



Project

Promotion of efficient heat pumps for
heating

(ProHeatPump)

EIE/06/072 / S12.444283

Deliverable 31
Round table about policy instruments to
accomplish an increase in heat pump
installations
Varna, 14th May 2009

Documentation



Dobrich Local Agency for Energy Management

Work Package 4

Intelligent Energy  **Europe**

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Task According to Annex 1 of the grant contract:

Organisation of Round tables on policy instruments to accomplish an increase in heat pump installations

A round table meeting had to be organised one in Bulgaria. About 15 people had to be selected among market actors and be invited to discuss constructive and practical measures for policy intervention in the country. The results of this discussion had to be documented in summarised and – wherever possible – generalised to become applicable for other countries with low market penetration of heat pumps.

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Event date:	2009-05-14
Event location:	Varna, Bulgaria
Event title:	Round table about policy instruments to accomplish an increase in heat pump installations
Type of event::	Workshop
Promotion (How did you invite participants?)	Mailing, Phone Calls
Number of Participants:	21 - in total, distributed as follows: 15 Planners 4 Policy makers 2 Installers
Target group(s):	Installers and Policy makers

Abstract of the discussions:

Under the project activities implementation the project partner DLAEM organised a round table in Varna, Bulgaria. We have invited 25 people to discuss constructive and practical measures for policy intervention in Bulgaria. 21 participants took part in the event. The invited people are installers, market actors and policy makers. The goal of round table is to prepare and documented practical advise penetration of heat pumps in the market.

Outcome of this work package:

1. Report analysing the policy context related to energy conservation, building and housing policy in Sweden, Norway and the UK.
2. Short reports including specific proposals for appropriate policy interventions in Bulgaria with relatively low market penetration of heat pumps and it will be distributed to key actors.
3. Specific proposals for appropriate policy interventions in countries with relatively low market penetration of heat pumps.

Minutes

from the round table workshop held on 14.05.09 in Varna Bulgaria,
organized by Dobrich Local Agency for Energy Management

Workshop title: Round table on policy instruments to accomplish an increase in heat pump installations.

The main goal of this meeting was to examine possibilities and barriers according to penetration of heat pumps in the market. The result of the discussions is: description of constructive and practical measures for policy intervention in Bulgaria.

We have invited policy makers, engineers and installers to take part, as they are the most suitable professionals to make good suggestions. Our participants' selecting list was based on the list of participants on the European conference, organized in Varna on 26.03.09.

The round table discussion started with a discussion on the current situation on the heat pump market in Bulgaria. At present there are operating about 15 companies, which install mainly ground source heat pumps, and more than 700 companies, which install split systems.

During the project duration time were produced and installed in Bulgaria 172 ground source heat pumps with capacity from 9 kW to 110 kW or the total power is about 10 000 kW. There is no statistic data about the number of the split systems in Bulgaria because there are a lot of companies.

The simple installation is the main advantage of the split system. And their shortcoming depends on the heat production from outside temperature. Up to 7°C they have good efficiency with proportion heat/electricity between 3 or 4. But if the outside temperature is less 0°C the efficiency is extremely low. Another disadvantage is the periodic need of defreezing, which is additional heat loss and efficiency decrease.



Anyway, although this disadvantages the heating with heat pumps is twice cheaper than heating with electric stoves.

Ground source heat pumps use ground or underground water energy. Their main advantage is the higher efficiency: between 3 and 6. Ground source heat pumps are two types depending from the ground connection type – open type and close type:

- Open type systems used underground water which is pumped out from drilling pass trough evaporator of heat pump decrease a bit temperature and go back to earth. Main advantage is higher efficiency 4 to 6 easy construction. Disadvantages of open type is lack of distinctness about deep of drilling and water flow, and necessity of filters their cleaning. It have possibility to freeze and destroy of evaporator respectively so it is need of precision control. Another problem is law about use of underground water. Although this problems this type heat pumps are most spread here.
- Close type constructed by polythene pipe in under earth where pass refrigerators liquid. Advantages - independence from water flow, there is no dangerous of pollution or freeze of evaporator. Disadvantages – lower efficiency than open type, more expensive and lack of good installers skills. Usually we heating house by water pipeline. The most suitable way for heating is by radiators or water floor heating. It is because max temperature from HP is 55°C. If the temperature increases the efficiency will decrease.

