or agencies realize financial savings earlier with a shared savings performance contract, this type of contract runs for a substantially longer period than a first-out performance contract. In all other respects, the contracts are similar.

2. STATE OF ART IN COPENHAGEN AND SALZBURG

Situation in Copenhagen

World Summit on Climate Policy

In November 2009, Copenhagen will host the global meeting on climate and sustainability. "We, the politicians of the world, have a responsibility to reach a truly global climate change agreement in Copenhagen in December 2009. But it is the business society that can deliver the tools to turn our vision into reality. Businesses can provide the clever solutions to make it possible to live in a both modern and sustainable society." By Connie Hedegaard, Minister of Climate and Energy, Denmark. Point 5 of the Copenhagen Call of May 2009 states: **Funds to make communities more resilient and able to adapt to the effects of climate change.**

We recognize that adaptation is as important as mitigation in an effective global climate treaty. Adaptation planning will require a holistic and long-term planning perspective, which will require different levels of activity at the international, national and local levels. Businesses will be responsible for building much of the infrastructure needed to protect us from climate impacts. An effective global climate treaty will mobilize funding that supports public private partnerships to enhance development, adaptive capacity, climate resilience and management of risk.

And in preparation of the summit: Business can help solve the climate crisis. "I believe in our resourcefulness and in our capacity to come up with workable solutions to the problems we have ourselves created. Necessity is the mother of all invention." Sir Richard Branson, Member of the Copenhagen Climate Council.

Agenda 21

In 1987, the World Commission on Environment and Development [Brundtland Commission] called for the development of new ways to measure and assess progress toward sustainable development. This call has been subsequently echoed in Agenda 21 of the 1992 World Summit and through activities that range from local to global in scale. In response, significant efforts to assess performance have been made by corporations, non-government organizations, academics, communities, nations, and international organizations.

Assessment of progress toward sustainable development should be based on:

- an explicit set of categories or an organizing framework that links vision and goals to indicators and assessment criteria
- a limited number of key issues for analysis
- a limited number of indicators or indicator combinations to provide a clearer signal of progress
- standardizing measurement wherever possible to permit comparison
- comparing indicator values to targets, reference values, ranges, thresholds, or direction of trends, as appropriate

Assessment of progress toward sustainable development should:

- obtain broad representation of key grass-roots, professional, technical and social groups , including youth, women, and indigenous people - to ensure recognition of diverse and changing values
- ensure the participation of decision-makers to secure a firm link to adopted policies and resulting action

Miljopunkt Valby

In Copenhagen, the municipality initiated and finances Miljopunkt Valby with 60% of their budget. The Miljopunkt Valby is independent [and likes this status over state based position], but supports the common goals of the city. Copenhagen is now more ambitious than Valby, which use to be the other way around. There are 8 environmental centers in Copenhagen formed under Agenda 21 plan. Last year there were 5.

Valby community agrees with the plans of Climate Copenhagen and wants to be the first to have these implemented. There are 'area based new generation projects' applied in Copenhagen and the municipality supports these projects for 1 million euro in 5 years. Besides, it is another issue to meet the interests of people who live in the Valby squatter neighbourhoods. These neighbourhoods are occupied mostly between April and October. Some of the houses have water; some have electricity; some of them both.

It is important to bring the goal of sustainability into people's perspective. 'Climate Copenhagen' [2025] and 'PV Plan' projects raise the requirement of local incentives and community interaction. Moreover, other stakeholders have become more interested in community action, to achieve the expectations of these projects. An example of public participation in sustainability could be mentioned as, the Green Festival in Valby that will be held at the weekend of 23-24 May.

Copenhagen has a lot of areas different from each other within GSC project, that a different process of project development and implementation is needed.

As an example of how a project is organised and which stakeholders play what role, one of the many projects is illustrated: **Hornemann's Vænge, Valby**

List of stakeholders for renovation:

- Housing association
- Tenants organization
- Architect
- Engineer
- Municipality
- Kuben and Cenergia
- There is another tenant association which should also be involved in the project
- Local media

What is it that we need to develop?

