

Case Studies



Case 2:

Sun and wood - a buyers association

A combination of solar and biomass is sold by an association of private house owners. A large price reduction has been possible (40 % for the solar part) by taking advantage of co-operative wholesale buying of components. It will be possible to purchase wood pellets with discounts.

Advantage:

- Good if the association can enable cheaper systems and bio-fuel
- The biomass-solar plant is a complete heating plant, not only for hot water

Lessons learned:

- Hard to get going and to make the association grow in order to make the work easier
- Lack of technical experience and knowledge with such systems (need of guidelines)
- 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 in this case, several solar heating systems have been sold to households where there already was a biomass-system installed.

CASE STUDY 2

Solar and bio mass systems sold through an association of private house owners.

Title: Sun & Wood – an association of private house owners.

Location: Denmark.

Time period: Starting date: The project is still in the starting phase, 1997. End date: No end date.

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.

If the house owners gather together in an association it will be possible to make larger buys and thereby to achieve large discounts from the manufacturers. This association consists of private house owners as members and a company of consulting engineers as technical advisors.

Participants:		Role:
Nellemann, Nielsen & Rauschenberger A/S	Company of consulting engineers	Initiator Technical advisors
Private house owners		Members of the association Potential buyers of the systems

Time Schedule:	
1997	Installation of 10 pilot – systems Operation monitoring, installation optimization
March 1997	Statutory general meeting
Spring 1997	Test of the solar system at the Danish Technical University
Fall 1997	First ordinary general meeting
July 1999	250 systems sold

2 Project goals

General objectives:

- to spread out renewable energy systems by making it more economical attractive because of the advantage of wholesale

Specific objectives:

- to introduce a new constellation of associations of potential buyers

Targets:

- a total of 250 installed systems by July 1999 which seems a little difficult to reach.

3 Design characteristics

The members of the association can buy a system consisting of an automatically fired boiler for wood pellets in combination with a drain back solar system with a large collector area at 12.5 m² (Price 46.836 DKK, normal price: 51.200 DKK). The large collector area was chosen because the system should include space heating too. The concept of the system was developed as a part of this project and tested at the Danish Technical University. It is also possible to buy the boiler for wood pellets without the solar part (Price 27.300, normal price: 48.000 DKK).

The systems are sold with a large water storage tank (500L) and a little auxiliary water tank (160 litre) with an electric heater.

4 Financial characteristics

There is a subscription to members of the association at 125 DKr and 10% of the total price of the system for administration and support from the association. The association is a non-profit cooperation with the object to use the advantages of large wholesale of components and solid wood fuel to get cheaper hot water and space heating. The Danish Green Foundation ("den grønne fond") has supported the project, which means that the association can keep an engineer employed as technical advisor.

By taking advantage of cooperative wholesale of components for the systems a large price reduction was possible (about 40% for the solar part of the system). When the house owners had bought the system it is possible to purchase bio fuel (wood pellets) with large discounts, due to large amounts of pellets.

The Danish State offers subsidies to as well solar as wood based energy systems.

5 Sales promotion

A first contact has been made to some house owners in a community in a rural area. 10 systems were installed as pilot systems. No real

promotion campaign has been carried out so far, but there have been effective articles in farmers newspapers.

6 Ownership and responsibilities

The association is only responsible for the subscription money. The systems and installations are paid for and owned by the private house owners.

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

7 Results

The association became a registered company in November 1998 and now has 45 members, and many are becoming members in the near future. The project is still in the starting phase. 50 systems are sold, but it will be difficult to reach the goal of 250 systems per year. The reason for this is that the systems are sold individually as it has turned out to be difficult to create buyer groups who are ready to bargain at the same time.

Experiences from the 10 pilot systems and the system at DTU are positive (about 20 installed solar systems).

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