Ground source HP can work also in cooling regime. And they are more efficient than the split systems.

The main components of HP are compressor and heat – exchanger. Another important condition for the good work of HP is the quality of the construction. So, installers and planers realized that they have to have good theoretic and practical knowledge.



Barriers for increasing the share of the HPs in the Bulgarian market:

- Unclear law about using underground water for HP. Very slow and difficult license issuing procedure, managed by the BG government.
- Some technical problems with heat exchanger in open type HP
- Lack of quality experts can discredit ground source HP
- Low level of popularity of the HP potential in Bulgaria

Suggestions for the increase of HPs share in Bulgaria:

- Improvement of the Law for underground natural resources in the part on underground water (when this water is used for HP installation to have special lower price). Currently MOSW is define 2 lv per m3 without matter what for the water is used
- Creating a data base with chemical and physical composition of underground water of different sources with possibilities to be used for HP installations. The goal is better planning of heat exchanger and decreasing the damages.
- Creation of suitable manual, adapted to the professional school programs.
- Encouraging the use of HP installations with secured subsidies form RES national funds.

One-day round table in Bulgaria, Varna, 14th May 2009

Evaluation & Feed Back from participants

In the frame of the ProHeatPump project DLAEM hosted One-day round table in Bulgaria. 15 people took part in the round table – mainly students and installers.

The aim of the current evaluation is:

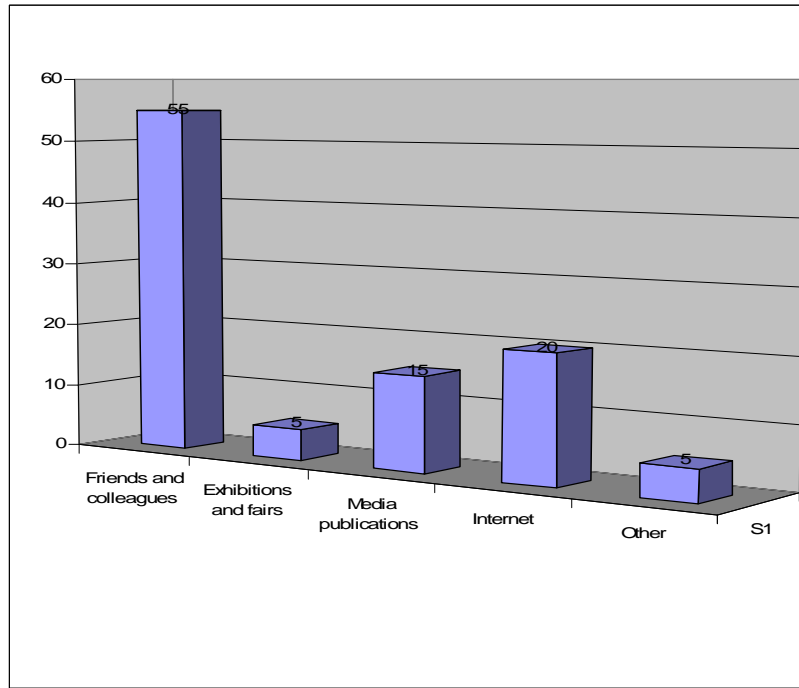
To present the information about the knowledge level of the people on the heat pumps, the potential and benefit of the heat pump use as a RES

- To measure the quality of the information provided during the round table.
- To help the improvement of the organizers quality in the future information packages distribution

For the aim of the evaluation a questionnaire with 7 questions was designed in the project (D 7) and distributed in 15 copies between the participants and all of them was filled in. The current evaluation summarized the results of the questionnaires and defines the main conclusions based on the answers. The summarized results from the questionnaires are as follows:

