

# Australia's most highly awarded range of **environmental** water heaters



# A **Renewable** Energy Future

## Action on climate change

Environmentally friendly hot water systems, like solar and heat pumps, aren't just for the green at heart anymore. Solar and heat pump water heaters have quickly become mainstream.

And it's no wonder. Nothing is more Australian than sunshine, so it's no surprise that our climate is ideally suited to solar and heat pump water heaters. Melbourne, for example, has 15% more solar gain than sunny Barcelona in Spain, where solar water heaters are widely used.

In fact, the Australian Government, in its recent environmental blueprint, announced that greenhouse-intensive electric water heaters will be phased out in new and existing homes with access to reticulated natural gas in 2010, and as installations in all existing homes by 2012.

To support this initiative, the Australian Government recently abolished means testing on solar rebates available when replacing old electric storage water heaters.

These rebates are planned to cease in 2012 when environmental hot water systems become mandatory. Put simply, there has never been a better time to purchase a solar or heat pump water heater.



# The Need for **Action** on Climate Change

## Installing solar hot water



Australia is particularly vulnerable to climate change. As the world's highest per capita greenhouse gas polluter, climate change is an issue that's very close to home for all Australians.

The Greenhouse Effect remains the most pressing ecological problem facing our planet. The CSIRO has warned that we face hotter and drier summers, more intense droughts and extreme weather events, less water for our cities, the loss of our snowfields - a vital water source - and the devastation of the Great Barrier Reef<sup>1</sup>.

Minimising the consumption of fossil fuel generated energy is one of the most effective ways of reducing household greenhouse gas emissions. As clean, green energy sources, solar and heat pump water heaters are the perfect alternative. The potential greenhouse gas savings can be huge. The average home using an electric hot water heater produces just over 6 tonnes of greenhouse gas each year. A similar home using a Dux Sunpro<sup>®</sup> solar or Airoheat<sup>®</sup> heat pump hot water system produces over 60% less!

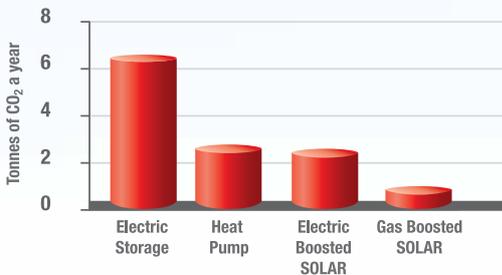
The vast body of scientific and economic evidence shows that the costs of failing to act on climate change will far outweigh the costs of early and decisive action<sup>2</sup>. Just as important, the environment our children and grandchildren inherit is in our hands. It really is a compelling call to action.

**“ Enough sunshine falls on Australia and New Zealand on an average day to power the two countries for 25 years. ”**

Source: Labor's 2020 target for a renewable energy future.

## Why Solar?

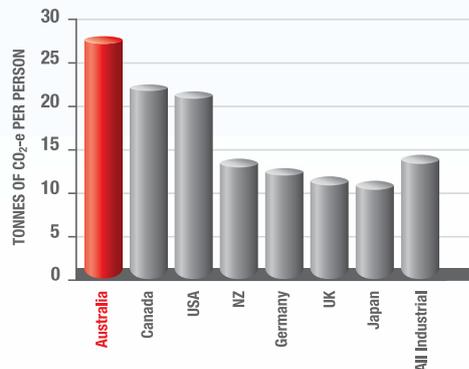
**CARBON DIOXIDE EMISSIONS FROM DIFFERENT TYPES OF WATER HEATER**



Figures calculated using AS4234 - 2008, based on a large hot water load in NSW (REC Zone 3). CO<sub>2</sub> coefficients 1.06kg/kWh electricity, 0.0655kg/MJ gas, from Department of Climate Change (2008).

1. Labor's 2020 target for a renewable energy future.
2. Australian Business Roundtable on Climate Change (2006), The Business Case for Early Action.

**GREENHOUSE GAS EMISSIONS PER CAPITA, SELECTED COUNTRIES 2001 (includes all sources and sinks)**



Clive Hamilton, *Running from the Storm*, University of New South Wales Press, Sydney, 2001, pp. 16-19.



