

## **Factsheet: WATER HEATING**

Water heating uses up to 38 percent of your power bill, a similar proportion to space heating. Using less hot water will make a significant difference to how much your power costs you.

Simple actions start with using less hot water:

- Use cold water wherever possible. Do cold water laundry washes and wash only full loads.
- Put the plug in when washing dishes by hand. Avoid running the hot tap and washing dishes under the running water. Use a rinsing bowl with cold water to get dirty suds off.
- Fill the jug with water from the cold tap. Using water from the hot tap uses more electricity to heat up the cold water that has to top up the hot water cylinder.

### **SOLAR HOT WATER**



Installing solar hot water has got to be a serious contender for most households in order to reduce water heating costs. With escalating electricity costs the payback on the set up cost is getting less. Most calculations use the current cost of electricity when working out the payback on solar hot water installation and don't take into account the rising cost of energy calculated over the lifetime of the system. Your bills are reduced from the day it is installed, so once the payback period is over you have more money in your pocket.

Perhaps most rewarding is that you don't have to do as many of the hot water conservation suggestions outlined below. You can have longer

showers (although you still need to think about water conservation!) You can fill the jug from the hot water tap. You can wash your clothes on the hot water cycle. The sun has helped you to generate your own hot water, and depending on the system, you may only need an electrical top up on cold winter days.

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And installing solar hot water is incentivised. Not only are there government grants available, Hamilton City Council waives the consent fee for solar hot water for city residents. [Funding for solar and heat pump water heating | EECA ENERGYWISE™](#)

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### **SHOWERS: SMART WATER USE**

About 80 percent of hot water is used in showers. So for those of us on water heated with electrical power:

- Take a shower not a bath. An ordinary shower uses 40% of the hot water needed for a bath.
- Take a shorter shower. Spending two minutes less in the shower would save two percent of the energy used.
- A low flow showerhead can use up to 50 percent less hot water than a standard one, without spoiling your shower experience, saving the average household about \$300 a year.

## WATER HEATING

A six litre shower can feel just like a ten litre shower:

To find out whether your showerhead is wasting water try either of these tests:

1. Time how long the head takes to fill a 10 litre bucket. If it's less than a minute, you're better off with a more economical low flow showerhead; or
2. Place a measuring jug directly under the shower rose and catch all the water for exactly ten seconds. Multiply the water you have caught by 6 to get the amount of water you would use in a minute. If your shower uses more than 10 litres per minute install a low flow shower head available at your local plumbing or hardware store.

Low flow showerheads save money and water!

- An efficient shower: A six litre per minute shower costs \$50 per person, per year in power.
- Wasting water and energy: A nine litre per minute shower costs up to \$100 per person per year in power.
- An inefficient shower: An 18 litre per minute shower costs \$150 per person, per year in power.

For more information go to [www.hamilton.co.nz/water](http://www.hamilton.co.nz/water) and click on 'conservation'.

### HOT WATER CYLINDER

How's your hot water cylinder? Hot to touch? The lost heat cost adds up to 35c per day. Wrap it: Hold in the heat by wrapping your electric hot water cylinder and insulating your hot water pipes.

- A 'cylinder wrap' made of fibreglass or wool, sandwiched between foil and plastic or cotton can be fitted around the tank. If every household installed a cylinder wrap, it would save 5% of New Zealand's residential energy use.
- Lag your hot water pipes. Lengths of pipe containing hot water radiate energy, so pipe wrapping also helps to keep the heat where it is wanted, in the water. Insulate the first two metres of hot water pipe nearest the hot water cylinder.



Once you have wrapped the cylinder and lagged the pipes you may find that the water arrives significantly hotter at the tap, so the temperature of the water to the tap can be reduced by a few degrees, but not lower than 55°C (for your health protection). Check the thermostat on your hot water system to see how hot it is running. The hot water temperature at the cylinder must be 60° to prevent bacteria forming.

### LEAKS

Fix dripping taps. Stop the drips: Depending on how many of your hot water taps are dripping, hundreds of dollars could be going down the plughole a year. They can be fixed for only a few dollars – by replacing the washer.

How to change a washer:

1. Turn off the water supply at the mains. If you are changing a washer on the hot tap, you will also need to turn the tap off under the hot water cylinder.
2. Turn the tap fully on and wait till the water stops flowing.
3. Unscrew the tap head and lift the top of the tap away.
4. Throw the old washer away and insert a new one.
5. Refit tap head and tighten.
6. Turn the water supply back on and when the water comes through, turn the tap off.
7. Now inspect for drips and leaks. There should be none. Turn the tap on and off a few times to make sure it is working properly.

Source: *Keeping Warm and Healthy This Winter*, booklet from Ministry of Social Development

### ENERGY EFFICIENCY SERVICE

Hamilton City Council's Eco Design Advisor offers a free service to Hamilton residents providing an in-home consultation to address energy efficiency issues and to assist in keeping electricity usage to a minimum and power bills low. Call the EDA on 07 838 6773 to book your consultation.

For further information, go to EECA's factsheet on water heating: <http://www.eeca.govt.nz/sites/all/files/action-sheet-3-hot-water-10-09.pdf>

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This publication is produced by Hamilton City Council's Sustainable Environment Team

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