

# Sunny region makes the most of solar water heating benefits



## ✓ Key features

- Hot water heated by the sun
- Save 50-75% of water heating costs
- Council scheme adds incentive

## ✓ Key benefits

- Lower energy bills
- Lower carbon footprint
- More hot water available
- Future proofing for retirement

When you live in a high-sunshine region of New Zealand, spend a large part of your electricity bill on hot water heating, and your local council offers an incentive to install solar water heating – the next step might seem obvious. Go solar! say these three Nelson householders, each of whom had different motivations behind their decision to switch to solar water heating.

### Heather and Anthony – saving money on hot water use

Their tired old electric water cylinder wasn't coping with the hot water demands of a teenage daughter, with lots of gym laundry and a love of long showers.

So Anthony Sands and Heather Dabinett started looking at more energy efficient options for their Stoke house.



Under a Nelson City Council incentive scheme they had a new solar hot water system installed, including a larger hot water cylinder and upgrading to medium pressure, at a total cost of just over \$6,000. They estimate they'll have the system paid off in about five years.

"We don't have to bang on the wall to get Alex out of the shower, and I can use warm water in the washing machine," says Heather, noting the multiple benefits they've had from getting solar water heating: long-term cost savings, their whole hot water system upgraded, improved home resale value, and environmental benefits.

Anthony adds: "We're saving about \$20 a week on our power bill, and rarely have to turn on the power to give the hot water system a boost on cloudy days. Two of my workmates are now getting solar hot water heating, after checking out our system. We're rapt with it: we've got more hot water than we've ever had, and no more headaches about anyone taking long showers."

### The Robertson family – concern for the environment

In 2008 the Robertson family – Kent and Mandy, and children Holly (11) and Scott (9) – participated in the Eco Challenge (part of the region's annual Ecofest event), which inspired them to start making eco-friendly changes around their house. Solar water heating was considered, but at \$8,500, it seemed too expensive until a Nelson



City Council initiative and a cheaper system combined to make it more affordable - \$5,100 for the fully installed system, paid off through the council rates. Kent estimates they're saving about 30% on power bills and reckons the system will have paid for itself in power savings in five to seven years.

The summer power bills are about half of what they were last year and the monitoring (included in the package they chose) has allowed the family to see that the system is making good use of the sun's energy and minimising the need to use the electric back up.

"For a family of four it has to be a good investment: we've got two active kids – Scott plays soccer, Holly does ballet and both love swimming. We have lots of showers and do lots of washing.

"To make our hot water savings go even further we have a wind-up timer in the bathroom: adults have six minutes to shower and children have four minutes. This has dramatically reduced needless lingering under the hot water."

As well as the cost savings, the Robertsons are pleased to be doing their bit for the planet. "The sun is giving us free energy – this is a very easy way to lower your carbon footprint every day while still living comfortably," says Kent.

## Anita Brown – future proofing for retirement

Anita Brown was looking to the future when she applied for the Council's solar heating incentive scheme. "While I'm still working it makes sense to take steps to make my home more energy efficient for when I'm old."



She says the installation was simple and took only a day. She now uses her power bill savings to repay the loan she took from Council to install the system.

Part of Anita's job involves sorting and washing clothes donated to St Stephen's Church's 'op shop'. "Some of the clothes need a good soak in hot water and it's nice to be able to do that, now that the hot water is free."

Having the freedom to use hot water as it suits her has been a real plus, she says. "It's so nice to be able to use hot water whenever I want to. I don't have to stop and think anymore about whether or not I can afford to run the hot tap. On a limited income, that really is important."

Anita notes that the new water heating system is more efficient in other ways. "My old system didn't have any lagging to insulate the pipes, but the new one does, so in winter it won't be losing as much heat.

"Nelson people are foolish if they don't use the sun we've got here to heat their water and save their money – after all, power is only going to go up in price!"

## Things to consider

### How does a solar water heating system work?

Solar water heating is not about generating electricity – instead, it's about using the thermal energy of the sun to heat water. Solar collectors (panels) installed on a north-facing section of roof take the sun's energy and transfer it to water that's stored in a tank. On less sunny days, back-up generation (usually provided by electricity or gas) may be needed to heat the water to the required temperature.

### Is solar water heating right for me?

For a solar water heating system to perform well, you'll need a section of roof that faces north (or close to it), and has good, all year-round sun. It needs to be large enough to accommodate collector panels (roughly 1m<sup>2</sup> for each person in the house), and ideally is near the hot water tank, your bathroom or laundry.

### How do I choose a solar water heating system?

The right solar water heating system for your household will be sized to fit your particular hot water requirements, and set up so that it maximises the energy provided by the sun and minimises the need for backup generation. Use the decision tool on the ENERGYWISE website to find a packaged system to suit your needs:

[www.energywise.govt.nz/solar-systems](http://www.energywise.govt.nz/solar-systems)

### Saving on hot water use

Solar water heating is just one of many ways to save money on hot water use and do your bit for the environment. Find out more at

[www.energywise.govt.nz](http://www.energywise.govt.nz)



For more information contact  
The Energy Efficiency and  
Conservation Authority:

#### EECA HEAD OFFICE:

PO Box 388, Wellington, (04) 470 2200

#### EECA AUCKLAND:

PO Box 37444, Parnell, Auckland, (09) 377 5328

#### EECA CHRISTCHURCH:

PO Box 13983, Christchurch, (03) 353 9280

Visit [www.energywise.govt.nz](http://www.energywise.govt.nz)

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