

SOLAR DIVERSION

WHAT HAS CATCH TAUGHT US?

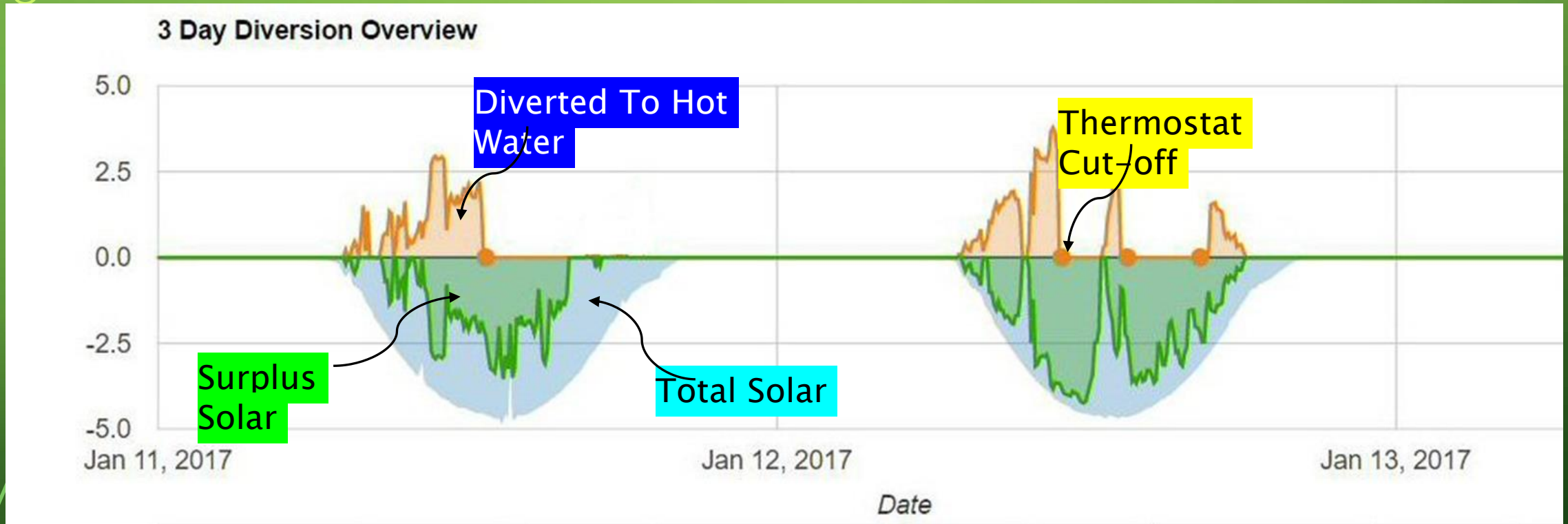
PRESENTED BY SCOTT YOUNG



INTRODUCTION – WHAT IS CATCH

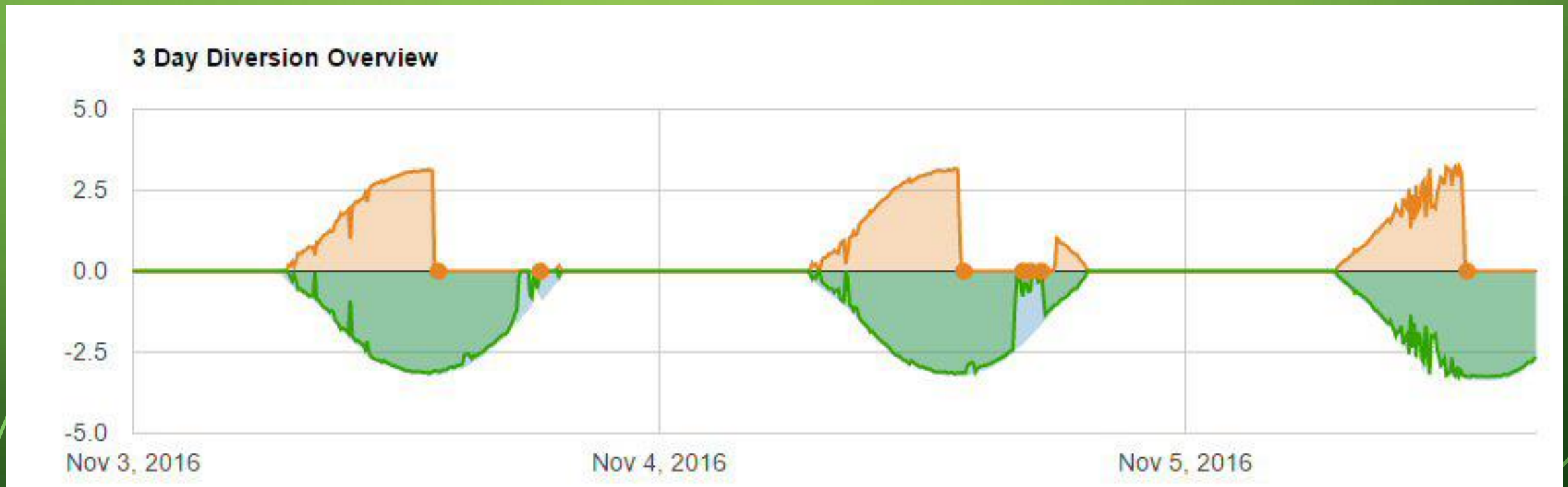
- CATCH is a solar diverter  hot water and floor heating
- Two Models; Blue CATCH and Green CATCH
- Blue CATCH; Online monitoring = Lots of information

