

How We Track Energy Savings & Increased Operational Efficiency

Tracking changes in operational efficiency of air conditioning, refrigeration, and heat pump systems requires consideration of a number of factors, such as:

- Consistency in temperature set points or consistent changes to set points
- Hours of operation. (The amount time the system calls for cooling, which can be normalized)
- Fluctuations in external heat load, or environmental temperatures, which vary from day to day, month to month and/or year to year.
 - Cooling degree days are used to determine how one day is hotter or cooler than the next

In order to compare apples to apples, we need to first be able to establish an average baseline that can show the changes in the energy consumption that has a direct correlation to the changes in external heat load or changes in energy use. Which in result, is able to determine the changes in energy usage based on the fluctuations in energy consumption.

A base line is established by remotely monitor energy consumption for a minimum period of (X) days. While the energy consumption data is being collected, the software simultaneously pulls temperature data from the nearest National Weather Service monitoring station.

- Weather and Utility readings are taken simultaneously every 10 seconds
- The data is used to create an algorithm.
 - This algorithm is a calculation of energy use based on seasonal temperature.

Once the preinstallation base line is established we can now use that algorithm to determine energy consumption at any given seasonal temperature.

After installation, and an estimated 15-day reaction period, the collected information gives the ability to compare the baseline energy algorithm to actual energy consumption, with the difference representing the increase in efficiency through verifying the decrease in energy consumption.

This decrease in energy consumption is a direct representation to the savings on your electric bill.

