Campaign for A-rated circulator pumps – a proven strategy

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Abstract

1.2 million households in Denmark have a central heating circulator pump. An estimated 800,000 pumps installed are old and inefficient. Potential savings per year of 400 GWh and 200,000 tons of CO_2 can be achieved by replacing these obsolete pumps. However, many consumers and installers have neither an opinion about, nor play an active role in choosing a circulator pump.

This paper documents how it is possible to promote the wider use of A-rated circulator pumps via an offensive campaign strategy to get both consumers and installers to participate actively in the choice of pump, thereby increasing the market share of A-rated pumps sold.

The campaign is based on a broadly-based push-pull strategy which aims to influence both consumers and suppliers simultaneously. The strategy consists of the following elements: Involvement of the supply side via voluntary agreements with producers, wholesalers, installers, and their trade organisations; Partnerships with installers in order to secure fixed price installations for A-rated pumps; Influencing consumers through magazine advertisements and TV commercials.

The market share for A-rated circulator pumps in Denmark grew from 15-60% in the period January 2006 to the end of October 2008. In a new phase, the strategy is switching the focus to OEM and boiler producers, and producers of heat exchangers for district and underfloor heating systems. The aim of the current phase was for A pumps to have accounted for 60% of the Danish market by the end of 2008.

Introduction

The campaign for A-rated circulator pumps is based on experiences gained from the previous campaign for energy saving circulator pumps which ran from 2004 to 2006. This earlier campaign showed that there was a need for involving the relevant actors on both the demand and supply sides. In March 2005, Europump (The European Association of Pump Manufacturers) launched an energy efficiency labelling scheme. This labelling scheme offers consumers an easy way to identify and prioritise the most energy efficient circulator pumps for heating systems (Europump, 2009).

The introduction of A-rated circulator pumps in 2005 showed the need for promoting the use of these high-efficiency pumps in the market. The Danish Electricity Savings Trust (hereinafter "the Trust") therefore decided to launch a campaign for A-rated circulator pumps. The campaign was designed in association with producers, wholesalers and installers. The cooperation is based on voluntary agreements made with producers, wholesalers, installers, and their trade organisations.

The current results of the campaign indicate that together the Trust and its partners have managed to increase the market share for A-rated circulator pumps from 15% in 2006 to 60% at present.



Figure 1. The Trust's push-pull strategy (Genius Access, 2007).

Approach

The campaign for A-rated circulator pumps is predicated on the Trust's overall strategy which involves influencing the market so as to encourage a more comprehensive and better selection of energy efficient equipment, and the increased demand for this equipment. The Trust therefore works with both the supply side (producers, suppliers, etc.) and the demand side (e.g. individual consumers).

Campaign background

- Most forms of electricity savings are financially beneficial for consumers
- The Trust must remove the real barriers to allow consumers to behave in a financially sensible and environmentally friendly way
- The Trust's approach simple, safe and cheap to act in an energy efficient way
- The Trust's work supports consumers' interests, competition, market development and environmental considerations

PUSH-PULL STRATEGY

The key strategy elements focus on involving and dealing with both the supply side and consumers. This strategy aims to create so-called win-win solutions in which suppliers can see the financial advantage of complying with requirements concerning quality, price and impartial information in order to benefit from the Trust's information and campaign activities, and its offers and endorsements of products¹.

A study covering A-rated circulator pumps

To get an overview of the operation of A-rated circulator pumps compared with traditional pumps, a study was undertaken by the Technical University of Denmark (DTU). The study describes the present and future power requirements for circulator pumps in central heating systems operating in single- and two-family houses. The study is based on the assumption that the pumping needs for single- and two-family houses can be achieved by a pump using less than 10 W of electric power. In order to test this assumption experimental tests were conducted at 12 single-family houses (mostly built in the 1970s) heated by district heating. Although the test results did not represent a sizeable sample in statistical terms, they clearly demonstrated that the pumps with the lowest capacities consumed 5-10 W of power as forecast. Furthermore, practical tests also showed that these pumps had sufficient pump capacity to distribute the required amount of heat during the Danish winter climate of the test period.

The study estimates that the total amount of electricity consumed for pumping in the test houses using these small circulator pumps can be reduced by 30-85% compared with the old pumps which were replaced (Tommerup & Nørgård, 2006).