1. Where from you've been informed for the ProHeatPump project?

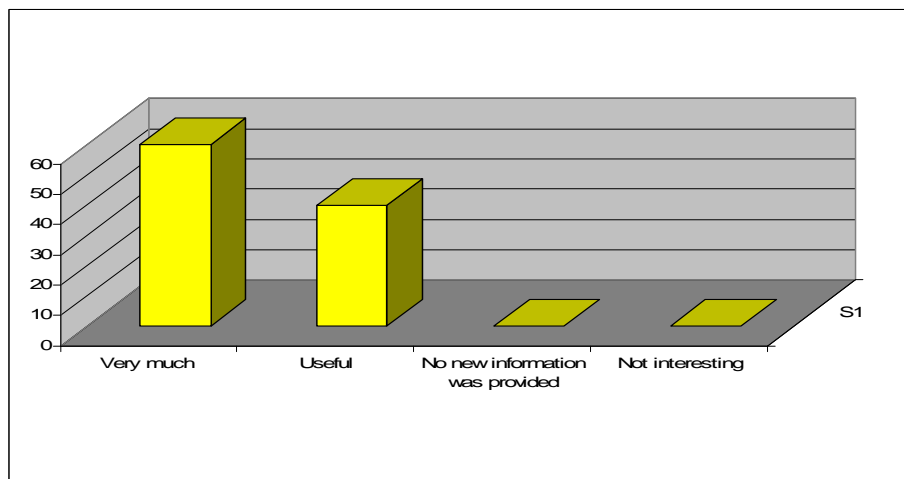
Answer	%
Friends and colleagues	55
Exhibitions and fairs	5
Media publications	15
Internet	20
Other	5



Conclusion: Most of the participants learned about the ProHeatPump project from friends, colleagues and media.

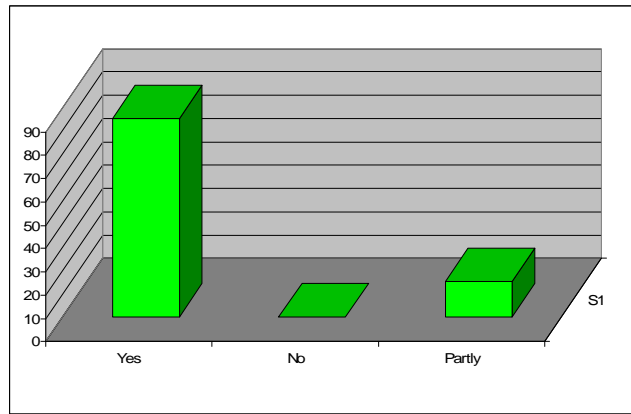
2. Was the information useful for you?

Answer	%
Very much	60
Useful	40
No new information was provided	0
Not interesting	0



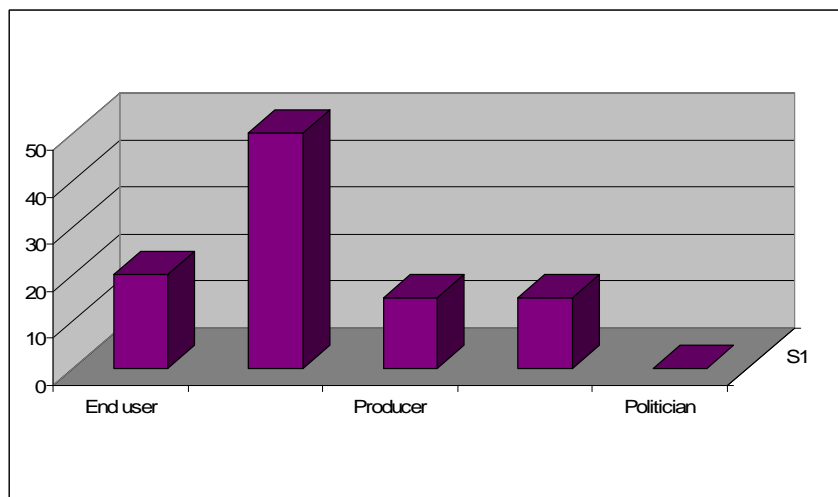
3. Does the information have practical application?

