Solar Power Addition

The original, and still existing, solar panel was only 10 W. This seemed much too small to be of any purpose within the RV, justice senses and running the RV seems to be 40 to 50 W.

So what I decided to do was to install to standard house solar arrays, this combined with the regulator supplies RV with a minimum of 350 W.

To accomplish this I purchased the following items :

a. Two (2) Evergreen Solar Panels, 215 Watts each, ES-A-215-FA3B. that would supply the system with at least 15 1/2 amps per panel.
b. Blue Sky Solar Boost 2000E multistage charge controller, with a maximum of 25 amp output.
c. Blue Sky battery temperature sensor, connects to the controller and optimizes the charge rate based on the battery temperature.
d. Switch, single pole double throw, this switch is used to redirect the solar panel current to either the coach batteries or the house batteries. This allows me to charge either battery system.

The two solar cell arrays are wired in parallel for a maximum output of 18 1/2 Volts DC, giving me a total current of 23.2 amps. This current and voltage is converted by the Solar Boost 2000E controller to a maximum of 25 amps at 14 Volts. The current is routed through the double throw switch allowing me to select either set of batteries.

Even though the solar array system has a total output capacity of 31 amps, I figured with the panels laying flat and not facing the sun directly I would never get 100% efficiency. Therefore a 25 amp charging system would be ample, so far I've never been able to reach over 23 amps in the summer with direct sun. I'm very happy with the system even in the winter with a low sun I get near 13 amps. On a sunny day in the winter I'm able to recharge my house batteries plus have lights on within the RV.