# The Economic Reality of Going Green

## Designed to save

It's not widely known but the old electric water heater consumes more power than any other appliance in the home. In fact, on average, they can account for around 35% of total electricity costs. With the average household energy bill sitting at around \$1,800 per annum, that could be over \$600 every year on just heating your water. With energy costs set to soar over time, installing a Dux Sunpro® solar or Airoheat® heat pump water heater is a much smarter alternative.

Installing a Dux Sunpro solar or Airoheat heat pump water heater has the potential to reduce water heating running costs by between 60 and 80%, based on replacing an existing electric storage water heater connected to 24 hour continuous tariff electricity\*. For a family of 4 living in Sydney, this represents an impressive saving of more than \$4,000 over 10 years, and this doesn't even take into account the significant price rises planned for electricity over the next few years!



### Huge Government Rebates

Despite recent reductions to the Federal Government Solar Hot Water Rebate, there are still outstanding federal and state rebates available. They could literally save you thousands!

For the complete eligibility criteria and to calculate how much you might save, go to [www.hotwaterrebate.com.au](http://www.hotwaterrebate.com.au)

**THE AUSTRALIAN**

**“ Energy prices will keep on rising ”**

Source: The Australian, 22 March 2010

**SYDNEY MORNING HERALD**

**“ Power bills could send people ‘into poverty’ ”**

Source: Sydney Morning Herald, 16 December 2009

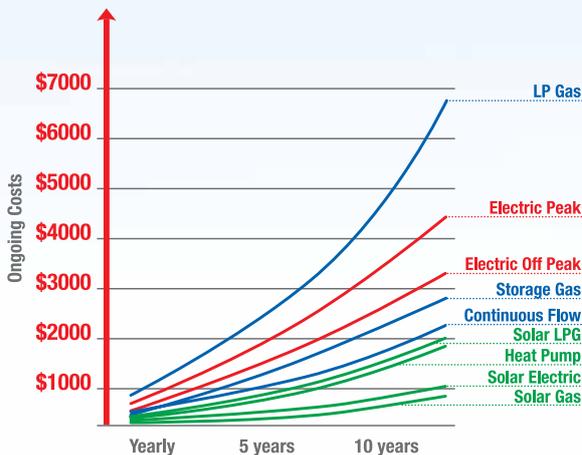
**SYDNEY MORNING HERALD**

**“ Households to feel pinch as price of power soars ”**

Source: Sydney Morning Herald, 19 March 2009

## Your running costs

HOW MUCH DOES HOT WATER COST FOR A FOUR PERSON FAMILY?



Guide only based on current average energy cost. This chart does not account for increased electricity or gas costs in coming years.

\* Note: When replacing an electric storage water heater on off-peak electricity with either a solar or heat pump water heater, running costs savings will be reduced. Figures are based on Australian Government Approved TRNSYS simulation modelling and running cost calculations from Energy Consult Pty Ltd. You should consult your energy provider for more information regarding electricity tariffs.

# Hotlogic® Processor Technology

## Why you should choose Dux

Over the last 5 years Dux has completely reinvented itself from a manufacturer of old electric water heaters to a world leader in the development of solar and heat pump technology.

Hotlogic® checks your system and the environment over 300 times per day to ensure hot water is being made available from the cheapest energy source. On cloudy or rainy days, the Hotlogic® technology in the Sunpro® solar water heater automatically engages the backup booster using either electricity or gas.

At the same time, this next generation 'set and forget' technology actively protects your system to ensure its longevity. Dux and Hotlogic®: water circulation at its most advanced... and cost effective.

This leading edge technology is not only used in our Australian made solar and heat pump tanks but it is further acknowledged by some of the largest water heater manufacturers in the world.

Our Australian made solar and heat pump tanks are manufactured to the most stringent standards in country NSW, further supporting Australian manufacturing.



## hotlogic™

### DAILY TELEGRAPH

“ There’s never been a better time than now to go solar, with the government rebates on offer, and also to do your bit for the environment... Better still, go with a system that is... Australian owned, Dux. Good on ya Aussie! ”

Source: Home Magazine pg 5,  
Daily Telegraph 6th June 2009.





