Turn your excess solar into hot water

Boost Controller Settings

The Boost Controller guides GREEN CATCH on how best to utilise the off peak boosting window. The control dial allows you to set the number of hours spent "Boosting" the hot water service.

Boost Window:
If there is no off peak connected to the diverter CATCH treats the boost window as any time between 11pm and 5am AEST

If off peak is connected the boost window is any time the off peak is available and their is no solar being generated.

HOW CATCH WORKS WITH THE CONTROLLER:

- If the controller is set to "**BOOST NOW**" CATCH will turn the hot water unit on immediately.

  - Otherwise the following algorithm applies -

- CATCH starts by assuming the number of boosting hours set on the controller is correct.
- If CATCH finds the hot water shut off is happening before mid day on more than 3 consecutive occasions then CATCH will automatically reduce the boosting time by 12.5%. This process repeats until the hot water cut occurs around midday.

  Note: the 12.5% reduction is an internal calculation, the dial position will not change.

- If on any day CATCH cannot get the hot water to cut off during the solar day, two things will happen:
  a. The boosting that night will not be limited, it will go until cut off is reached.
  b. The boosting hours will reset to the controller default.

The formula below can be used as a guide for setting the boost control.

$$\text{Boost Control (Hrs)} = \frac{\text{Daily HW Usage (kWh)} - \left(\text{Solar Size (kW)} \times 1.4\right)}{\text{Element Size (kW)}}$$

Boost Controller Light

The small light next to the boost control dial tells you how hard CATCH is working. The light is called the Duty cycle light.

the amount of time the light is on represents how much energy CATCH is trying to put into the hot water service. For example:

- If the duty cycle light is off, there is no power being sent to the hot water service.
- If the duty cycle light has small short flashes, there is a little bit of energy being sent to the hot water service.
- If the duty cycle light has long flashes, there is a lot of energy being sent to the hot water service.
- If the duty cycle light is on (there is no flashing) it means one of two things:
    a. There is plenty of solar, so CATCH has turn the hot water service on to its maximum.
    b. The hot water service has reached maximum temperature and has cut off, CATCH is trying as hard as it can to put energy in but the hot water service won't allow it.