Renewable Heat Pumps

Bring the benefits of a heat pump to your house and family.

On top of 70% lower heating bills, heat pumps have the following advantages:

- high reliability and longevity (on average lasting over 20 years)
- little or no on-going maintenance (no boiler cleaning, no chimney sweeping, etc.)
- the healthiness and comfort of low temperature heating systems
- a real contribution to a better environment

What to do next?

Quality is of paramount importance when choosing a heat pump system and an installer.

REIO's recommendations:

• Only opt for a heat pump with a recognised certificate of quality and performance.

• Your heat pump and its heat source (ground or water collector) should be designed by a professional to meet the heating requirement of your house.

• Your supplier should recommend an installer with the proper training and experience in this field.

• Make sure your system has been thoroughly checked and commissioned before signing off the installation.

For further information, download the following documents from REIO's website:

- our full brochures and buyers' guide on renewable heat pumps;
- a list of suppliers of certified heat pumps in Ireland.

Renewable HEAT PUMPS

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Renewable Energy Information Office

Sustainable Energy Ireland's Renewable Energy Information Office, one of Europe's leading renewable energy agencies, provides expert, independent information and advice on the development of all renewable energy technologies, including heat pumps.

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RENEWABLE ENERGY FOR EUROPE
Campaign for Take-Off

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Free heat from the garden?

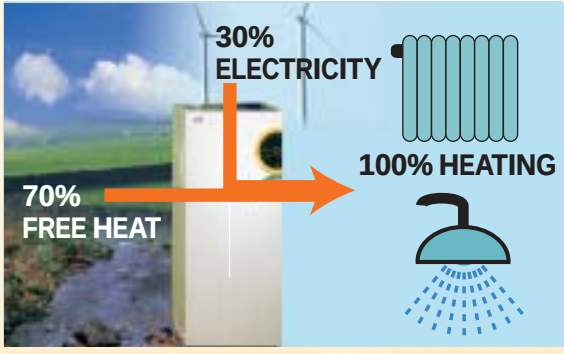
Heat is widely available in the ground, air and water around your house. These natural sources of heat are constantly replenished by the sun, wind and rain. A heat pump system will harness these free and renewable energy sources for heating your house and supplying hot water at a very low cost. The role of the heat pump is to 'pump up' heat from a low temperature source, for example the ground under your lawn and release it at a higher temperature into your central heating system.

Ok. But why is it so economical?

Because at least 70% of your heat will come from a free source. For every unit of electricity used to drive the heat pump, 3 to 5 units of useful heat will be generated. Manufacturers generally refer to the ratio between the useful heat produced and the electricity used as the coefficient of performance. With an overall energy efficiency in excess of 400%, compared to 70%-85% efficiency for a good oil or gas boiler, no wonder a heat pump is so economical.

And good for the environment...

When driven with conventional electricity, a heat pump system emits 40% less CO_2 emissions than a boiler. That's a great contribution to the fight against climate change. But if you can operate your heat pump with green electricity (e.g. from wind farms) then your central heating system becomes 100% renewable and totally free of greenhouse gases emissions.



Fine. Will it fit my house?

If you are building a new house, you are in the best position to do it. You can cover the extra cost with your mortgage and finance the installation at a low cost. Make sure your house is well insulated and opt for a heat distribution system operating at a low temperature (e.g. underfloor heating or fan coils). This ensures optimal performance of your heat pump. The heat pump itself requires little room and will fit neatly into your utility room or hot press.

A heat pump system can also be fitted into an existing central heating system. It can provide all the heat required on its own if the characteristics of the existing heat distribution system allow it. If not, it can be operated in conjunction with the existing boiler, which will act as a back-up system when the heating demand is high.

So, is it really worth it?

Absolutely. While they are more expensive initially to install compared to a conventional oil system, their frugality in electricity will save you €20,000 over its lifetime.

The graph below shows the annual heating cost of a 180m² house with different types of heating systems, including a ground source heat pump.