

SOLAR IN MICHIGAN

MREP 8/15/2013

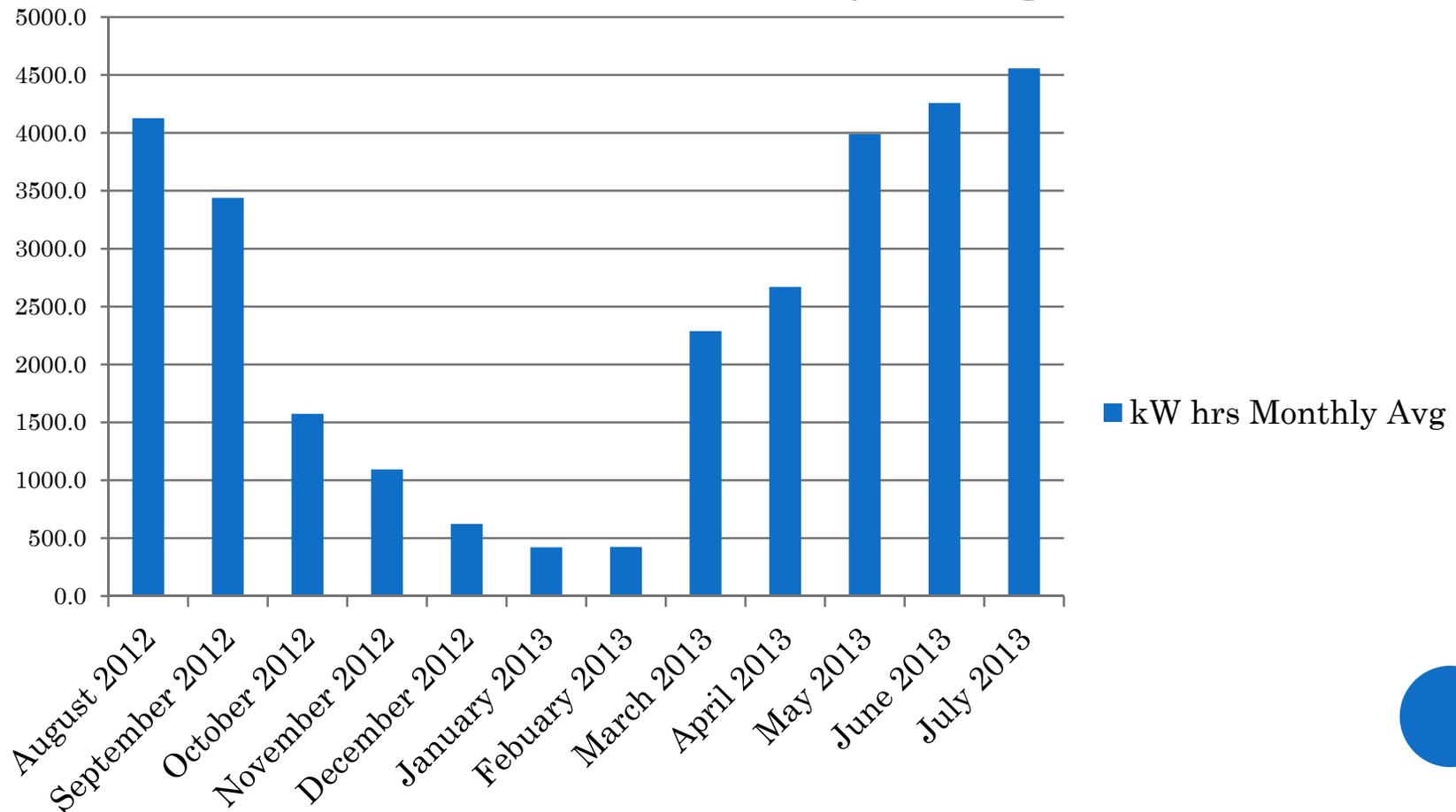
Kim Walton
Program director
GVSU/MAREC

MICHIGAN ALTERNATIVE & RENEWABLE ENERGY CENTER 30 kW THIN FILM PV



MAREC 30 kW PV SYSTEM YEAR AVG. 60 MW

kW Hrs. Monthly Average



SOLAR PHOTOVOLTAICS (PV)



SOLAR PHOTOVOLTAICS (PV)



SOLAR PHOTOVOLTAICS (PV)



