



TOOLKIT FOR MONITORING

Monitoring solar thermal systems, a renewable resource.

Solar energy systems are the product of a team and Solarwave aims to serve each member by adding value to their valuable role in creating an efficient system. We provide operations and performance information, historically and in real-time, allowing you to see what you have built.

- Designer can see their (and other's) systems work in real world applications with live loads
- Installer can see real-time performance and possible service issue as they happen, and track historic changes over time, allow for proactive maintenance, reducing downtime.
- Service professional can maintain more systems with less onsite time, keeping production high without wasted services calls.
- Program managers overseeing multiple sites can assess value created by each site or multiple ones. Planning new work can be based on the best of your past with confidence.

For more information and a demonstration in real-time go to www.solarwave.com

ThermalGrid Software Service

Fully customizable, five-year software service incorporates real-time status, alerts, and online advanced analytics to help you easily optimize, maintain and administer multiple systems.

AEM Hardware

The Advanced Energy Monitor (AEM) is our basic package for monitoring solar hot water systems. Systems monitor one supply and one return line to the collector array and one through-put line from the city water through solar and auxiliary heating tanks. You will get a report of energy produced by the collectors, the thermal load (in gallons of water and thermal energy) of the building, the percentage of that load met by delivered solar energy and energy from auxiliary systems (solar fraction). Value of the delivered solar energy (contribution) is calculated based on avoided use of the auxiliary system using estimated seasonal efficiency. This system requires 8 temperature sensors and 2 flow meters.

Included with Package:

- Sensors /communication hardware
- Sensor placement advice
- Benchmarks for performance to aid in optimization
- Instructions (written/web/video) for installation, configuration.
- Webinar for support

Extras

- Design/operational consulting
- SolarWave Installation

Add ons

Modules

- Meteorology & Collector Efficiency
- Solar radiometer, outside air temperature sensor

Measured Seasonal Efficiency of Auxiliary System

- Gas, Oil, or kWh Meter for the auxiliary system.
- More accurate value of avoided auxiliary energy.

Additional Solar Arrays

Plus 1 Temp for each array. Allow analysis, but not energy readings, for arrays in parallel.

Additional Loops

Plus 2 Temps & 1 Flow Meter. For process heat, heat storage, heat exchangers, etc.

Recirculation Loops

Plus 1 Temps and 1 Flow Meter per loop.