The campaign for A-rated circulator pumps 2006-2008

As stated above, as a result of the introduction of A-rated circulator pumps on the market the Trust launched a campaign for high-efficiency pumps (A-rated). The campaign was based on voluntary agreements signed with the manufacturers, distributors and installers. The installers are represented through their trade associations. The purpose of the agreements is to motivate all the actors on the supply side.

In order motivate both the supply and demand sides a range of different measures was implemented in the campaign as listed below:

The push-pull strategy was conceived by marketing and management expert Philip Kotler. Originally, marketing strategies were about either push or pull (Kotler, 1976). The Trust's overall marketing strategy is based on both 'push' and 'pull' because this is what is required to influence the market in order to promote energy efficient products. Consumers are unaware and have little interest if one only promotes the 'push' element, while a pure 'pull' strategy will result in shortcomings in both distribution and products.

CAMPAIGN MEASURES

- A-rated pumps are labelled with The Trust's Energy Saving Label
- Agreement with installers on a standard price for installing an A-rated pump
- Agreement with distributors on special offers to installers of A-rated pumps
- TV commercials and press advertising
- Activities on The Trust's website

The Energy Saving Label

In order ensure that the circulator pumps promoted in the campaign meet the requirements for high energy efficiency, the pumps are labelled with The Energy Saving Label. The Energy Saving Label is the Trust's labelling scheme. In order to qualify for the Energy Saving Label circulator pumps should be A-labelled per the Europump criteria: 'Industry commitment to improve the energy performance of Stand-Alone Circulators through the setting-up of a Classification Scheme in relation to Energy Labelling'. In addition, producers must vouch that their products conform to the energy class stated (The Danish Electricity Saving Trust, 2008; 2008/2).

Furthermore, circulator pumps are regularly tested so as to ensure that they comply with the requirements. If the results show that a circulator pump does not fulfil the requirements it is removed from the list and the test results publicised.

Standard installation package

By virtue of an agreement with the installers association The Trust has made it possible for consumers to have an A-rated circulator pump installed for a standard price of around 400 Euro. In order to benefit from this offer, customers must choose a participating installer that has agreed to make the offer by signing up on The Trust's website.

Agreement with the distributors on special offers

In connection with standard installation package described above, distributors have come to an agreement with The Trust to make special offers on A-rated circulator pumps available to installers. By doing this The Trust has helped remove the barriers concerning the price difference between A-rated circulator pumps and traditional pumps.

TV commercials and press advertising

Although end-users/customers do not choose which pump they want to purchase, The Trust ran TV commercials and press advertising directed specifically at this target group. The purpose of these measures was to raise public awareness of Arated circulator pumps. The measures focused on two aspects. On one hand, the intention was to make end-users aware of high-efficiency circulator pumps. Armed with this knowledge, end-users could therefore request the installer to fit an A-rated circulator pump instead of a traditional pump. On the other hand, the intention was to demonstrate to installers that endusers knew about A-rated circulator pumps. Based on the fact that end-users are informed of the facts, installers will now have to take this into account when recommending which type of pump to install. The actual experiences from the campaign demonstrate that TV commercials are reasonably effective in terms of increasing the market share for A-rated circulator pumps.

In the campaign The Trust put forward 6 basic reasons for switching to an A-rated pump. The reasons were based on technical, financial and environmental arguments. The arguments are listed below.

6 good reasons to switch (The Danish Electricity Saving Trust, 2008/4):

- 1. An A-rated pump can save a family 25-100 Euro per year.
- 2. A-rated pumps use about a sixth of the power typically consumed by older circulator pumps.
- 3. A-rated pumps automatically adjust their output to suit a home's variable heating demands, compared with ordinary pumps which run continually at full speed.
- 4. A-rated pumps have a service life of 10-15 years.
- 5. A-rated pumps can minimise the noise in a central heating system.
- Saving electricity reduces your carbon footprint. If all Danish households installed an A-rated pump, Denmark would save around 200,000 tons of CO2 per year – equivalent to 1% of total Danish emissions.

Newsletter

Another information initiative involves producing and distributing newsletters to installers featuring the latest news about A pumps. The newsletters are produced in cooperation with the producers and wholesalers. The newsletters contain case stories, market share statistics for A pumps, competitions, etc.

Activities on the website

The Trust has developed different kinds of tools on its website. The tools are partly directed at the supply side and partly at the demand side.

The supply side has its own separate area on the website where installers can sign-up and offer the standard installation package to customers. By signing up in this way installers benefit from having their company name visible at no cost to themselves, thereby gaining access to many new potential customers who use The Trust's website. Additional advantages include the fact that once signed up, installers also benefit from special offers on A-rated pumps from wholesalers.

