

Best Practice description

REScoop: Hvidovre Fjernvarme, FDHvidovre, and Avedøre

Country: Denmark

Name of Measure: the “package” approach

Third party involved: EBO Consult

Description of measure

EBO Consult manages administrative and technical tasks of several local district heating non-profit companies, called Hvidovre Fjernvarme, FDHvidovre, and Avedøre. Each company is a cooperative owned and directed by citizens and consumers. One of the administrative and technical tasks that EBO Consult manages for Hvidovre Fjernvarme is to expand district heating in Hvidovre, which is a suburb in Copenhagen. The expansion of district heating is accomplished by separating the expansion area into projects.

In order to realize and begin a project, 30 % of the heat demand (i.e. home owners) in each project has to accept a conversion into district heating from natural gas, electricity or oil. Therefore, each project starts with a marketing period. A measure that is used to achieve the 30 % is the package approach, which is a conversion package for the homeowner.

Description of actions

First there is a marketing period where a specific area is targeted. Which area is next, is determined in advance in a district heating expansion plan. In order to begin, a project proposal must be prepared and sent to the municipality for approval. It must include socio-economic, user-economic, environmental analyses etc. of different heating sources (district heating, oil or gas). The city council is obliged to approve the heating source that has the largest socio-economic benefits.

Consequently a period of 2-4 months the cooperative goes into the area, starting off with newspaper articles and information nights. People can sign up to participate on the website of the cooperative. The marketing in this campaign has three main arguments: comfort, price and sustainability.

When 30% of the district households sign up, the project goes ahead. There is a specific deadline for people to sign up. When the customer agrees on the details, he signs a contract with the cooperative.

Everybody that signs up gets a visit of the account manager of the cooperative. This person explains all the details on how, when and where the installations will be installed. This account manager communicates with the cooperative and the builders and construction workers, the customer only needs to be home when they start the installation.

Customers only have to do two actions. Sign the contract and open their house for the installation. All the rest is taken care of by the cooperative. Customers can become a member of the cooperative (non-profit organisation in Denmark).

After the installation members get information on saving energy. The more efficiently they use the heat the better the business case of the project. Since all profits are returned by lower heating prices, it is in their interest to save heat since it benefits everybody.

Cost of implementation:

The package solution has a fixed price of +/- €6000,- . People who cannot afford this amount can choose to repay it through their energy bill. They can decide in how many terms they want to pay it.

Criteria	the "Pakkeløsningen" approach	Score	Explanation of Score
<i>Effectiveness:</i> The effectiveness of energy saving measures exists of different parts			
	<i>Impact:</i> Is there a clear impact on the energy savings of households where the measures were targeted or implemented. The researchers aim to find meaningful correlations between the measures and the variables that determine energy saving in households.	++++	The transition from gas to sustainable heat (50%) has a large impact on energy savings. The transition from gas, oil and electricity is considered an energy saving in Denmark. A conversion from oil to district heating = over 70 % decrease in CO2 emission pr. consumer. A conversion from gas to district heating = over 60 % decrease in CO2 emission pr. Consumer.
	<i>Outreach efficiency:</i> This criterion looks at the reach in relation to impact. How easy is it to reach a large group of consumers and have an impact on energy saving in that group. Or the other way around, when the measure was implemented in a small group did it had a substantial impact to justify this reach.	+++	Reaches at least 30% percent per district and has significant impact. 386 households changed their energy source in last projects.
	<i>Time Efficiency:</i> This criterion looks at how much time does it takes to implement the measure and the duration between implementation and first results. An example of a best practice would be a short time span (months rather than years) between the implementation of a measure and the first measurable results.	+++	6-12 months of implementation to first transition and significant energy saving. After that the communication continues.
<i>Pre-investments and share of costs:</i> Who bears the pre-investments of implementing the measures and who benefits? How long does it take to cover the pre-investments?		++	Thanks to the cooperative model, the consumers benefit. Members share the costs. The cooperative shares pre-investments, but also gets the benefits. Returns get back through energy bill. For consumers the price of installation is €6000. They save €700 a year. Less then 10 year ROI is about the average.
<i>Implementation:</i> This criterion looks at the complexity of implementing the measure. This includes the above criteria of cost, but also administrative burdens, training of employees or volunteers and integration into existing systems.			
	<i>Administrative burdens:</i> Here we will look at the administrative burden that is created with the implementation of the measures, and if it is possible to reduce them with automatization, for example with a basic administrative system. This criterion will always be applied in relation to the impact and reach.	+	It requires extensive specialised organisation, but is legitimized by the high impact.