A LITTLE ABOUT OUR GRAPHS



GRAPHS OF INTEREST

Perfect Diversion?



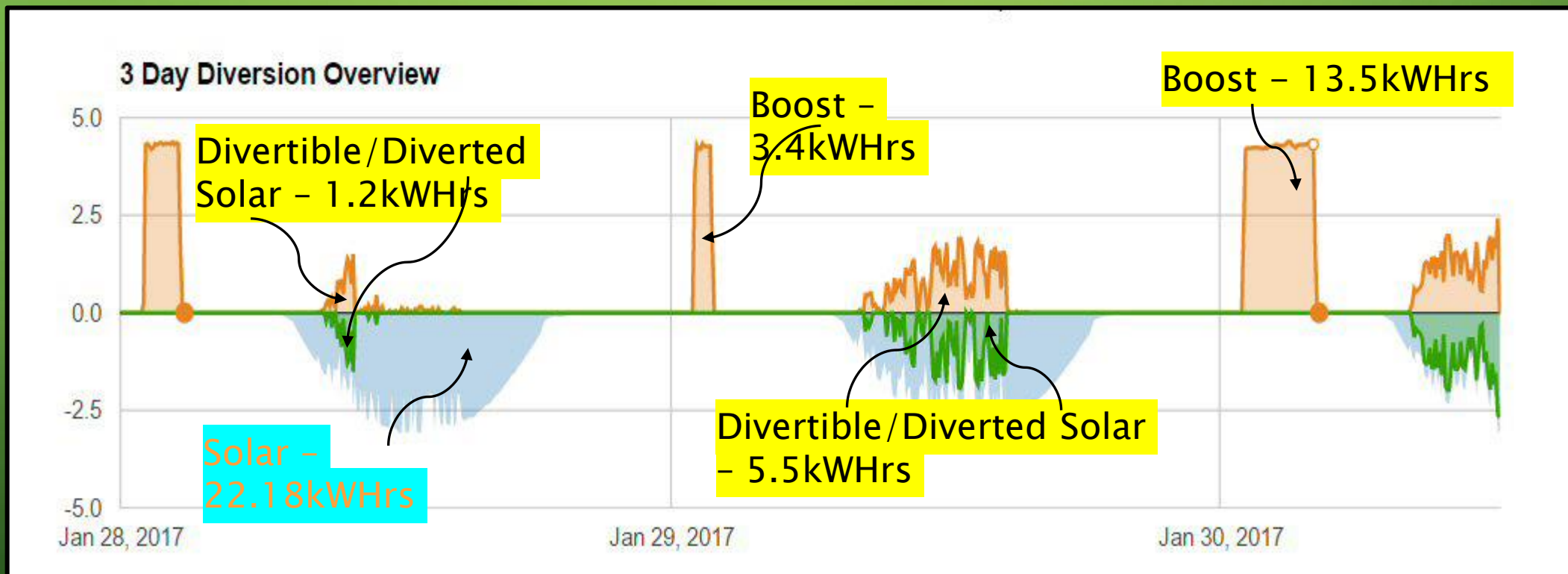
Total Solar – 20–
25kWHrs

HW Diversion – 13–
15kWHrs

Cut-off –
~2pm

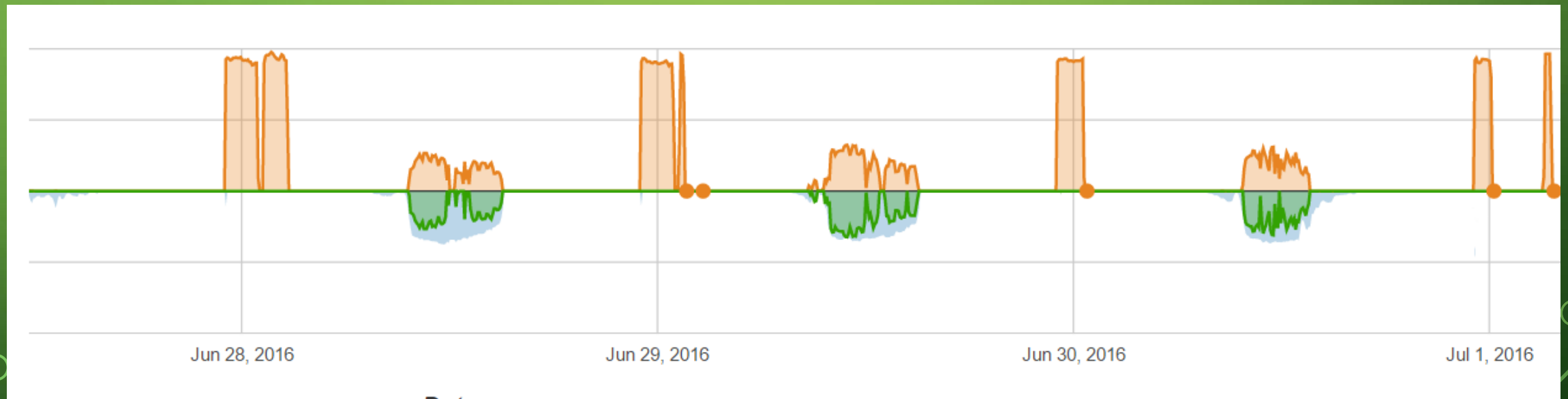
GRAPHS OF INTEREST

The Effects of Air Conditioning



GRAPHS OF INTEREST

Small Systems – 1.8kW Array, Winter



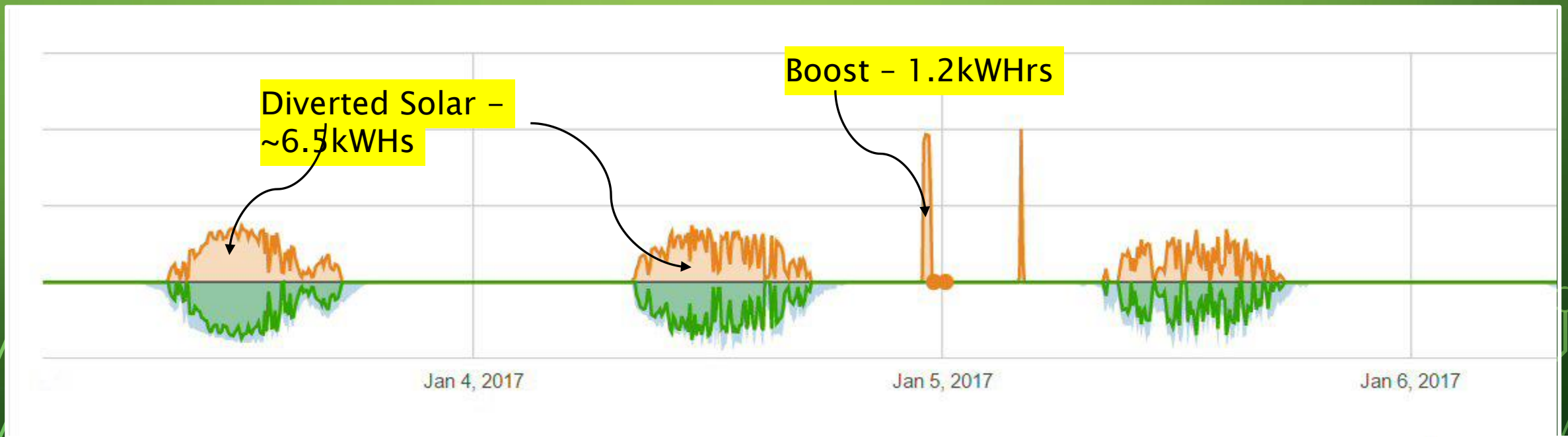
28th; Total Solar;
7.14kWHrs

HW
Req.; 15.8kWHrs

Boost;
12.2kWHrs

GRAPHS OF INTEREST

Small Systems – 1.8kW Array, Summer

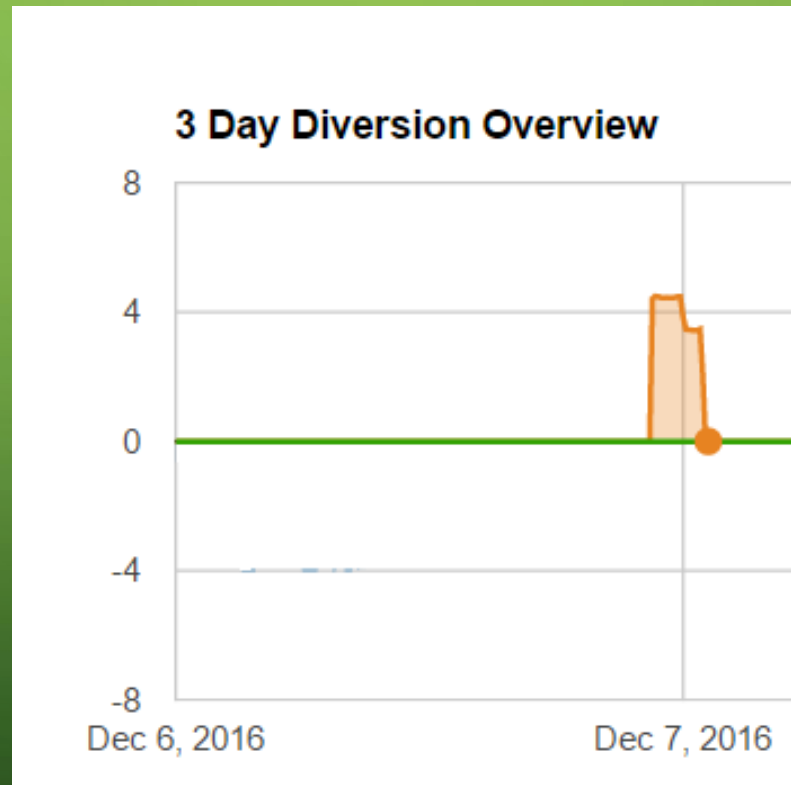