At the moment the discussions are technical. Some rooftop apartments can be done without changing the local planning document: Can it be done?

Social housing association in the area is very easy to collaborate and open-minded. Which decisions are to be made and what time? Communication is important and needed through the process of management. The tenants will approve the detailed project in September. Meanwhile the national foundation helps the tenants that most renovation will be financed, and they know the problems in these projects.

There is ambition; tenant groups should also think how municipality should work with the railroad. Social analysis, such as a survey to support social work, has been conducted about criminality in that area.

Is there future work on immigrant lifestyles, in Copenhagen?

Young students are located there, socially not functioning so people move from this place. Social plans are improved to help people for different problems. Municipality locates ¼ of people in social housing. The aim is to work [social housing associations+tenants+municipality] together to solve problems.

Conclusion:

Promoting the social ownership of the area and the project is important. The PV artwork created a lot of noise for example. More are needed in Valby scale and not only for Concerto projects.

PV cooperative in Copenhagen

The ongoing Solar City Copenhagen initiative is aiming at high CO₂ reductions for cities in combination with use of energy savings and solar energy. [See also www.solarcitycopenhagen.dk]. In connection to this it has e.g. also been possible to realise the first PVCoop in the world, Copenhagen PV-Coop, [see www.solcellelauget.dk].

Denmark in general

http://ec.europa.eu/energy/efficiency/doc/sec_2009_0889.pdf

The National Energy Efficiency Action Plan [NEEAP] submitted by the Danish authorities was adopted in September 2005, prior to the adoption of Directive 2006/32/EC. In principle, the Danish NEEAP represents a coherent strategy, but one that fails to cover certain ESD-reporting requirements. It only covers the period 2006-2013 and does not establish intermediate and overall national indicative savings targets calculated in line with Annex I. Denmark does, however, fulfill the provisions on public procurement and also seems to meet most of the requirements concerning availability of information and advice to final customers on energy end-use efficiency.

The Copenhagen Climate Plan [<http://www.kk.dk/climate>] aims to reduce CO₂ emissions by 20% between 2005 and 2015. Together with [1] integrating climate into energy supply, [2] greener transport, [3] low energy buildings, [4] climate in city development, and [5] adapting to the weather of the future; one of the most important points of the action plan is to create the so called ‘climate citizens of the world’. In the plan, this is further explained as:

“A large proportion of the city’s CO₂ emissions are generated by Copenhageners themselves. If the city as a whole is to generate less CO₂, we must all change our daily habits. We must

change to energy saving light bulbs, cycle more, regulate our central heating and buy the right hardware.”

Situation Salzburg

In Salzburg, a steering group was formed to define the quality targets, to coordinate several projects and activities. Members of the steering committee are the city of Salzburg, the housing associations, commercial builders, the energy suppliers and SIR. Currently, there is an NGO established for community management. Head of the steering group is the secretary of the planning department and Concerto is the first programme to collect small projects together. These two points make the NGO advantageous to make success. In autumn, 2009, the process started with representatives from community investors, neighbourhoods, social network, and potential future cultural users. This is a medium for new projects and ideas for public participation. Housing associations can't be part of this NGO but they work close and they support the NGO financially.

What is interesting for the Stadt:Werk:Lehen area is that the energy supplier company [ESCO] is also the owner of the ground, which includes 1600 m² ground floor commercial area. In this commercial area, there will be a social-cultural market, supported by the ESCO. They promised to pay for half of the costs of the market. Besides, there are other ideas for mobility management; such as to set an electrical base for PV powered city bikes.

Socially important points are mentioned as the social acceptance of the area and if and how this project will relate to other projects in Salzburg. At the moment, decision-making processes are quite top-down. It should be somehow related with bottom up. In the past, there were some initiatives for this purpose, in the master planning process. These were positive intentions but there was no further positive output.