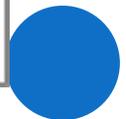
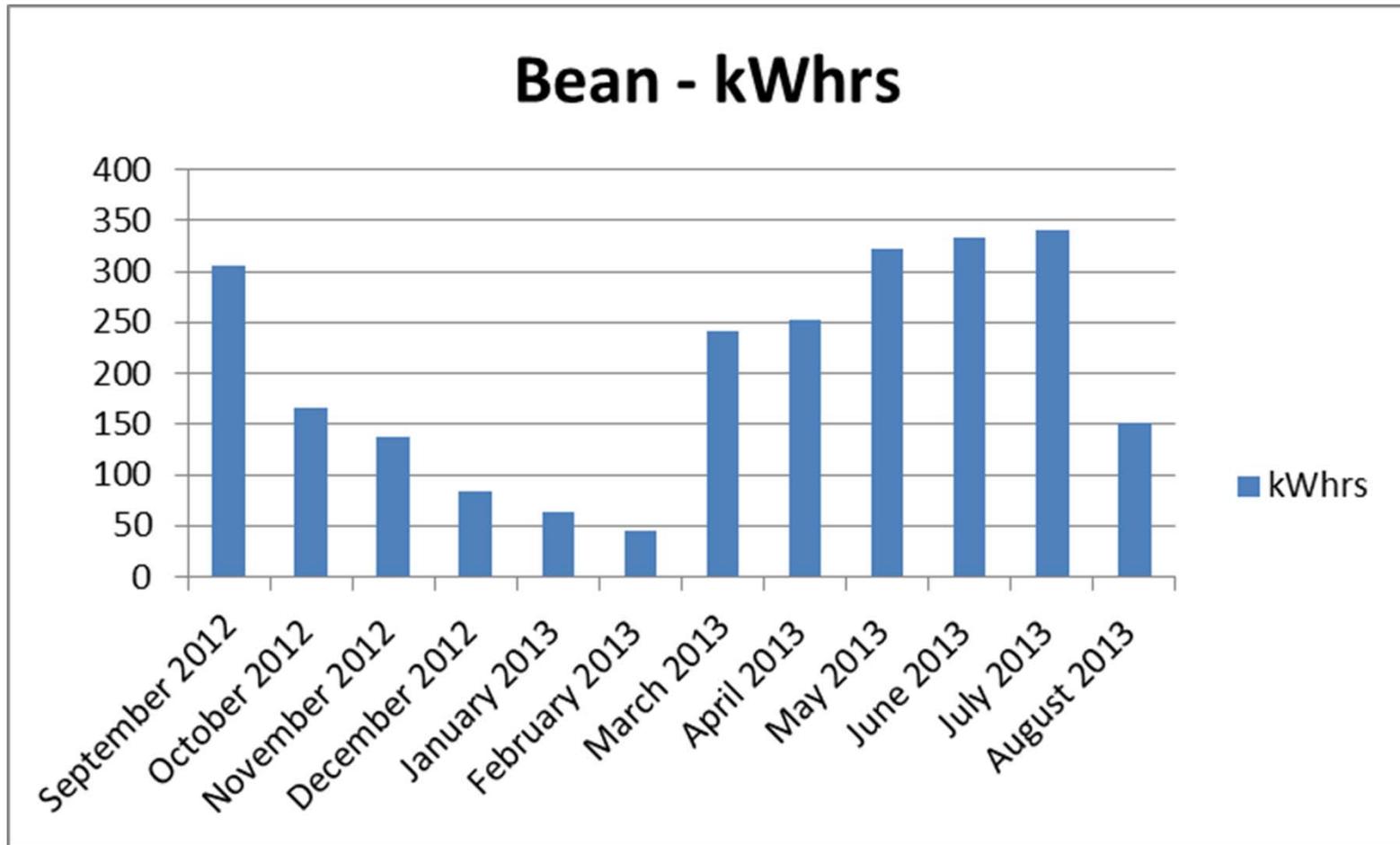
SOLAR PHOTOVOLTAICS (PV)



SOLAR PHOTOVOLTAICS 2 kW (PV)