GRAPHS OF INTEREST

What's Going on Here?

Two hot water tanks in parallel – 3.6kW and 1.2kW elements.

When the thermostat of the 1.2kW tank reaches cut-off the total load drops to 3.6kW.



CATCH FAST FACTS

Information Based on 1.2 Million Data Samples

- Average Solar Production; 18kWHrs/Day
- Average daily load per home; 18kWHrs/Day
 - Average standing load of 750W and average peak for 24Hrs = 3.8kW
- Total hot water diverted; 28MWHrs = 9.52T Coal not



CATCH FAST FACTS

- Average energy exported per home; 12kWHrs
- Average hot water use per home; 6kWH
- Average boost required with CATCH; 0.9kWHrs
- Efficiency Level of Solar plus CATCH; **85% !!!**

BUT, WHAT IF THERE IS NO INTERNET?



HOW SMART IS GREEN CATCH?

- Short answer; VERY!
- User adjustable, through the seasons
- Firmware overrides;
 - Thermostat cut-off is not reached
 - Thermostat cut-off reached too soon!



WHEN TO USE GREEN OVER BLUE

- When the internet isn't available
- If the customer has a small solar array
- If the customer is a light user of hot water
- If the cost of Blue CATCH is too much



THANK YOU FOR YOUR ATTENTION