The city quarter committee is pessimistic about the new area but there is an agreement now, that new prospects are definitely needed, so this should lead to action. City council is not clear yet, if the NGO association will work only in Stadt:Werk:Lehen area or more in general.

The energy supply company cooperates very close with the housing associations. The Salzburg AG erects the solar plant with thermal collectors and PV and the micronet and runs it. SIR created a framework of QA, signed in February, 2008 and with a quality check in Summer 2009. This quality check was about the items in the quality agreement, before the construction begins. The technical aspects were easy to measure but for the social aspects, there were a lot of discussions, especially about the use of green areas: Not all the partners were honest in the beginning. For example the area for a kindergarden was taken from the general green areas, which are planned for the tenants. The last part of QA will be articulated for each site. Content of QA:

1. Project targets and general provisions
2. Quality targets of the project
 - 2.1. Urbanistic overall view of the planning area
 - 2.2. Urban qualities, use of mix and social infrastructure
 - 2.3. New building construction quality and energy efficiency
 - 2.4. Retrofit focus of the old residential buildings in the area
 - 2.5. Overall energy concept with focus on solar energy and district heat from industrial waste heat
 - 2.6. Social and living qualities
 - 2.7. Cooperative quarter management
 - 2.8. Image generation and PR
3. Cooperation and Responsibilities
4. Schedule
5. Agreement

Werk:Lehen Area

Main steps of Quality agreement:

- Clear definition of the roles of stakeholders,
- Agreements of housing associations, builders and city that something is necessary and that they will pay for it.
- Define what is necessary
- Lehn area is substandard: social service + water management

How to implement the QA is a question.

Identity of the area: the dilemma is that the neighborhood can become a new landmark, but how people still think is that there is already a local community, with social problems and mixed purposes. There is a problem for the perception of ownership of the place. As a measure, this time, a different method could be developed when moving in the area. The newcomers should know about where they will live, and what are the characteristics, beforehand.

New idea: Information shops at the ground floors of buildings and the new city library was opened on 7 January 2009, in Stadt:Werk:Lehen area. This brought a good image to this area of the city.

In the master planning phase people were asked what they expect, but it was not realistic.

There are some apartments owned by the city with no elevators. SIR sent these people after to move to the new area. There were problems with the municipality to implement this, for example the rent was higher in the new apartments. The houses that are owned by the city are harder to renovate. Further concepts to connect technical renovation plans to the community action plan with stronger focus on social criteria are now being established. In September 2009, a new group formed from the professionals without people from the city began to work on this.

What was missing?

Good mix of occupant groups, according to income, culture, job opportunities. The image of the neighborhood [Lehn] is bad. The crises lead to the decrease in selling the houses. There are some actions now, such as positive news in media, meeting young and elderly [young help old to use 'facebook' and 'sms'ing and building up a new dictionary]. The elderly create a more stable environment. Besides, a competition is designed, to attract people to involve more people in planning. In short, a statement is made that this part of the city will be good: 'green' and 'sustainable'. At 15 October 2009, the start of the building activities on Stadtwerk Lehen area is a big event for the whole neighbourhood.

Community workers [Bewohner] service is important to be established.

Neighborhood meeting, and a meeting with the new political member [Stadtrat] [Inge will have a meeting soon] are important.

In terms of implementing the QA, the social working group is reanimated, in addition to the steering committee that will collaborate by describing the activities. Same information should be available for all stakeholders.

Could the structural plan for Salzburg be used to discuss for a strategy for a larger area?

This plan is for 10-20 years, general goals but no implementation. The discussion was made to motivate Lehn positive about the project. The surroundings is an axis for the project now.

