

----- Original Message -----

Subject: Measurement data
From: "David Green" <solcoolfl@yahoo.com >
Date: Sat, April 19, 2008 9:59 am
To: "Roxanne Reitmeyer" <rreitmeyer@solcool.net>
Cc: "Jerry Scala" <scaladj@aol.com>

Saturday 10am EST 4-19-2008
Local Temp. 74f degrees

Hi Roxanne,

At around 8:30am this morning I began working with the solcool unit again. I had just established a base line of data when, true to form, Florida Flash and Flicker, also known as Florida Power and Light or FPL, sent a rolling voltage spike down the lines and tripped up the whole house. Once things calmed down again, I obtained the following DRAMATIC readings using a P3 International model P4460 Kill A Watt meter. See attachment.

I established the draw of the battery charger with no load by disconnecting it from the batteries. At turn "on", no load, the charger draws 5 watts.

Next, I connected the batteries and the draw became 200 watts.

Next, I turned the inverter "on" but not the solcool unit. Draw became 250 watts.

Turning on the solcool unit the draw became 270 watts with the air handler fan before the unit began full operation.

Upon full operation, the unit pulled a maximum of 855 watts for just 1-2 seconds. As I allowed it to cycle under normal operation, power readings were as low as 280 watts without the compressor on to the 855 watts mentioned before.

In a sustained compressor "on" cycle of about 15 minutes the unit draw started at 770 watts and reduced to 714 watts after 15 minutes. I'll take this range of numbers as my data for typical operation as it probably represents the worst case scenario. True to form, the longer the compressor runs the more efficient it becomes and the less power drawn. From experience using my current central AC system a 15 to 30 minute "on" cycle is typical in FL heat.

Given that the currently supplied electronics is not optimal, I do hope that the designed charge controller may further reduce power consumption by 100 watts to 200 watts? This would bring the overall averages between 500 watts and 600 watts (I'll use 550 in my math). I estimate the average 1.5 ton conventional system uses 2,700 watts to 3,000 watts (I'll use 2,800 in my math). As it stands now, the solcool demo as supplied, is using about 75% less power. If the improved electronics save an additional 200 watts then the figure could be 80% less power! Of course this is with just 1 air handler. From my observations, I think the air handler uses about 20 watts?

The lowest observed output temp was 44f degrees against the 74f degrees ambient air temp. This 30f degrees differential is the best obtainable in any AC system.

David