**1 TWh increase in renewable-energy use in the heating of houses with the 60,000 heat pumps installed last year**

**There are already as many as 730,000 heat pumps in Finland. They extract more than 5 terawatt-hours of energy from around buildings per year. A heat pump is by far the most popular form of heating in new single-family houses, and heat pumps are rapidly replacing oil and electric heating as well as district heating in old buildings. In 2015, Finns invested approximately 350 million Euros in heat pumps, out of their own pockets.**

According to Finnish Heat Pump Association SULPU statistics, 60,000 heat pumps were sold last year. A positive surprise was the increase in the number of air-to-water heat pumps, which almost doubled to 3000 pumps. Air-to-water heat pumps are mainly used in reconstruction to replace either oil or electric heating, or to be used alongside them. These huge growth figures reflect the performance development of the pumps, the high quality of systems delivery as well as the increase in supply.

The strong decline in single-family house construction, a general reduction in reconstruction investments and the decline in oil prices are the major factors that impact heat-pump installations. There were 17% less installations than the previous year. Nevertheless, more than 9000 pumps were installed. Approximately half, i.e. 3000, of the 6000 single-family houses that were built in 2015 were fitted with geothermal heat. The remaining 6000 ground-source heat pumps replaced oil and electric heating, as well as even district heating to some extent. The relative sales share of large ground-source heat pumps increased, which means that an increasing number of terraced-house complexes and apartment buildings chose the economically sound heat-pump investment – says Executive Director Jussi Hirvonen from the Finnish Heat Pump Association SULPU.

The sales figures of single-family house exhaust-air heat pumps remained the same at just under 2000 pumps. The performance of exhaust-air heat pumps has, furthermore, reached a new level over the past few years. The exhaust air of a building is used even more carefully than before, and sales figures remaining on the same levels in a declining construction market proves that their compatibility has improved whilst house sizes have become smaller and energy efficiency has otherwise improved.

Exhaust-air heat pumps in apartment buildings have rapidly become more common. As many as a few hundred apartment buildings were fitted with a heat pump that gathers exhaust-air heat, which helps reduce as much as 50% of a building’s district-heat, or other energy, consumption. The potential of these solutions is truly enormous. More than 30,000 apartment buildings release over 20-degree Celsius exhaust air into outdoor sub-zero temperatures through ventilation.

Last year, Finns invested 350 million Euros in heat pumps. The reason goes without saying. The return on the investment is excellent, most often more than 10% per year. Other factors that strongly speak in favour of heat pumps include easy and carefree use, little need for space and the cooling feature that they provide. The impact of saved fuel on the Finnish trade balance is already in the region of one hundred million. The heat-pump industry offers 2000 people employment. Furthermore, the reduction in CO2 emissions is in the region of a megaton, with the 730,000 heat pumps in Finland gathering more than 5 TWH/a of local energy from around buildings from the ground, the ground rock or from the air. The 60,000 heat pumps alone that were installed in 2015 increased the use of renewable energy in the heating of houses by 0,6-0,8 TWh. Last year, Finland consumed 82.5 terawatt hours (TWh) of electricity.

When considering the recent developments in the construction industry, the heat-pump industry has clearly strengthened its position in the heating and cooling of houses, and it has only just started on its road to success. According to a survey conducted by Consulting Agency Gaia Ltd, in 2030 there will be 1,7 million heat pumps in Finland producing 15 TWh worth of renewable energy. By then, a total of 12 billion Euros will have been invested in heat pumps, and 3000 new jobs will have been generated. The savings that will have been made will by then be in the region of one billion Euros per year – envisions Jussi Hirvonen.

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