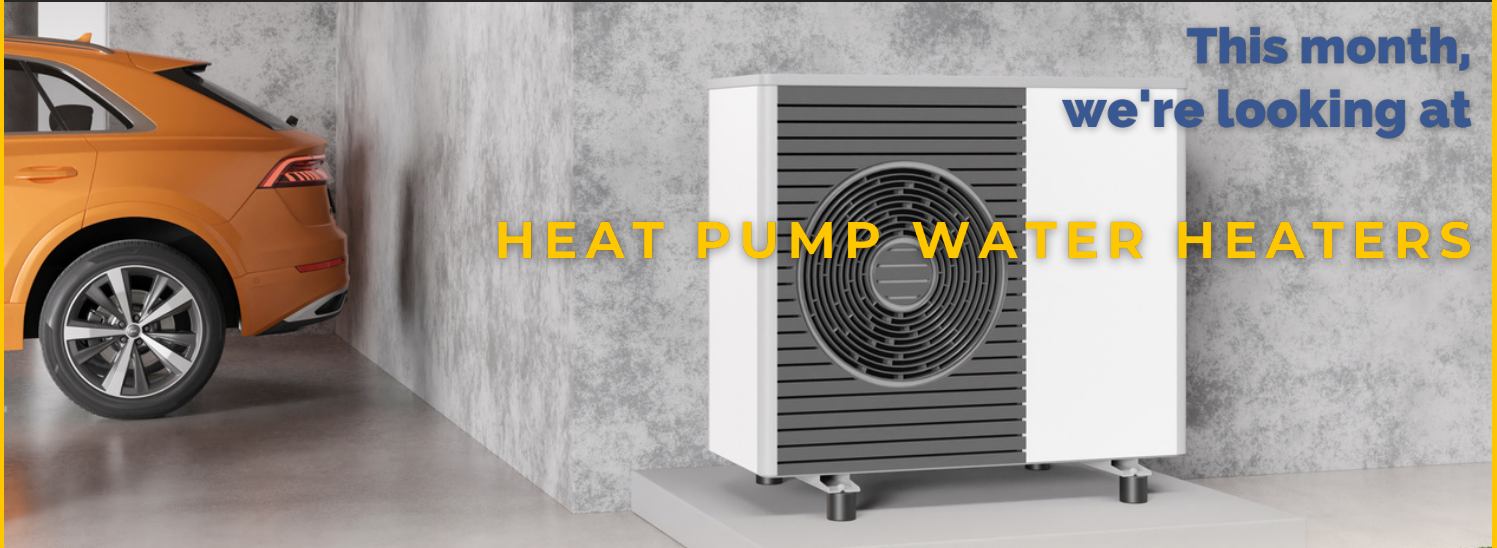


# BUILTECH

SUSTENA'S BI-MONTHLY NEWSLETTER



This month,  
we're looking at

## HEAT PUMP WATER HEATERS

### Air to Water Heat Pump

Air to water heat pumps are an energy efficient alternative for heating your home or business. They can be used in the coldest of climates, where the temperature drops below freezing, and can even be used for air conditioning. It is a relatively new technology compared to conventional boilers, but they are already proving themselves as an efficient and cost-effective alternative.

Air to water heat pumps work by transferring heat from the air outside into water that circulates through your radiators. This means you'll always have hot water at the tap, even in the depths of winter.

Air to water heat pumps are often used in combination with solar panels because they produce more energy than they use, meaning they will help you reduce your carbon footprint.

Air to water heat pumps are more expensive than conventional boilers or electrical water heaters, but they offer many benefits over traditional heating systems. Here are some of the advantages:

- Energy Efficient – Air to water heat pumps use much less energy than conventional boilers or electric baseboard heaters.
- No Fossil Fuels – Air-to-water heat pumps do not burn fossil fuels like natural gas, propane or oil—they simply use electricity to generate heat and circulate it through your home or business.
- Simple Installation – Air-to-water heat pumps don't require any special installation.
- Less maintenance cost – Low maintenance costs and long-term expenses.
- Improved comfort – The temperature inside your home will be more consistent and comfortable
- Noise-free operation - unlike gas boilers and electric boilers that can make a lot of noise when they're operating.



There are two primary types of air-to-water heat pumps

- Split Systems - A split system has two separate units: an outdoor unit (condenser) and an indoor unit (evaporator). The condenser is located outdoors on your roof while the evaporator is located inside near where you need the heat or cooled air.
- Integrated Systems: This type of heat pumps are often mounted on the top of the storage cylinder and include an evaporator, compressor, and condenser, all in one package.

Adopting an air to water heat pump in your home can drastically reduce your monthly utility bills and will allow you to take advantage of a renewable energy source: cold air.

# Which Air to Water Heat Pump to choose?

If you're considering a heat pump for your home, there are many factors to consider. Here are some of the most important things to look for when selecting a heat pump. Here are some things to consider before engaging a consultant or contractor:

- Your climate zone and impact of that on the performance of the heat pump.
- The upfront cost and return of your investment
- The right size of the system
- Efficiency: Heat pumps are rated by their energy efficiency in units called Coefficient of Performance (COP). The higher this number, the better!
- Temperature range: A good heat pump should be able to operate between -10 degrees Celsius and 40 degrees Celsius.

There is no doubt about it, heat pumps could save you money especially if you're not using your AC as much as you usually do in the summer. It is likely that you will need to take a few steps to make sure your home is ready for heat pump installation. This can act as a checklist to make sure all bases are covered before calling in the professionals.



## Regulation For Heat Pump Water Heaters

There are no regulations that require the energy efficiency of HPWHs sold in Australia and New Zealand to be tested to a common standard, to carry labels indicating their energy efficiency or other key aspects of performance (e.g. noise), or to meet any minimum prescribed levels of energy efficiency or performance. These issues are now under investigation.

A product profile was produced in 2012 that described the market as well as explored options to introduce energy efficiency performance requirements.

This was further explored with the release of a consultation Regulatory Impact Statement (RIS) in 2013. The consultation RIS provided further market and technical information about HPWHs in Australia and New Zealand. It explored a number of options including mandatory energy rating labelling and establishing minimum energy performance standards. The presentation given at stakeholder consultation meetings in Australia and New Zealand (August 2013) summarises some key issues in the consultation Regulatory Impact Statement. \*

Reference: <https://www.energyrating.gov.au/>

## Latest from SUSTENA

### Centralised or Decentralised Air Conditioning?

If you or your design consultants are choosing between a centralized or decentralized air conditioning system, it's important to consider the specific benefits of each one. Both of these systems have their pros and cons.

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