As featured on  
**'Better Homes  
and Gardens'**

# airoheat®



## Air sourced heat pump technology

- The Dux Airoheat® is the industry's most awarded heat pump hot water system
- Powered by Hotlogic® – Airoheat® will even operate in colder air temperatures, and is so efficient, there is no need for any back-up element
- An easy one piece, compact design makes for a quick and simple installation
- No need for solar collectors
- Can generate over 700L of hot water in a 24 hour period using 70% less energy than a standard off peak electric storage water heater<sup>1</sup>

<sup>1</sup> Airoheat® result achieved when connected to continuous tariff with 15°C inlet water, 20°C ambient air temperature and 40% humidity. This allowed for 3 heating cycles in the 24hr period. This is compared to a 250L electric heater on off peak tariff with 1 heating cycle in the 24hr period.

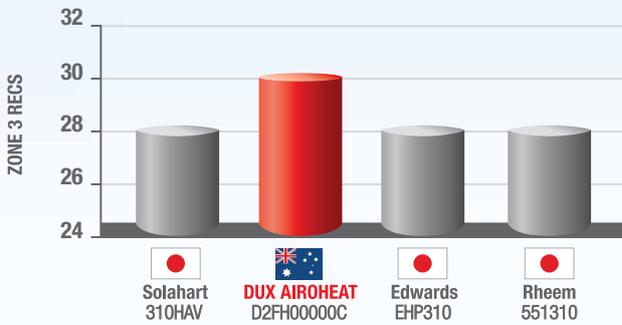


### Renewable Energy Certificates (RECs)

Tank Size	No. of Collectors	ZONE 1	ZONE 2	ZONE 3	ZONE 4
250L	N/A	30	26	30	30

## Why Dux Airoheat?

### SYSTEM EFFICIENCY – COMPACT HEAT PUMPS



**Flags are used to denote ultimate company ownership only.**  
 For comparison purposes, only compact heat pump models have been selected.  
 RECs Source - Australian Government, Office of the Renewable Energy Regulator.  
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# sunpro®



## Electric boosted solar hot water

- Next generation split system design with tank on the ground
- Multi-temperature sensor vitreous enamel tank configuration
- High performance black chrome selective surface collectors as standard
- Thicker 4mm toughened glass for increased weather resistance
- Patented Hotlogic® processor that constantly searches for and switches to the cheapest available energy source
- As the element is located midway up the tank, it heats up the top half of the tank only. Thus, in a 400L tank, only 200L of water is heated. This provides the benefits of solar power while minimising electricity costs

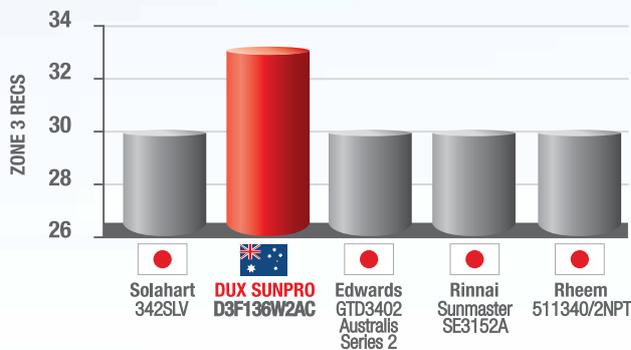


### Renewable Energy Certificates (RECs)

Tank Size	No. of Collectors	ZONE 1	ZONE 2	ZONE 3	ZONE 4
<b>2CB PANELS (QLD only)</b>					
250L	2	33	32	33	28
315L	2	33	32	33	28
400L	2	38	40	38	31
400L	3	45	45	45	38

## Why Dux Sunpro?

### SYSTEM EFFICIENCY – ELECTRIC BOOSTED SOLAR



#### Flags are used to denote ultimate company ownership only.

More efficient collectors may be available as an additional option from all manufacturers, including Dux.  
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# sunpro®



## 305 gas boosted solar hot water

- Gas boosted solar is one of the most environmentally friendly domestic hot water solutions available
- Next generation split system design with the tank on the ground
- Multi-temperature sensor vitreous enamel tank configuration
- High performance black chrome selective surface collectors as standard
- Thicker 4mm toughened glass for increased weather resistance
- Patented Hotlogic® processor that constantly searches for and switches to the cheapest available energy source
- Natural gas only
- Typically, a gas pipe size upgrade is not required when installing a Sunpro 305, which saves additional installation costs