Actions per city

Austria in general

http://ec.europa.eu/energy/efficiency/doc/sec_2009_0889.pdf

Overall the National Energy Efficiency Action Plan [NEEAP] of Austria fulfils the major obligations of the Directive. It is an ambitious NEEAP, which contains a large number of measures that cover all end-use sectors, and include many good practices.

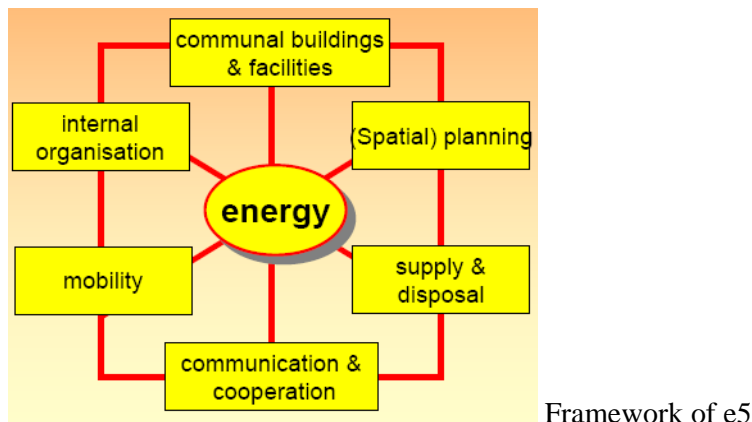
There is a clear commitment to the 9% target for 2016 [and a 2% intermediate target in 2010]. The NEEAP is mainly based on already existing national, federal and local strategies and programmes. The NEEAP also comprises measures implementing relevant Community legislation.

On the other hand measures are presented as a set of lists of actions lacking descriptions, links, and explanations, and with very limited details, making the plan fragmented. In addition, savings from measures, as well as the foreseen budget for implementing measures, are estimated only in a qualitative manner. While the NEEAP indicates potential overlaps between measures, the evaluation process identified other further possible overlaps. For this reason, while the list of measures is promising, it is difficult to assess whether the NEEAP presents a realistic strategy towards the savings targets.

Local Agenda 21 Salzburg: <http://www.salzburg.gv.at/la21>

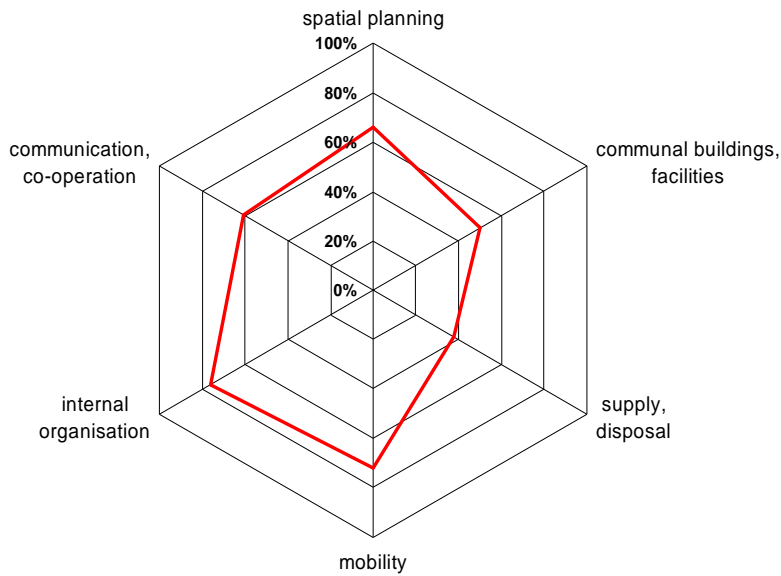
e5 & European Energy Award

e5 is a continuous process and quality management system. It works for setting up and improving local structures and frameworks for effective energy policies. It is a certification, benchmark and labelling system as well as a network within the community and between communities.

