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## Solar saver scheme

### Goals of the programme

The overall goal of the Solar Saver Scheme is to increase the uptake of solar water systems in the Nelson City Council area. To support this goal, the Council objectives are to:

use the targeted rate process to reduce the upfront cost for customers

reduce per unit cost

ensure high quality systems are available to customers, that perform well and save customers money

simplify the selection and installation process for customers from start to finish, with low administration costs

provide excellent customer service

provide customers with a choice of systems and suppliers

### How the scheme works

The Solar Saver Scheme allows residents to choose the system they like from one of four suppliers and have it installed. The cost of the entire system is met by Council and residents pay it back to Council, including interest, as a targeted rate on their property over ten years.

[Read more about the expenditures involved with solar water heating and the cost savings of the Solar Saver Scheme.](#)

If owners sell their house during the ten-year payback period, the rate remains with the property, not the homeowner. Owners can pay off the loan at any time, including as part of the house sale process.

### Who can participate in the scheme

The Solar Saver Scheme is available to Nelson home owners. Council will investigate extending the financing of installations to businesses in the future if there is sufficient funding available.

Council, with its partners, will also provide the advantages of the scheme (e.g. reduced prices) to people that don't want to use Council's finance, because

they choose to pay cash outright

they have other finance available

they reside in the Tasman District Council area and can't pay back through the Nelson rates system

Nelson City Council's goal is to increase the number of installations regardless of whether it's providing finance or not.

[Watch a locally produced video about how the Solar Saver scheme works, including advantages of solar water heating in sunny Nelson.](#)

### The process and timeframe

Interested homeowners should contact Council to start the process. Council registers your interest, takes your contact information, and then provides you with the names of the four suppliers involved in the Solar Saver Scheme.

You can choose to get quotes for one or all four of the suppliers - it's up to you. The suppliers are glad to meet with you at your home to do an assessment, answer questions, and provide a quote.

Once you have selected one supplier, they will provide you with a final quote and an agreement for you to sign and return to them. The supplier will then send the agreement to Council for approval to ensure all is in order. The Council will then notify your supplier of its approval.

Next, the supplier applies for your free building consent from the Council.

Once the consent is granted, you schedule the installation. After the installation is completed, Council pays the supplier for the installation and organises the EECA subsidy that comes off your purchase price.

The overall timeframe depends on which supplier you choose, the supplier's schedule, and your personal timeframe for installation. However, suppliers will be expected to complete the installation of the system within two months after the Council approves the purchase agreement.

Payment of the Council loan through the rates begins from 1 July (when Council will next set its rates).

## Sign up for the scheme

Contact the Council's project manager Pete Wilkie on +64 3 545 7037 or 021 029 30551 or [email your name, address and phone number to Council](#).

You can register your interest now, and change your mind later. You are not committed to participating until you sign a purchase agreement.

## Solar Saver Suppliers

The list of suppliers that you can choose from as part of this scheme are:

### APRICUS Solar by Switch

Ph: 0800 APRICUS (0800 277 4287)

Email: [info@switchenergy.co.nz](mailto:info@switchenergy.co.nz)

Visit: [www.switchenergy.co.nz/solar-assessment](http://www.switchenergy.co.nz/solar-assessment)

### Days Plumbing/Solar Peak

Ph: 03 5441989

Freephone: 0800 00 HELP (0800 00 4357)

Email: [damon@days.co.nz](mailto:damon@days.co.nz)

Web: [www.days.co.nz](http://www.days.co.nz)

### Solar City New Zealand Ltd

Ph: 03 548 3138

Email: [info@solarcity.co.nz](mailto:info@solarcity.co.nz)

Web: [www.solarcity.co.nz](http://www.solarcity.co.nz)

### Solar Technology Systems Ltd

Ph: 03 5442500

Mobile: 0272500343

Email: [info@solartechnology.co.nz](mailto:info@solartechnology.co.nz)

Web: [www.solartechnology.co.nz](http://www.solartechnology.co.nz)

## More information

[Further information can be found at the Energywise website.](#)

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## Profiles of Solar Saver users

### The Robertsons of Nelson



The Robertson family.