The demand side can access different kinds of tools which can assist consumers to switch to an A-rated pump. Some of these tools are (The Danish Electricity Saving Trust, 2008/3):

- A product list which allows consumers to locate an Arated pump
- A pump calculator which lets consumers calculate the potential savings achieved by an A-rated pump, and find a pump which fulfils their needs
- Information on A-rated pumps
- A list of installers offering the standard installation package allowing consumers to locate an installer locally

Press Advertising



Calculator



Newsletters



TV commercials



Figure 2. TV commercials and press advertising

Campaign results

The figure below shows the development of the market share for A-rated pumps from January 2006 to autumn 2008. The results shows that The Trust has managed to increase the market share for A-rated pump from 15-60% from campaign start-up to October 2008. The goal of a 60% market share for A pumps has therefore been achieved.

Some of the main reasons for the success of the campaign have been:

- TV campaign aimed at consumers
- Information on the Trust's website (product list covering Arated pumps, pump calculator, etc.)
- Standard price installation for A pumps
- Significant efforts from the supply side (producers, wholesalers, installers). Both the producers and the wholesalers have reduced their prices of A pumps.
- One of the producers (Grundfos) has decided that it will only put variable-speed A-rated circulator pumps for house-holds on the market.

The next steps in the campaign

The first step in the continuation of the campaign involves renewing the voluntary agreements with manufacturers, distributors and installers. These will underpin the aims of the campaign. Additional aims for the campaign will be determined during the agreement renewal process. The new aims have not been agreed yet. The next phase in the strategy involves switching the focus to OEM products incorporating A-rated pumps, boiler producers, and producers of heat exchangers for district and underfloor heating systems. The whole idea behind this initiative is to focus on pumps which are a component of another product e.g. a gas boiler. In many cases consumers are not able to choose an A pump for their boiler or heat exchanger this makes it difficult for consumers to make an informed choice.

A further element of the strategy will focus on pumps in multi-storey buildings. It is expected that there are potentially large savings to be made in terms of the amount of power used for pumping. Focusing on this area raises a new challenge for the campaign. People who live in a multi-storey building often have little understanding of the heating system in their building and therefore have no knowledge of which pump is installed. Another key issue which needs to be taken into account is ensuring that pumps are correctly sized according to the operating requirements of the systems in which they are installed. Many buildings have pumps which are over dimensioned.-Naturally, all the above will need to be taken into account in any future campaign strategy.

The campaign from an EU perspective

There are around 100 million heating circulator pumps installed in households across the EU-27. These pumps account for total electricity consumption in excess of 50 TWh per year, a figure which equates to 5-10% of the electricity bills payable by private households in the EU-27. The energy used by these circulator pumps is roughly 2% of overall electricity consumption and results in emissions of more than 30 million tons of CO_2 per year. Replacing conventional circulator pumps with energy efficient versions could reduce the amount of electricity



Figure 3. Development of market share for A-rated pumps

consumed annually by 60% or more, equivalent to more than 30 TWh per year. This would result in a reduction of emissions of around 18 million tons of CO_2 per year (Energypluspumps, 2009).

However, some issues need to be considered when putting the Danish circulator pump campaign into an EU perspective. A key element of the campaign is the Trust's central role. It is therefore essential that any similar campaign on an EU-wide basis is organised by an equivalent umbrella actor/organisation which can facilitate the efforts across the individual member states. As no such entity exists in the EU, the first step would involve creating an organisation which could manage the campaign. This would naturally require a larger set-up with much more coordination between the different actors in the EU, including producers, wholesalers, installers, and their trade organisations.

Managing the campaign is not the only issue. Another key element is cost of such a campaign. In the Trust's campaign the total budget for the 3-year period is around 1.3 million Euro (0.43 million Euro per year). Some preconditions require to be addressed when upscaling the costs of the Trust's campaign to the EU-27. Firstly, there is the difference in marketing costs from country to country; secondly, there is the assumption that some of the costs incurred by the Trust's campaign could be used in the development of the campaign; finally, it would be reasonable to assume that some of the campaign material could be recycled in an EU-wide campaign. Taking these factors into account, a conservative estimate of the cost of an A-rated circulator pump campaign covering a population of 493 million people in the EU-27 would be 70 million Euros. This entails a CO₂ cost for the campaign measures of circa 4 Euro per ton of CO₂.

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