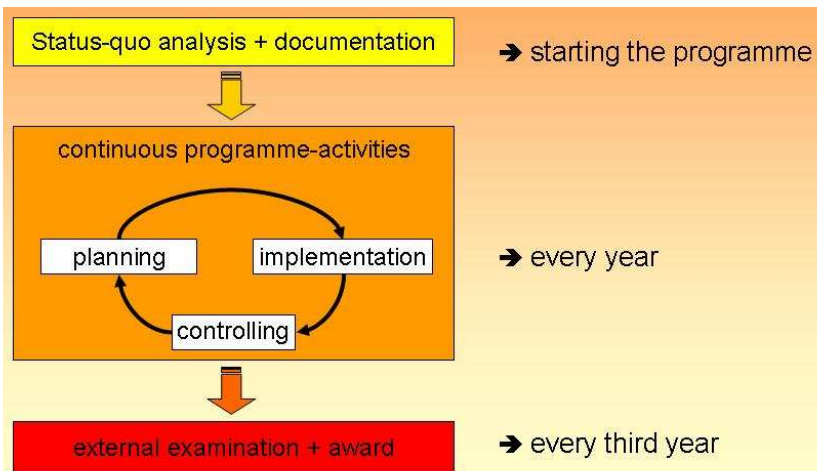


It has 4 functions:

- Checklist for the energy reviews
 - what has been done?
 - quality of transformation?
 - documentation of each project
- Catalyst for the process
- Aid for planning future activities
- Measurement tool for benchmarks, external audits and certification



Evaluation framework of e5



Continuous process of e5

Quality assurance and awarding

Continuous examination of the implementation in all six action-fields of the catalogue of measures

- annual: 'internal audit' (balance of all activities, programme of activities)
- minimum every three years:
 - 'external audit': $xx\% = \text{realized measures} / \text{all possible measures}$
- documentation
- energy-political programme

Awards correspond to the level of realisation 'e' – 'eeee'

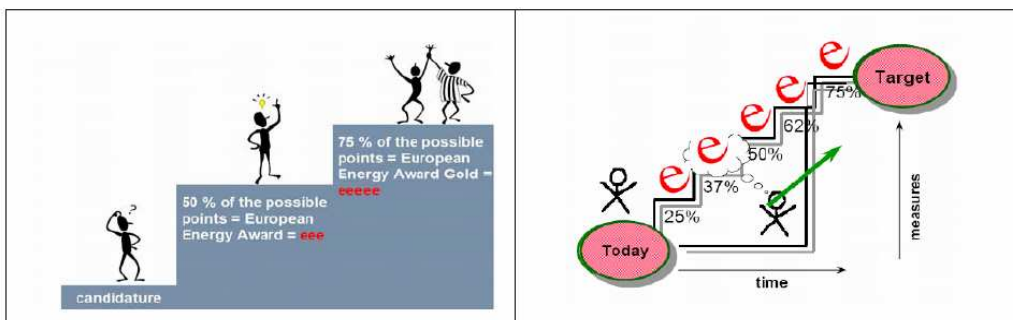
e5-Gemeinden in Österreich 2007



Austrian communities of e5

Short history

The original idea was developed in Switzerland. ('Energienstadt') In 1998 it was adopted and modified by three Austrian provinces (Vorarlberg, Tirol and Salzburg) in e5. In 2002, a harmonised programme called European Energy Award was implemented by Austria (e5), Switzerland (Energienstadt), Germany and Poland. The EEA combines the expertise and tools developed by Austria and Switzerland with the ideas of Germany, Ireland, France, Lithuania and Italy who joined the programme in 2003. The Austrian and Swiss partners decided to keep their well accepted and established brands e5 and Energienstadt. All brands (e5, Energienstadt, eea®) use the same tools and the international umbrella organization of the EEA ensures uniformity.



e5 & European Energy Award Certification (EEA):

50 % of all possible points = European Energy Award®

75 % of all possible points = European Energy Award® Gold



Participating Countries

In 2008 more than 450 communities in 10 countries (Ireland, Italy, France, Czech Republic, Lithuania, Liechtenstein, Netherlands, Switzerland, Germany, Austria) participated in the program. 236 of them have already been awarded with the EEA (17 with EEA gold)

3. BEST PRACTICES

CAP

Financial arrangements

WoonEnergie = the Dutch organization Home Energy is a consumer based collective for energy distribution: collective buying. The energy “buy-in” is coordinated by housing associations, to help reduce energy cost for their tenants. One bill for both transport and energy use is available. Price level is guaranteed: as low as the three lowest Energy companies in the market.