“It’s a no brainer,” says Nelson radio announcer Kent Robertson, “We live in a region that has the most sunshine in the entire country, the cost of heating hot water makes up a large part of your total electricity bill, and the Council is offering an incentive – these three things mean ‘Do it!’”

#### Paying for itself

In 2008 Kent and Mandy and their two children Holly (10) and Scott (9) did the Eco-Challenge, making some changes on the domestic front in the lead up to Eco Fest. They looked at installing solar power then, but the cost of \$8,500 put them off. Under the Solar Saver Scheme their supplier reduced that cost to \$5,100 for the fully installed system. This was much more affordable and Kent estimates 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 produced some impressive graphs showing the system is maximising the sun’s energy and keeping the upper level of the family water cylinder hovering in the high 50s.

#### Money well spent

Kent says the investment is money well spent. “For a family of four it has to be a good investment: we’ve got two busy active kids – Scott plays soccer, Holly does ballet and both are passionate about swimming – we have lots of showers and we do lots of washing.”

#### Caring for the environment is a factor

As well as the cost savings and lifestyle benefits the family is pleased to be doing their bit for the planet.

“The environmental reality is that if everyone in New Zealand put in solar hot water there’d be no immediate need to build new power stations,” Kent says. “The sun is giving us free energy – this is a very easy way to lower your carbon foot print every day.”

## Heather and Anthony of Stoke

Their small, tired old cylinder wasn't coping with the hot water demands of a teenage daughter, the washing from gym training and a love of long showers. So Anthony Sands and Heather Dabinett started looking at more energy efficient options for their Stoke house.

### It's all so simple



**Anthony Sands and Heather Dabinett**

"I followed the development of the Solar Saver scheme on the NCC website for a few months and when it was ready to go, I was pretty quick to get our names in," Anthony says. Their name came up in the ballot and the process from there on was 'completely painless'. "We got three quotes, made our choice and the supplier did all the paper work, got the council approvals and we just signed for it," Anthony says.

### Paying for itself already

Within a week of signing up, Anthony and Heather had their new solar hot water system installed. They chose to get a new larger hot water cylinder and upgrade to medium pressure at a total cost of just over \$6000. Anthony reckons they'll have the system paid off in about five years. "With no payment up front, you are only paying about what you are saving. The scheme costs us \$16 a week, but we are saving around \$20 a week on our power bill."

### Great results all round

Heather is convinced of the domestic benefits: "I don't have to bang on the wall to get our teenage daughter out of the shower, and I can use warm water in the washing machine." Anthony and Heather would recommend the system to anyone: "The motivators for us were the long term cost savings, the chance to upgrade our whole hot water system, the environmental benefits and the added bonus of improved resale for our home."

## Lou Perkins - Evolve Builders

With solar hot water installed in his own home, Lou Perkins of Evolve Builders now plans to install it in every home he builds. "I'm building energy efficient houses for first home buyers, so the council scheme allows me to include solar hot water systems in the plans without having to carry the cost," Lou says. "This way the buyer can get the benefits of solar straight away by paying it off on their rates without having to put the extra \$5000 on their mortgage."



Lou Perkins of Evolve Builders

### Asking to go solar

Lou was attracted to using solar hot water firstly for environmental reasons, but the systems are also a selling point for his houses. He says solar is not just for alternative lifestylers or high-end homes, it's now mainstream and many clients are asking for it. "The houses I build are designed with a suitable solar-ready roof to get the maximum potential of the sun. The suppliers can fit a profiled solar collector flat against the roof, or a pitched frame to suit sun angles - they can work with any roof style, even the weirdest angles or curves."