	<p><i>Training of employees or volunteers:</i> Here we will look at how much time it costs to train volunteers or employees that help with implementing the measures. Also, the level of education is considered.</p>	+	Cannot do this with volunteers, but you need trained skilled workers to implement. It is not a quick win. But once the organisation stands you can expand and have significant impact.
	<p><i>Integration into existing systems:</i> Here we will look at the ease by which the implementation of a measure can be transferred to another cooperative somewhere else. When adoption of a measure implies the adoption of a complex support system, this is likely to form a barrier for transfer of this practice to other cooperatives.</p>	++	When one takes the technical aspect out of consideration but focus on the package deal approach and the process can be implemented as a measure everywhere. It can for example also be used for retrofitting houses.
<p><i>Market up take:</i> This criterion evaluates the possibility of replication with workable alterations in different cooperatives.</p>			
	<p>Regulatory context: Important here is to look whether the measures can only be used when certain regulatory measures are in place or that they can be implemented in any regulatory context.</p>	++++	No regulations needed for the package approach. District heating depends on national regulations.
	<p>Organisational context: Another important aspect is to analyse whether the measures are linked to any specific organisational structures of the cooperative. For example, when a measure only works when the cooperative is the owner of the electrical grid it will get a low score on the market up take criteria.</p>	+++	No specific legal entity or structure needed. The fact that it is a cooperative is an extra benefit to the project but not essential.
<p><i>Ethical performance:</i> This criterion looks at whether there are ethical procedures in place concerning control of end-user, transparency and data management.</p>	<p>Degree of control by end-user: In what terms can end users exercise control of the measures or organisation that implement the measures.</p>	+++	The district heating is owned by the cooperative. Members have direct control in the organisation.
	<p>Transparency: Is it clear how governance structures or cash flows are organised</p>	++	Due to the cooperative control of the members this is clear
	<p>Data management: How is data of the tools managed. Is there for example a privacy policy in place?</p>	+	National privacy regulations for the cooperative are in place.

Expert involved:



Holds a bachelor degree in Social Science from the University of Roskilde and a master degree in Cross-Cultural Studies from the University of Copenhagen, and she has followed business courses from Copenhagen Business School. She has mainly worked with issues in Social Science, international trust-building, diversity management, cultural, and behavioral differences and change. Rie wrote her thesis for an international company, called Grundfos, where she analyzed the behavior of employees working in different cultural contexts in order to help the leading management team to change the business culture. She has also followed courses in behavioral economics, psychology, and 'nudging'. Rie has a lot of hands-on experiences working with qualitative and quantitative methods.

When studying, Rie worked in EBO Consult, where she has got a lot of knowledge about energy issues. She has worked 6 months in Spain, where she made a feasibility study of the Spanish biomass market, and she has been involved in the package solution model and the free technical service from the beginning. Today, she works as a fulltime employee in EBO Consult, where she combines her knowledge about human behavior and energy issues. She works with communication, marketing and evaluation of district heating projects, and motivating consumers to become cooperative members, make sustainable and energy saving choices such as the package solution model or the free technical service. Rie has also arranged an energy community gathering where over 200 consumers – children and adults - voluntarily showed up.

Rie can help REScoops with the communication and marketing of large energy projects concerning the changing op heat sources.