

Solar Water Heating



\$1000.00 EECA grant with all our installed NZ Solar systems



Standard energy costs are likely to continue increasing but solar hot water will end up giving you free hot water. Depending on usage, on average, it takes 5 years of energy savings to pay back the initial investment.

NZ Solar Southland & Lakes District believe that solar is the way of the future with the evacuated tube solar panels we install becoming increasingly popular. As UV rays are apparent throughout the year, the NZ Solar systems are designed to continue to absorb the sun's energy and are not affected by Southland's cold weather. During the heat transfer process, there is no energy wasted making NZ Solar's evacuated tube solar panels efficient and effective.



As an accredited supplier of the Solar Industries Association, Plumbers & Building Services offer a **free, no-obligation consultation and quote** in homes throughout Southland and the Lakes District. All systems are installed by a craftsman master plumber and work is fully guaranteed.

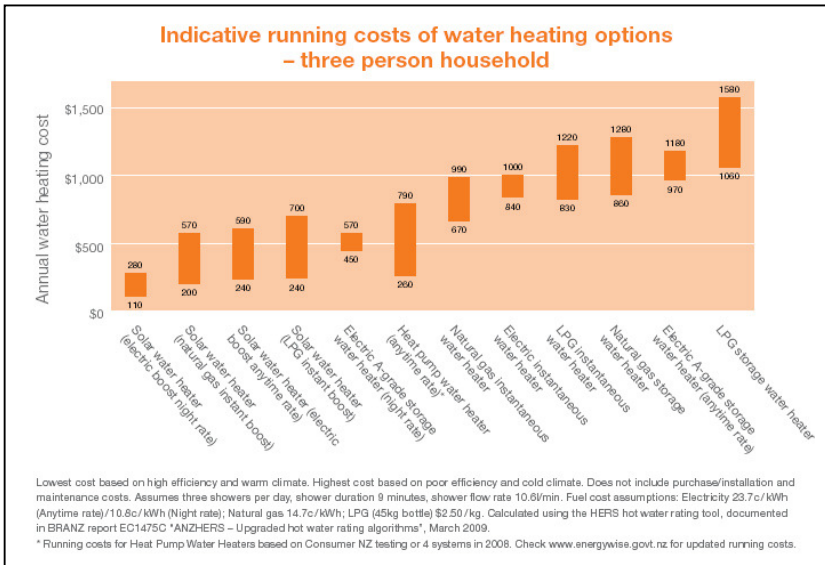


NZ Solar installation options

Capacity in litres	Rec. house hold (no.)	Performance (%)	System	Brand HWC)	Controller	Price ex gst	Price incl. gst
30 tubes with 250 litre solar ready HWC	2-3	65-74	SWH boosted by electric	Peter Cocks	TDC2	\$6900.00	\$7762.50
40 tubes with 250 litre solar ready HWC	2-3	75+	SWH boosted by electric	Peter Cocks	TDC2	\$7700.00	\$8662.50
40 tubes with 300 litre solar ready HWC	4-5	75+	SWH boosted by electric	Peter Cocks	TDC2	\$7900.00	\$8887.50
30 tubes with 280 litre solar ready HWC + wetback coil	4-5	85+	SWH/ wetback boosted by electric	Multi	TDC2	\$12000.00	\$13500.00

Note: These prices include all necessary work for an installation into a new house (including pipework installation in the HWC walls to the roof header unit, header tube placement, solar pump connection to HWC pipes across two site visits, controller and relay box for your electrician to connect).

Not included: stand up frame if required, electrical work and/or domestic plumbing for system, any additional pipework over 10m between header tank and HWC, travel to outside our 50km radius from the Invercargill boundary (\$1.00 per km), any consent fees



The solar water-heating units can be fitted to new and existing dwellings, easily...no mess, no fuss.

The three main types of Solar Heating: -

Sealed Solar Heater: *The most basic is a sealed solar heater combining gathering heat & accumulating heat into one, generally made up of 2-3 round black painted tubes. The coating absorbs heat, which warms the water. Advantages: simple structure & lower cost of construction. Disadvantages: very quick to loose heat, cannot be used in winter or cloudy & rainy days. Only used for the most basic of needs. Technologically superseded.*

Flat-panel Solar Water Heater: *Consisting of a panel and heat collecting water tank, generally runs in natural circulatory style with a panel for heat absorption, transparent cover, an insulating layer for back and side face, & the framework. Advantages: Lower cost of construction, high rate of heat when sunny. Disadvantages: Looses heat quickly. Flat panel systems not as efficient as vacuum tubes in cloudy or rainy weather.*

Vacuum Tube Water Heater: *Usually adopts natural convection for heat exchange, made up of several glass vacuum tubes for heat collection inset directly into the water tank. There is silica gel band between each tube & the water tank hole. The vacuum tubes transfer heat through super conductors in the copper heat tube rather than water, so the rate of heating is high. NZ Solar products use this system for heat collection, made out of concentricity sleeved pipes of high borosilicate glass. The space between the two tubes is drawn to be a vacuum of 5*10⁻³pa, and the outside of the inner tube deposits some gradating aluminium nitrogen/aluminium. The solar spectrum absorbs the coating selectively (rate of absorption is a=0.90~0.92, rate of emission is b=0.06~0.1). Heat consumption rate of the vacuum tube is small (U=0.55~1.2W /m2.0C), so the heater can be used in rainy and varied weather. Advantages: High heating rate. Quick heat absorption. Slow heat loss. Small heat consumption. Can be used in winter and rainy days*

The stunning improvements in NZ Solar water heating technology means that our systems are efficient and effective even on cloudy days. They are maintenance free and guaranteed to last. Once installed simply enjoy hot water and substantial savings.