Netherlands Energy Credit Scheme around 2003

[households]

- 15% of the energy tax
- collected by Energy Companies and passed on to the Government
- Energy Companies implement EE Programmes,
- that is they deliver economic incentives [rebates] to household customers when they buy EE appliances or realise EE retrofits to their houses [wall insulation, low emissivity glazings...]
- tax credits to energy companies to recover direct and administrative costs

Effects of this scheme

- 2000-2001: Doubling of the market share of A-rated white goods within two years
- [2001: washing machines up to 88%; EU-average: 45%]
- Side effects for the case of washing machines alone: + 1,9 Meuro/y profit tax on the economic activities generated; + 6,6 Meuro/y extra VAT;

- jobs created: 152/y [excluding manufacturing of appliances mainly in other countries]; avoided unemployment benefits 2.3 M euro

Market condition	Country operated	Summary
Feed-in tariff	Germany	Installed capacity in Germany would suggest that the feed-in tariff is the most successful instrument for stimulation of the PV market. It gives PV developers certainty of the value of the electricity they generate for a long period and makes attractive payback periods achievable. The only potential drawback is that the feed-in rate is fixed by the government and is decreasing, such that the value is lower than can be achieved in Zurich or Copenhagen within the Solar Stock Exchange
Net metering	Denmark Switzerland [at discretion of utility] Netherlands [small-scale only]	The value of PV electricity is high due to net metering [especially given the relatively high retail price in Denmark]. The lack of a requirement for supply companies to pay for net export per annum encourages developers to use PV electricity on site. This may also have the effect of limiting the size of installations as excess capacity [compared to demand] does not create revenue
Solar Stock Exchange	Zurich, Switzerland Copenhagen, Denmark	The high feed-in tariff that can be obtained within the solar stock exchange can make PV commercially viable.
Retail electricity price higher than PV export price	U.K. Netherlands Switzerland	A market which values PV export lower than the retail electricity price offers no incentive for investment in PV installation. Under these market conditions, PV uptake can only be stimulated through capital grants and/or other incentives such as green certificates or tax exemptions. Such incentives have been employed in the Netherlands for a number of years and have recently been introduced into the UK market.

ESCO

The Shared Savings Structure is a good introductory model in developing markets because Customers assume no risk, however it does limit long-term growth and competition of ESCO and financing industries. The Guaranteed Savings Structure is difficult to use in introducing the ESCO concept in developing markets because it requires Customers to assume investment repayment risk. However, it fosters long-term growth of ESCO and financing industries.

Exceptions include Germany with its emphasis on contracting in federal buildings, combined with a programme for refurbishment of federal buildings; the Federal government of Belgium with its Fedesco agency that promotes third-party financing in federal buildings; and the UK with a revolving fund in the public sector and the London ESCO joint venture energy service company. The NEEAP of Slovenia mentions energy performance contracting as an instrument in the public sector. The NEEAP of Portugal states that efficiency contracts shall be mandatory for the state – this obligation is combined with an extensive auditing and building

48 Directive 2006/32/EC, Annex VI, point [e]
49 Point [a] of Annex VI

EN 37, EN certification efforts: The NEEAPs of Poland and Hungary include measures related to thirdparty financing and/or ESCOs in the public sector, but without providing clear implementation details. There are a number of actions in the NEEAP of Austria to support contracting relating to federal and public properties. In the Czech Republic support will be given to projects that will promote ESCOs and the market for energy services, but no additional information is provided on what types of projects would qualify or how the support will contribute to ESCO sector development.