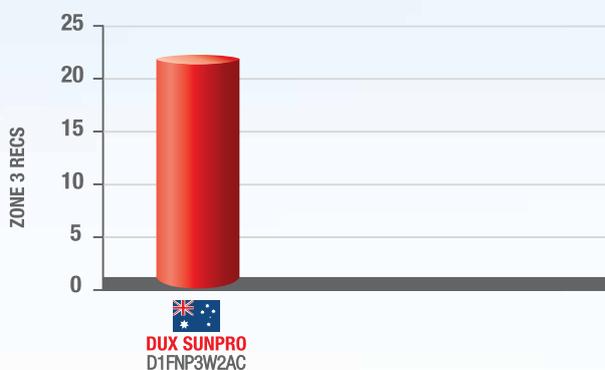
### Renewable Energy Certificates (RECs)

Tank Size	No. of Collectors	ZONE 1	ZONE 2	ZONE 3	ZONE 4
170	2	22	21	22	18

2CB PANELS (QLD only)

## Why Dux Sunpro?

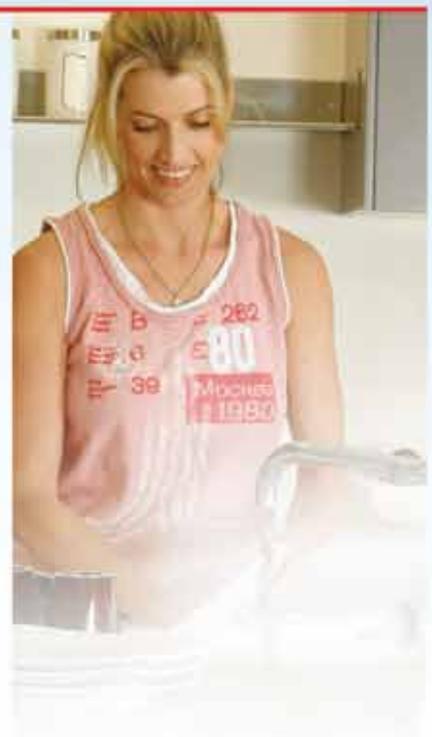
### SYSTEM EFFICIENCY – IN-TANK SYSTEMS UNDER 200L



Flags are used to denote ultimate company ownership only.

No comparison is possible, as neither Rheem, Solahart, Edwards, nor Rinnai manufacture an in-tank gas boosted solar hot water system under 200 litres.

RECs Source - Australian Government, Office of the Renewable Energy Regulator.



# sunpro®



## Continuous gas boosted solar hot water

- Gas boosted solar is one of the most environmentally friendly domestic hot water solutions available
- Next generation split system design with the tank on the ground
- High performance black chrome selective surface collectors as standard
- Suitable for both LPG and Natural Gas
- Flexible continuous flow mounting options – on a wall or the tank allowing for greater installation flexibility (comes with mounting bracket)
- Ability to install the tank internally while still having the continuous flow unit mounted externally (distance restrictions apply)
- Reduced footprint for better side access, particularly for smaller blocks

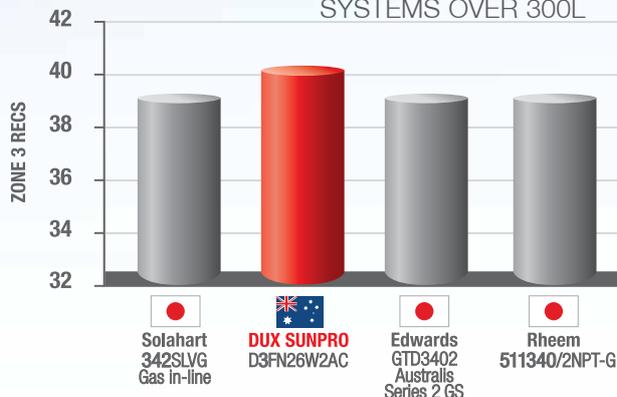


### Renewable Energy Certificates (RECs)

Tank Size	No. of Collectors	ZONE 1	ZONE 2	ZONE 3	ZONE 4
<b>2CB PANELS (QLD only)</b>					
250L	2	40	41	40	33
315L	2	40	41	40	33
400L	2	40	41	40	33
400L	3	47	46	47	41

## Why Dux Sunpro?

### SYSTEM EFFICIENCY – DIRECT VITREOUS ENAMEL SPLIT SYSTEMS OVER 300L



Flags are used to denote ultimate company ownership only.

More efficient collectors may be available as an additional option from all manufacturers, including Dux. At the time of printing, Rinnai did not market a vitreous enamel direct split type continuous gas boosted solar system over 300L. RECs Source - Australian Government, Office of the Renewable Energy Regulator.

