EU wants to speed up market breakthrough
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High-efficiency heating pumps become standard

A pilot project supported by the EU, the Intelligent Energy - Europe programme, aims to speed up the market breakthrough of high-efficiency heating pumps, which can save 60% or more on energy consumption compared to conventional pumps. The goal is to alter the market such that the new technology becomes standard and attains a price level similar to that of conventional pumps. The cooperative procurement approach was tried out across national boundaries in nine European countries. The grouping of demand was combined with innovation incentives for manufacturers, the distribution of information, and training for heating installation technicians. A final report is now available.

The project publishes lists twice yearly with prospective buyers and support organisations on the one hand, as well as lists of so-called “Energy+” pumps that fulfil the requirements for energy efficiency in particular on the other. The most recent lists from November 2008 contain 26 pumps from eight manufacturers from Denmark, France, Germany, Italy and Switzerland. Also included are around 50 institutional buyers and 27 support organisations that act as multipliers for the project with their public relations work.

A competition to find the most efficient pump and the most electricity-efficient condensing boiler provided a further incentive for manufacturers. The EU project presented the winners in March 2008 in Milan at the Mostra Convegno international trade fair. In addition, the city of Salzburg was honoured for the best campaign for the market introduction of “Energy+” pumps. Newly developed consultancy aids and a course for installation technicians are used in the participating countries.

The NRW consumer association, ProKlima Hanover, the Association of Energy Consumers and E.ON Westfalen Weser are the German participants in the project.

The final report in English can be downloaded from the Wuppertal Institute's website.

Potential savings with new pump technology

The energy consumption of circulation pumps in heating systems is often underestimated. The heating circulation pump is actually responsible for 10% of the electricity bill in many single-family houses. There are over 30 million heating pumps nationwide, and they consume around 3.5% of the electrical energy used in Germany. Their consumption is thus of the same order of magnitude as that of all railway vehicles of the German Federal Railway and public transport combined – even though improved pump technology has already been available for a number of years now.
Background

Heating pumps are products with long service lives. Even today, most heating systems still have so-called canned pumps with asynchronous motors. The design of these pumps means they are robust, low-maintenance and quiet in operation, but unfortunately also have low efficiencies. The “factors of safety” included during sizing often further worsen the energy balance. However, electricity-efficient pumps that work on the principle of electronic commutation (EC motors) are now available from all the major manufacturers. The initial high prices have now fallen by over a half. Nowadays, energy-efficient pumps pay for themselves within a few years.

BINE ‘Projektinfo’ on this topic

A BINE ‘Projektinfo’ publication from as far back as 2001 has already documented the development and principle of operation of electronically commutated heating pumps.