PV Cooperative

Typically in Denmark, the price for PV electricity is the same as the retail price for purchase of electricity from the grid – there is a type of net-metering system. However, if the PV installation makes a net export of power over the year, the electricity company is not obliged to pay for that export, creating a situation where developers limit the size of systems to ensure that it is closely matched to on-site consumption. However owners of PV installations in Copenhagen are now being offered a feed-in tariff equivalent to € 0.55/kWh for the electricity they export to the local system. This is funded by the customers of the local utility – Copenhagen Energy – who have been given the opportunity to support PV projects by paying a premium for a portion of their electricity [a tariff of 0.6 €/kWh for a percentage of their demand that they fix on a year long contract basis]. The high feed-in tariff encourages investment companies to invest in PV. These investment companies provide the initial capital and often form a co-operative to operate the systems. As soon as the system is operating, shares in the cooperative are sold to the public and a dividend is paid from the revenue generated by sale of electricity.

German Bürgerbeteiligungs

No other country has seen more solar PV development than Germany. Nearly twothirds of German solar PV capacity has been installed by farmers, homeowners, and by limited partnerships known as Bürgerbeteiligung in German. These limited partnerships, while not true co-operatives, share similar attributes. Most importantly, Bürgerbeteiligungs allow for individuals to invest in commercial solar projects. The advice taken from Germany was not to use the co-operative model for solar hot water. Commercial-scale solar hot water systems require a stable market for the distribution of hot water, which is user dependent and not easy to distribute as electrical power is. In summary, there is a ready market for solar electricity. The technology is proven, widely available, and economies of scale exist for large systems. For these reasons, it is easier to construct a financial model to determine whether a project is feasible or not with a higher degree of certainty for solar PV than that for solar hot water.

Solar Share in Toronto

The SolarShare project set out to pursue several objectives.

- Explore the possibilities for the development of solar energy in Toronto
- Examine Solar Co-operatives in Germany and their Applicability to Canada
- Create Economic & Financial Modelling Tools for Solar PV & Solar Thermal
- Determine Key Parameters Affecting Profitability
- Determine the Profitability of Solar PV & Solar Thermal in Ontario
- Determine Conditions Necessary for Profitability in the Future
- Determine Preliminary Financial and Organizational Structure
- Identify Preliminary Sites and Potential Partners
- Develop a Replicable SolarShare Business Plan

SolarShare sought specifically to develop rooftop projects within the urban core of Toronto. The urban core is where the demand for new capacity is greatest and both the benefit of rooftop solar PV and its public profile would be highest. Further, SolarShare seeks to provide the opportunity for individuals to invest in community solar development.

After evaluation of pv arrays, the price per Kwh produced was higher when more building integration was achieved. The cheapest pv arrays can be found on flat roofs, with standard mounting fixtures [Cenergia, Denmark]

4. EVALUATION

Important points:

- Positions of stakeholders in structuring cap's
- Tools and methods to exchange between Salzburg and Copenhagen
- Public involvement

Could Copenhagen learn from the Energy Point system in Salzburg?

Knowledge and experience transmission from Salzburg to Copenhagen about social housing and financial aspects is required.

Concerto partners in Salzburg are the main project developers. This increases the awareness and engagement in the project.

In Copenhagen not all relevant stakeholders are project partners. Stakeholder analysis is important that partners mention their aims and agenda.

Recommended actions

General

- Create a better perception of “ownership” of the plans in the Concerto area
- Take action immediately to prepare for social process
- Extend the borders of community action across the demonstration projects
- Support the community centers with public support
- Voice and choice connection [connection of top-down and bottom-up processes]

Main steps of Quality agreement:

- Clear definition of the roles of stakeholders,
- Agreements of housing associations, builders and city that something is necessary and that they will pay for it.
- Define what is necessary
- Parts of Lehen area is substandard: social service + water management

Copenhagen- Hornemann's Vænge, Valby

Concerned stakeholders for actions are the social housing associations, the tenants and the municipality.

