Cost Efficiency of Heat Pumps and Underfloor

Heating results from our 2013 study

You can heat your whole home for the same cost as running two hot air heat pumps without the drafts, the damp or the cold spots.

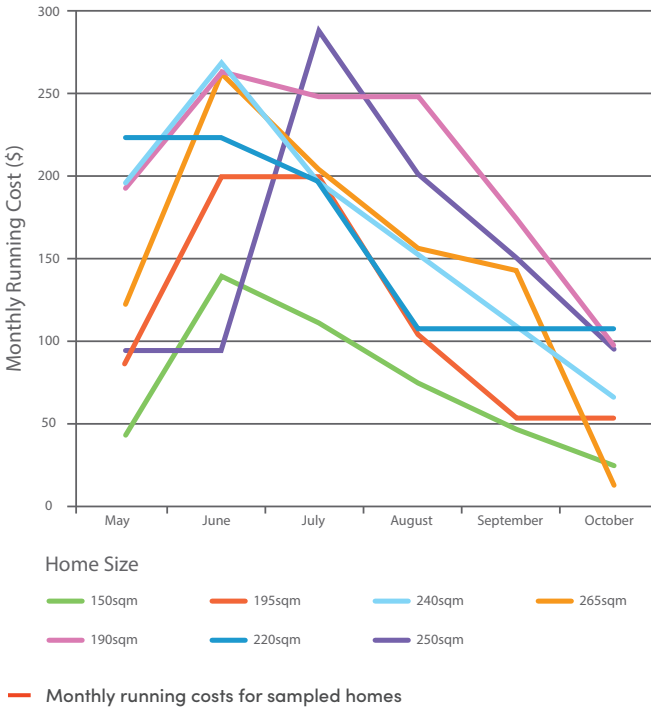
About our study

With the help of the power meter installed on each of our air-to-water (aka hydronic) heat pumps, we looked at the amount of electricity used only by the heating system for eight different Christchurch homes. These new homes ranged in size from 150sqm to 250sqm and covered a variety of architectural styles.

Monthly costs

We found the average running costs of the homes in our study during the heating season of May to October to be much lower than some might expect. Even during the coldest months of the year, the monthly cost ranged from $150 to just under $300 per month*! And, of course, since this is central heating, the whole home is warm.

*Over the entire heating season, when electricity priced at 24¢ per kWh



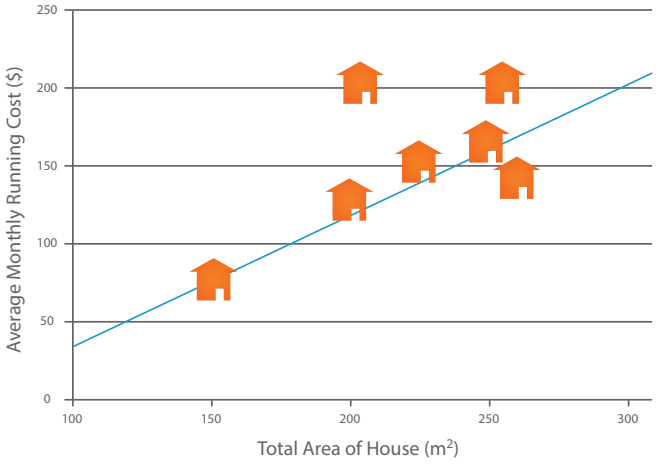
Heating costs relative to house size

Knowing the average heating cost is great but we knew we needed to take it one step further for this study to be truly useful. What is most valuable from this study is being able to gauge what any homeowner's heating cost might look like based on the size of the home.

There are two figures we looked at to determine the best way to do this. First, we needed to know the total lived-in area of the home, which we got from house plans. Second, we needed the total heated area of the home or how much of the home had the underfloor pipes installed beneath the floor.

By putting together a graph with the figures, we discovered that the average running cost is most closely related to the total area of the house rather than the heated floor area.

Take a look at the graph to the right to see what your running cost might look like with a healthy, comfortable, warm-water underfloor heating system installed.



Average monthly running cost relative to house size