1.60 MWh Year to Date



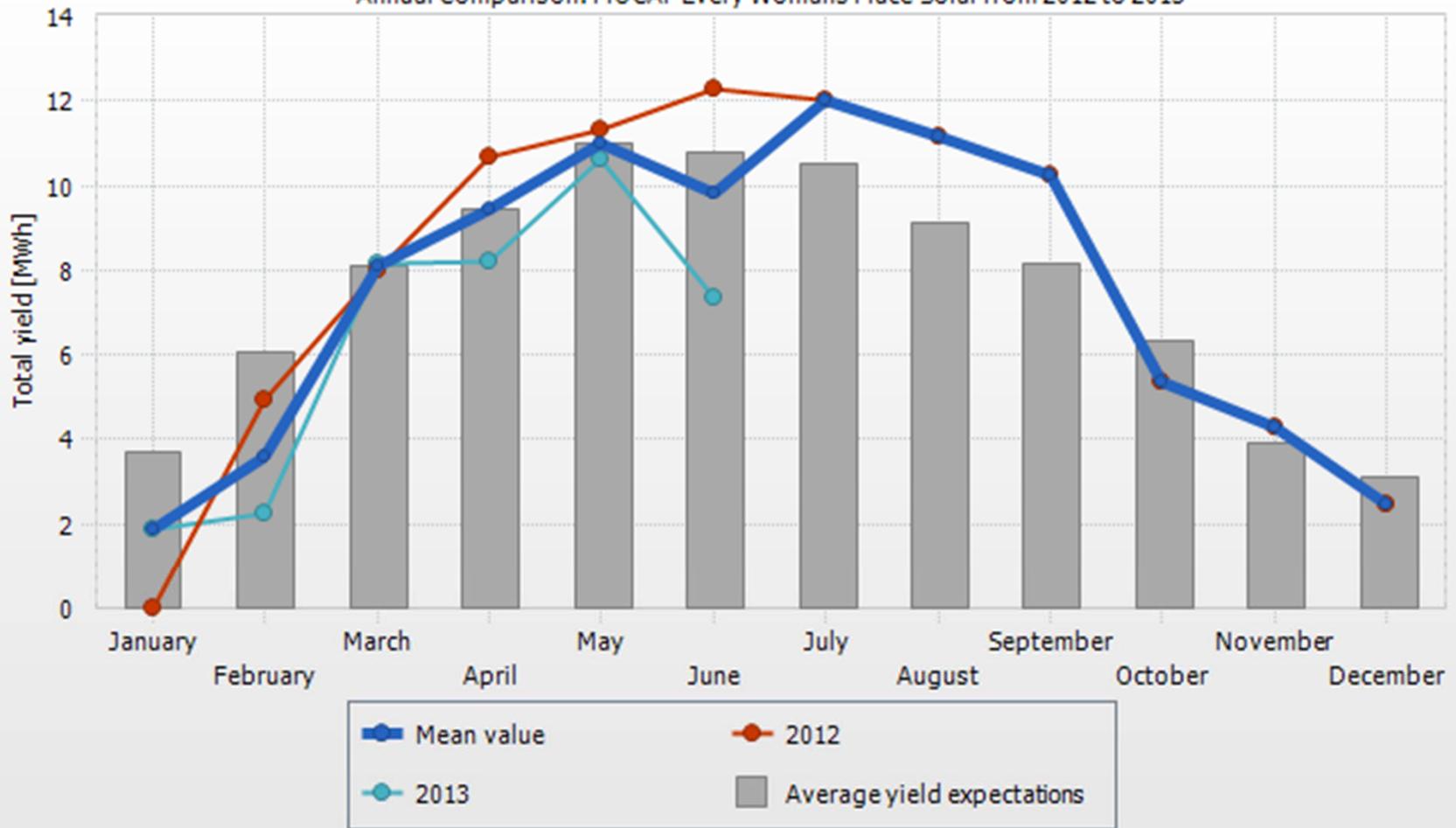
EVERY WOMEN'S PLACE



EVERY WOMEN'S PLACE



Annual Comparison: MOCAP Every Womens Place Solar from 2012 to 2013



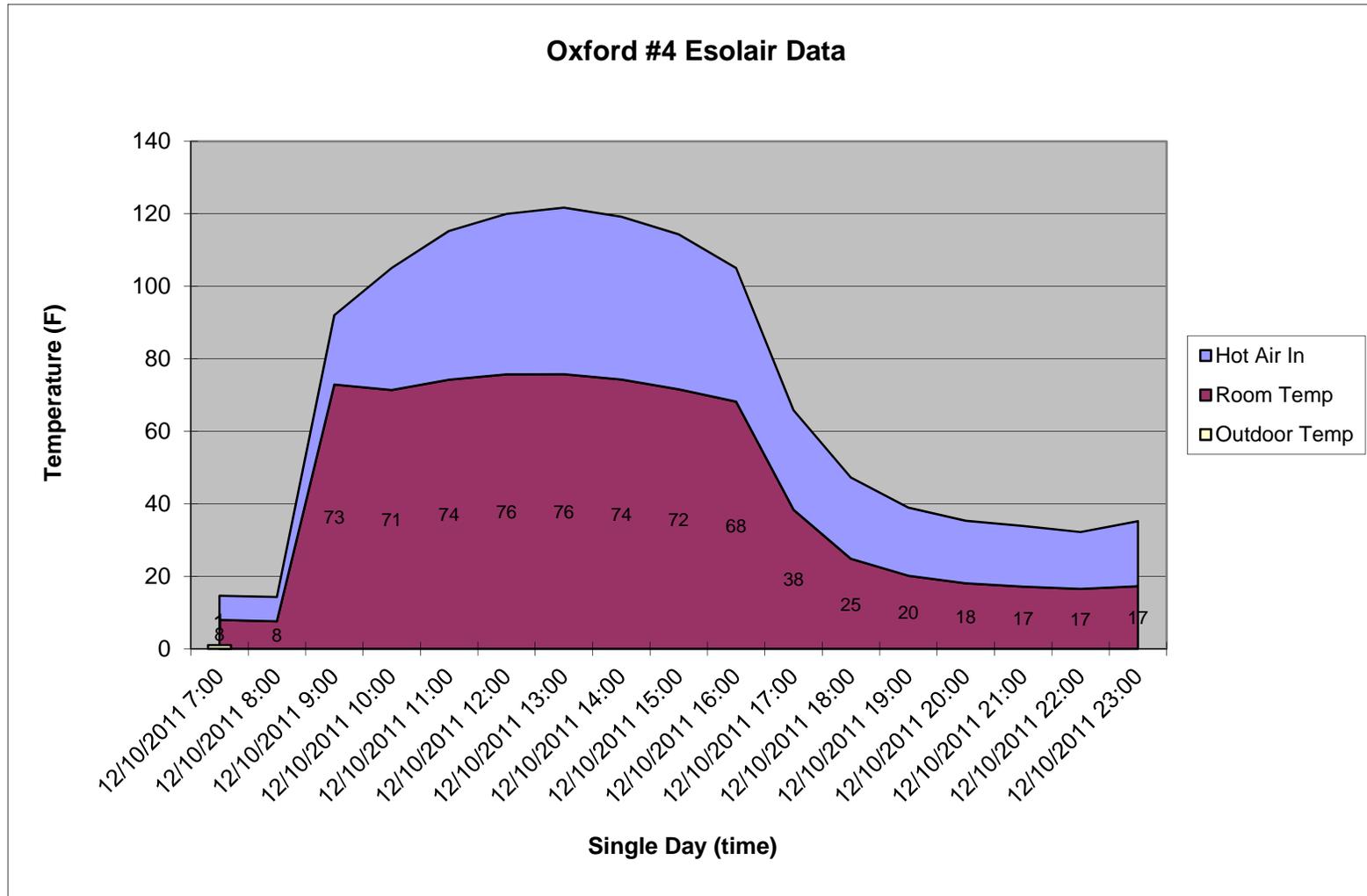
SOLAR HOT AIR



SOLAR HOT AIR



SOLAR HOT AIR



Solar Hot Air

- Installed mid January ran the middle of May.....solar heating during the day
- The collector was turned off in May.
- A random data point to graph. The low temp was 9 deg, the high temp was 45 deg.....a pretty typical day.
- At 9:00 am the collector temperature was 90 degrees...the room temp was 70 degrees.
- Both the collector and room temp continued to climb until about 2:00pm. The peak room temp was 76 degrees, the peak collector temp was 141 degrees.
- At 141 degrees...the btu output is over 7,000 btu/hr.
- The room temperature returns to 69 degrees at 4:00 pm.....free heat from 9-4.....not bad.



SOLAR HOT WATER



SOLAR HOT WATER



SOLAR HOT WATER



THANKS!

