Case 3:

Sun and/or biomass in sparsely populated areas

Herning Kommunale Værker.

There are basically 2 ideas in the project:

1. To let local energy supply companies operate outside the collective energy supply system (Herning), and
2. To transfer experience from small district heating societies to the establishment of a co-operative society for the sale of individual solar/biomass systems (Egense). Manufacturers and installers gave special price offers and financial agreements were made with the bank. The results seem positive as approximately half of the original target group has installed solar heating systems, and 20% of the households have installed biomass systems.

Advantage

- Good project with a utility who wants to sell more than electricity and district heating, There are no limits, as for the gas utilities, and that gives it a good perspective
- The benefit is that you can use the solar plant in the summer and thus spare the work with the biomass plant in months with low consumption (and low efficiency with the biomass boiler)
- The neighbour impact has been positive, (especially in Egense).

Lessons learned:

- It is already very expensive with a biomass plant, so it can be tempting to leave out the extra costs for a solar plant. However it does not seem to have been the case here.
- Lack of technical experience and knowledge with such systems (need of guidelines)
- They have not been marketing so aggressively (as for instance the natural gas companies).

CASE STUDY 3

Sun and biomass in sparse built-up areas

Title: Sun and biomass in sparse buildup areas.
Location: Denmark (Herning and Egense).
Time period: Starting date: 1996. End date: 1998.

1 Short description of the project:

In the Danish energy Plan Energy 21 it is suggested, that people living in rural areas without possibilities for connecting to a collective energy supply net, should use renewable energy sources for hot water and space heating. These houses are today mostly heated by individual oil burners or by electricity.

This project consists of two models of organising the conversion to renewable energy sources in these areas. In the city of Herning a local energy supply company offers technical advice and financial arrangements in areas outside the collective energy supply net. The other model takes advantage of the experiences from projects, which implement district heating in small villages by establishment of cooperative societies. A small village called Egense was chosen as target group for this campaign.

Participants:		Role:
Herning Kommunale Værker	Local Energy Supply Company (electricity and district heating)	initiator technical advisors
Naturgas Midt-Nord	Local Energy Supply Company (Natural Gas)	initiator technical advisors
Planenergi SI	Company of consulting Engineers	initiator technical advisors
Passat Energi A/S	manufacturer of wood pellet boilers	supplier of components
HS Kedler-Tarm A/S	manufacturer of wood pellet boilers	supplier of components
Ar-Con Solvarme A/S	manufacturer of solar collectors	supplier of components
Djurs Solvarme I/S	manufacturer of solar collectors	supplier of components
Herning inhabitants	200 households	target group
Egense inhabitants	100 households	target group

Time Schedule:	
June 1996	Start of Herning project
Sep. – Nov. 1997	Campaign period in Herning area
May 1998	Evaluation of Herning project
Jan. – Feb. 1998	Campaign period in Egense
Sep. 1998	Final evaluation
1999	Follow up

2 Project goals

General objectives:

- To increase the use of solar and biomass energy in rural areas by establishment of an efficient sales- and operation organisation.

Specific objectives:

- To expand the work area for local energy supply companies to areas outside the collective energy supply net with technical advising and financial arrangements for individual energy supply (the Herning project).
- To use experiences from small district heating societies to establishment of a cooperative society for the sale of individual solar and biomass energy systems (the Egense project).

Targets:

- To make agreements for the sale of a solar and/or biomass energy system to app. 30% of the selected target groups.

3 Design characteristics

Two suppliers of biomass boilers and two suppliers of solar water heating systems take part of the project. They offer systems of different size and design but all approved standard systems.

4 Financial characteristics

A general inquiry for prices was made to the manufacturers and to the installers in the area. From the results agreements were made with two manufacturers of wood pellet boilers and two manufacturers of solar collectors. The manufacturers gave special offers due to this campaign. The price setting for the installing was carried out in cooperation with two of the installers in the area.

Financial agreements were made with the local banks in order to get an attractive economical solution for the buyers of the systems.

In the Egense project a cooperative society were established with the potential buyers as members. The society should be able to bargain with the suppliers in order to get cheaper components and installations and also cheaper wood pellets/solid fuel afterwards.

5 Sales promotion

The sales material consisted of direct mail to the selected target groups, info-meetings, exhibitions and advertising in the local newspaper.

The direct mail consisted of information about solar energy and biomass energy, together with interviews with house owners who already had a solar/biomass system. By responding to the mail the potential customer could get a visit by a technical advisor. This advisor would help choosing the right kind of system.

6 Ownership and responsibilities

The private house owners buy and own the systems. Financial arrangements can be made with the local Energy Supply Company or through the bank.

Manufacturers and installers are obliged to give a 5-year guarantee on the components and the installations.

7 Results

The project is not yet completed and no final results are available by now.

In the Herning – project agreements were made for the installation of 29 biomass systems and 6 solar energy systems in a total of 32 households. By now 20 biomass systems have been installed. This should be compared to the app. 200 households in the selected target group. In the Egense – project agreements have been made for the sale of 22 wood pellet boilers and 53 solar SDHW systems to a total of 58 households. At this moment 3 biomass boilers and 16 solar systems have been installed. This result should be compared to the app. 100 households who were selected as target group in Egense.

May 1999