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*In difficult economic times, it's never been more important to buy **Australian** owned.*

Did you know that Japanese companies ultimately own most of the biggest names in the Australian hot water market, including Rheem, AquaMax, Solahart, Vulcan, Edwards and Rinnai? Whilst these companies still have Australian manufacturing operations, they are ultimately owned by overseas interests.

**Dux is Australian owned** ... and proud of it. Dux is part of GWA Group Limited, which is listed on the Australian Stock Exchange.

In difficult times, it's never been more important to support Australian owned businesses. Built in country NSW, Dux solar and heat pump tanks are proudly designed and manufactured in Australia. Nearly 300 Australian employees thank you for your support.



### Ultimate Ownership



Dux



Rheem



Vulcan



AquaMax



Solahart



Edwards



Rinnai

Source of ownership information: Australian Competition & Consumer Commission (ACCC) Press Release 22/4/2009  
<http://www.accc.gov.au/content/item.phtml?itemId=885703&nodeId=54ceacfc763d3aa8d1df12060c7109e8&fn=Rheem%20Australia%20Pty%20Ltd%20-%20proposed%20acquisition%20of%20Aqua-Max%20Pty%20Ltd%20-%2030%20July%202009%20-%20water%20heaters.pdf>  
On 3rd August 2009, Sietel announced the sale of Aquamax to Rheem.



**GWA**  
*Smarter Solutions*

# Australia's leading supplier of fixtures & fittings



Dux Hot Water is fully owned by GWA Group Limited, a publicly listed Australian business based in Brisbane.

One of the largest suppliers to the housing industry, GWA is committed to developing environmentally sustainable solutions.

Caroma Smartflush toilets and Dorf tapware are just two examples of products that can help you create an ecologically proactive home.

Dux first started manufacturing hot water systems in Australia in 1915 and now has over 95 years' experience.



SPECIFICATIONS	Airoheat®	Sunpro® electric boosted			Sunpro® gas boosted			Sunpro® gas 305
	Capacity (L)	250L	250L	315L	400L	250L	315L	400L
People								
<b>TANK</b>								
Storage capacity (L)	259	259	324	416	259	324	416	170
<b>BOOST SYSTEM</b>								
Electric (kW)	N/A	3.6	3.6	3.6	N/A	N/A	N/A	N/A
Gas consumption (MJ/hr)	N/A	N/A	N/A	N/A	199	199	199	32.5
Gas type	N/A	N/A	N/A	N/A	Natural / LPG	Natural / LPG	Natural / LPG	Natural only
Net weight empty (kg)	113	90	105	120	118	133	144	92
Relief valve pressure (kPa)	1000	1000	1000	1000	1000	1000	1000	1400
<b>TANK DIMENSIONS (DOES NOT INCLUDE HOTLOGIC)</b>								
Overall height (mm)	1755	1444	1754	1703	1444	1754	1703	1896
Overall diameter (approx.) (mm)	632	617	617	705	832	832	920	421 x 503
<b>SOLAR COLLECTORS</b>								
Number of Collectors	N/A	2	2	3	2	2	3	2
Roof area required (m)	N/A	2.1 x 2.0	2.1 x 2.0	3.2 x 2.0	2.1 x 2.0	2.1 x 2.0	3.2 x 2.0	2.1 x 2.0
Collector weight empty (each) (kg)	N/A	37.3	37.3	37.3	37.3	37.3	37.3	37.3
<b>PIPE CONNECTIONS</b>								
Cold (mm)	20	20	20	20	20	20	20	20
Hot (mm)	20	20	20	20	20	20	20	20
Gas inlet (mm)	N/A	N/A	N/A	N/A	20	20	20	15
Collector connections (mm)	N/A	15/25	15/25	15/25	15/25	15/25	15/25	15/25
<b>HOTLOGIC</b>								
Mains voltage (V)	240	240	240	240	240	240	240	240
Solar pump power (W)	N/A	< 28	< 28	< 28	< 28	< 28	< 28	< 28

Size figures are based on environmental averages which can effect the performance of solar & heat pump heaters. Adult icon can represent dishwasher or washing machine. An adult icon does not represent a spa bath.



**1300 365 116**  
[www.dux.com.au](http://www.dux.com.au)  
[www.hotwaterrebate.com.au](http://www.hotwaterrebate.com.au)



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