

The year of the heat pump!

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The year 2008 may be considered the year when heat pumps became an established heating technology in major European countries.

This year several positive factors influenced the development of the heat pump markets:

- The European Parliament, the Council and the Commission agreed on the Directive on the Promotion of the Use of Energy from Renewable Sources (2009/28/EC). This added energy from air, water and ground to its definition of renewable energy sources. It also makes reference to heat pumps as the technology of choice to make this energy usable.
- Evaluation of press coverage on technologies for heating and cooling show a dominant interest for heat pump technologies. Several magazines created special editions covering renewable technologies including heat pumps.
- As the population becomes increasingly aware of heat pumps, an explanation of the technology is less and less



necessary. Interest has shifted to questions of affordability, reliability, environmental impact and efficiency.

- Subsidy schemes in the larger markets (France, Germany, Italy) have triggered demand by consumers who were not traditional buyers of heat pumps.
- The overall aim, to reduce energy demand in buildings in general and related greenhouse gas emissions in particular, leads towards ever stricter building regulations. The requirements on the energy demand of buildings have increased steadily and it is often already mandatory to provide a share of the total energy demand from renewable energy sources.
- Consumer comfort requirements lead more often to low temperature heat distribution systems as well as to the integration of cooling.

- The steady growth during the past five years has led to modernisation and extension of production lines and allowed for economies of scale.

Heat pump technology benefits from these trends and caters to the different requirements with regard to economic efficiency, reliability, comfort and economic impact.

On the downside, the prevailing economic crisis with its current extremely low oil prices has meant consumers have put off investment decisions.

While this slowing down affects the market for HVAC systems in Europe, the heat pump segment is not hit as hard as others, as it is expected sales numbers for 2009 will be around those seen for 2008!

For 2008 and 2009 (provisional figures), according to the statistics, the major markets observed by the European Heat Pump Association, showed double digit growth rates with the positive exception of France, where sales figures more than doubled (+127%) because of a beneficial subsidy scheme. Even established markets experienced considerable growth (Sweden: +37% and Switzerland: +27%). This is a good indicator of a widening application base from new houses to the refurbishment segment and for an increasing number of installed heat pumps in commercial buildings.

The rising installation number of heat pumps in the refurb sector backs the existing trend towards air-source units. However, where the building envelope cannot be upgraded to a standard suitable for the efficient heat pump operation, only hybrid systems or domestic hot water heat pumps are an option.

In such hybrid systems, heat pumps provide the majority of energy for heating or domestic hot water with the remaining energy demand covered by the existing gas, oil or biomass boilers.

Another trend in the renovation segment is also showing growth. Air-water and – in the Scandinavian countries and Southern Europe – reversible air-air units are often simpler to employ when refurbishing a building.

As an additional heat pump type seeing strong growth, sales of tap-water only heat pumps have more than doubled (+122%) from



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2007 to 2008. As this type of heat pump is often used to augment a gas/oil fired boiler, increasing sales numbers do support the perceived trend of using heat pumps in the renovation sector

The total market size for the eight countries surveyed in the EHPA statistics has reached 576,392 units in 2008, a 46,8% increase over last year's 392,756 units (see figure 1). The outlook for 2009 is moderate with only a slight increase over 2008 figures. As more markets reach the stage that justifies the preparation of sales statistics, the total number is expected to increase more strongly.

Sales figures for Germany and France show both countries have established subsidy schemes. The exceptional nature of the scheme for the French market is reflected in super-proportional growth (see figure 2).

Input from countries not covered in the EHPA statistics shows the same level of interest with builders/owners and, to a lesser extent, with architects and planners. Growth rates are impressive, albeit starting from a low base.

There are emerging national markets for heat pump technology and it is expected these markets will reach a level of maturity, that will further fuel the growth of heat pumps in Europe.

For the future, heat pumps offer tremendous potential towards the goals of the individual for an affordable and reliable energy supply.

For society it represents an increasing share from renewables. The soon-to-be-expected recovery of the global economy with its impact on energy prices should influence buying decisions towards heat pump system.

Preparations for this expected uptake in the speed of market development must be taken now so as to be prepared for the future.

Figure 1

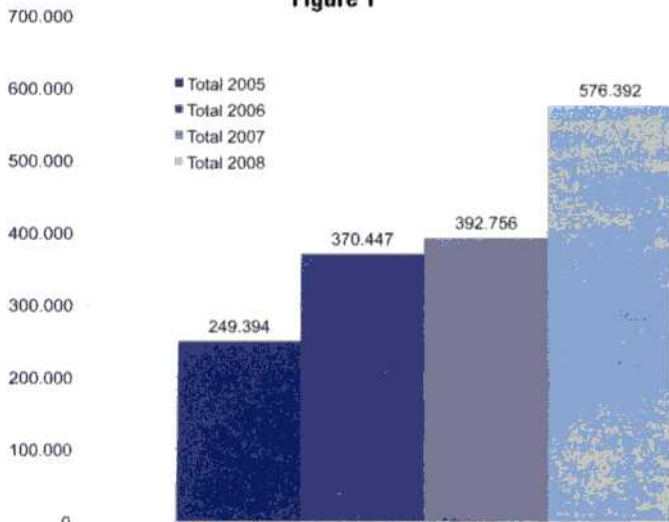


Figure 2