Valby general

Promoting the social ownership of the area and the project is important. The PV artwork created a lot of noise for example. More are needed in Valby scale and not only for Concerto projects.

Salzburg- Werk:Lehen Area

Actions:

- a. bring positive news in media: a statement is made that this part of the city will be good: 'green' and 'sustainable'
- b. meeting young and elderly [young help old to use 'facebook' and 'sms'ing and building up a new dictionary]. The elderly create a more stable environment.
- c. A competition is designed, to attract people to involve more people in planning.

Community workers [Bewohner] service is important to be established. It will start operating on 15 October 2009, in small scale and will be established on 1 January 2010.

Neighborhood meeting, and the meeting with the new political member were realized. New concepts for renovation were worked out and the new group started about the elaboration of these concepts in September, 2009.

In terms of implementing the QA, the working groups should be reanimated, in addition to the steering committee that will collaborate by describing the activities. Same information should be available for all stakeholders.

Could the structural plan for Salzburg be used to discuss for a strategy for a larger area?

The targets of the structural plans are worked in Concerto projects by quality check for each building project. This plan is for 10-20 years, general goals but no implementation. The discussion was made to motivate Lehen positive about the project. The surroundings is an axis for the project now.

Actions per city

Actions per project area

Stadt:werk:lehen – Lehen

1. Work with the work package groups command on question marks
2. Symposium on community scale center

Stimulating community action is not expensive, especially considering the social capital of bottom up organization.

For Denmark, the local government should be more involved and active to combine top down and bottom up processes. Carlsberg area in particular: meetings for the sustainable qualities of the neighbourhood.

As for Salzburg, furthermore than the quality agreement concept and sustainable qualities, a roadmap for action is needed.

Meetings are needed every year to see the needs of community and government, and for monitoring; we need a questionnaire for expectancies of community action [zero case and end case]

A Community Questionnaire Structure

What are the priority issues for the community?

List the major issues they feel need to be addressed in the community. They will probably be local issues, but may also include global, national, and regional concerns.

What can the group do to help?

Give a short summary (one or two paragraphs) of any existing or planned projects, activities, or resources that will help to address the priority issues. Ask for a description of the project,

the people and organizations involved, its status (e.g. planned, or third year of operation) and anticipated benefits.

What support needed?

For each activity/project, ask groups to provide a summary of the resources, support, staff, training, materials, equipment, etc., that would improve their ability to carry out projects. This will give the coordinating committee a sense of what groups need and where partnerships with other groups, businesses, or funding can be arranged.

REFERENCES

Asset-Based Community Development Institute [ABCD], Institute for Policy Research, Northwestern University, 2040 Sheridan Road, Evanston, IL 60208-4100, Tel: 847.491.8711, Fax: 847.467.4140, Email: earlee@northwestern.edu, Website: <http://www.nwu.edu/IPR/abcd.html>.

The ABCD Institute shares its findings on capacity-building community development through interactions with community builders and by producing practical resources and tools for community builders to identify, nurture and mobilize neighborhood assets.

Smart Communities Network, US Department of Energy [DOE], Office of Energy Efficiency and Renewable Energy, Denver Regional Support Office, 1617 Cole Boulevard, Golden, CO 80401, Tel: 303.275.4826; 800.357.7732, Fax: 303.275.4830, Email: sustainable.development@hq.doe.gov, Website: <http://www.sustainable.doe.gov/>.

The Smart Communities Network helps communities design and implement innovative strategies that enhance the local economy as well as the local environment and quality of life. Its website contains a "tool kit" of sustainable information including manuals, workbooks, bibliographies, data bases, case studies, and model codes and ordinances.