Answer	%
Yes	85
No	0
Partly	15



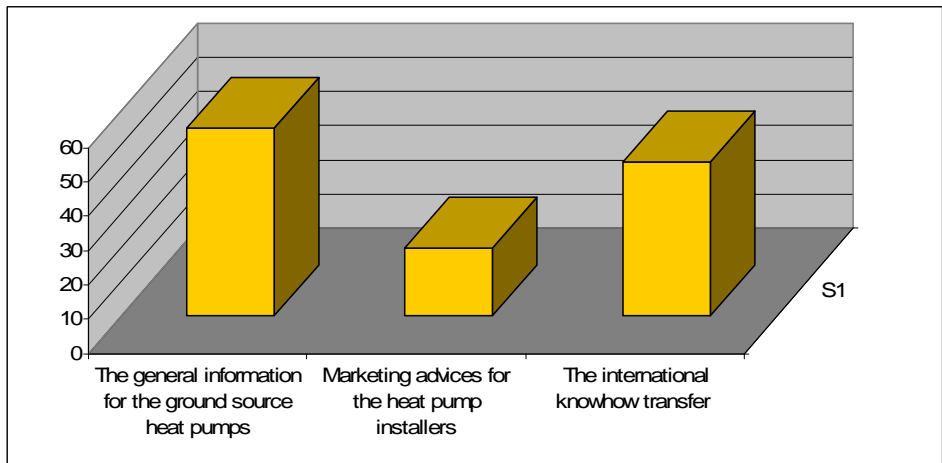
4. What is your personal interest to the heat pumps?

Answer	%
End user	20
Installer	50
Producer	15
Tradesman/dealer	15
Politician	0



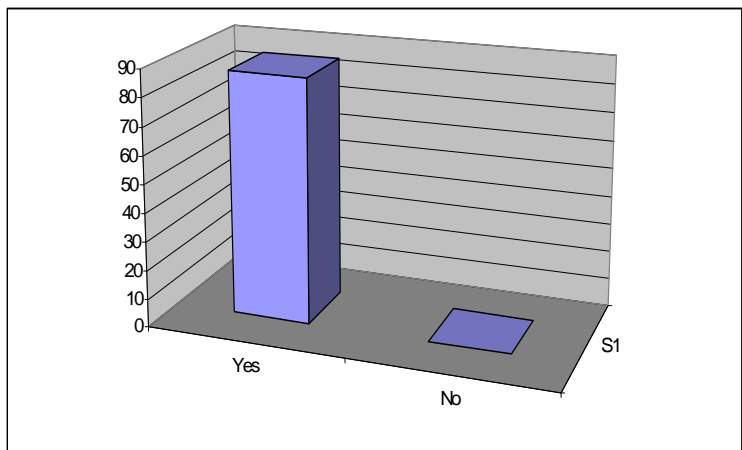
5. The ProHeatPump project is interesting for you because of?

Answer	%
The general information for the ground source heat pumps	55
Marketing advices for the heat pump installers	20
The international knowhow transfer	45



6. Do you like to receive additional information on the heat pumps?

Answer	%
Yes	100
No	0



Participants List



Name of Event	Round table on policy instruments to accomplish an increase in heat pump installations
Date of Event	14.05.2009
Location of Event	Varna, Bulgaria

Nº	Name	Organization
1	Todor Tonev	DLAEM
2	Mariana Kyncheva	DLAEM
3	Binio Dimitrov	DLAEM
4	Milena Nalbancheva	BoRAEM
5	Janeta Hristova	BoRAEM
6	Violeta Petkova	UBBSLA
7	Magdalena Karakerezova	Heat engineer
8	Radoslava Peneva	"Varna Gas Engineering" Ltd
9	Albena Jonova	HVAC Engineer
10	Aleksandyr Popov	"Dalkia"
11	Antonia Hajdutova	Gaskonetcs Ltd
12	Prof. Nikolaj Angelov	Naval Academy Varna
13	Veselin Todorov	Heat engineer
14	Prof. Venelin Pavlov	Electrical Engineer
15	Prof. Dimityr Dimitrov	Technical University Varna