### Get in on the ground floor

As a builder, Lou knows it pays to plan for energy efficiency and solar from the start. "Putting a solar system in a new house makes good sense because the buyers are not paying extra for a retro fit later." In summer, hot water bills are virtually zero and there's excellent savings in the shoulder seasons too. Even in winter the 10 to 30 percent savings are very worthwhile, and with teenagers at home Lou says he really notices the benefits of solar hot water. "We are lucky with the sunshine in Nelson, but when there's not quite enough, the units have auto timers to turn on the power to 'top up' the heat - so it's reassuring to know your family will have hot water when it's needed, year round."

### Anita Brown of Nelson

Anita Brown was looking to the future when she read about the Council's Solar Saver scheme in Live Nelson and decided to put her name in the draw. "I'm looking ahead to my old age – while I'm still working it makes sense to take steps to make my home more energy efficient for when I am old."



Anita Brown

### Savings already

Anita says the installation was simple and took only a day. She was pleased with the way the builder helped to keep the storage space she had in her hot water cupboard, and even more pleased when the

first power bill came in. "I started saving from my first month's power bill, so I am paying off the loan from the Council with the savings I'm making on electricity." Part of Anita's job at St Stephen's Church sees her sorting out clothes for their popular 'op-shop'. "Some of the clothes donated to the op shop really need a good soak in hot water and it's nice for me to be able to do that – now that the hot water is free."

Anita is a convert to solar water heating and has strong words for the rest of us: "Nelson people are foolish if they don't use the sun we've got here to heat their water and save their money."

## Nadine Connock of Nelson

When Nadine Connock spotted the information about the Solar Saver scheme in Live Nelson she got her name into the first ballot and was thrilled to be among those selected.

### Glad of the chance to go solar

"There was no way I could have afforded solar water heating without the subsidy and the system of paying it off with my rates payments," she says. "I thought it was an exciting offer from Council and an amazing opportunity for people who need a step up to help put them onto solar." Since having the solar panels installed in January, Nadine says her electricity bill for the first month was around \$75 less. She's also pleased to be doing her bit for the environment.



Nadine Connock

### A place in the sun

"My house above Victory Square is amazingly positioned for the sun, and visitors often commented that it would be ideal for solar," she says. "It's an environmental step that I've always aspired to as well as a long term cost saver."

While some 'solar savers' like the freely available hot water for longer showers, Nadine says having the system has made her even more aware of water use, as she strives to use only solar heated water and not have the system switch over to backup electricity. All in all she's sold on solar: "I would definitely recommend Solar Saver as a positive step for the home, the family, the environment and the future."

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## Drains from hot water cylinder relief valves

### Guidance for plumbers, plumbing designers and building consent authorities

The Department has received several enquiries about drain lines from pressure relief and temperature and pressure relief valves discharging to a PVC-U plumbing and drainage system. In some cases, the PVC-U pipes and stacks have melted causing a failure of the plumbing system and extensive damage.

It appears that this is due in part to the increasing use of solar water heating, and other heat sources that cannot be controlled by an energy cut-out device, requiring relief valves to discharge to prevent hot water cylinder explosions.

Relief valves are designed to reset after discharging and can discharge again and again until the heat source is reduced or a fault, such as replacing a failed thermostat, is fixed.

#### What is the function of relief valves?

Pressure relief valves are designed to relieve excess pressure to make sure valve-vented storage water heaters do not explode.

Temperature and pressure relief valves are designed to keep the temperature below 99°C and to relieve excess pressure to make sure valve-vented storage water heaters do not explode.

#### What do the compliance documents say?

Acceptable Solution G12/AS1, and Standards AS/NZS 3500.4: 2003 (cited in G12/VM1) and NZS 4607: 1989, all require:

the drain line from the relief valve to be in copper  
discharge to an appropriate place that does not cause damage to the building.

AS/NZS 3500.2 (cited in G13/AS3) says the range of temperatures likely to discharge to the plumbing and drainage system must be taken into account when

selecting materials for use in the plumbing system. Therefore, if the drain line discharges over a tundish into the plumbing system, the plumbing system has to be constructed of a material that will take the high temperature discharge from relief valves.

Failure to comply with these simple requirements could cause the PVC-U plumbing system to melt when a relief valve discharges, resulting in a failure of the plumbing system.