

ENERGY MANAGEMENT – FIRST STEP IN EFFICIENT USE OF ENERGY

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Most of the energy savings opportunities in industry and buildings are in **how energy is managed, rather than new technologies. Taking advantage of these energy savings opportunities frequently **requires little or no capital investment**. One has to assist these facilities in learning **where to look and what to do** to realize these benefits.**



ELEMENTS OF ENERGY MANAGEMENT

- Management commitment required
- Develop energy management plan
- Establish energy use baseline
- Identify Energy Coordinator/Manager
- Establish cross-divisional implementation team
- Emphasis on continuous improvement

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- Document energy savings
 - Establish performance indicators & energy saving targets
 - Document and train employees on procedural/operational changes
 - Specified interval for reevaluating performance targets
 - Reporting to public entity
 - Energy savings validated or certified



What Should Be Monitored

- Power Use of air-cond & lighting
- By-Product from the power use
 - Cooling Tons
 - Flow rates
 - Chilled Water /Condenser Water Temperature
 - Room Conditions, i.e. %RH and Temperature
 - Airflow

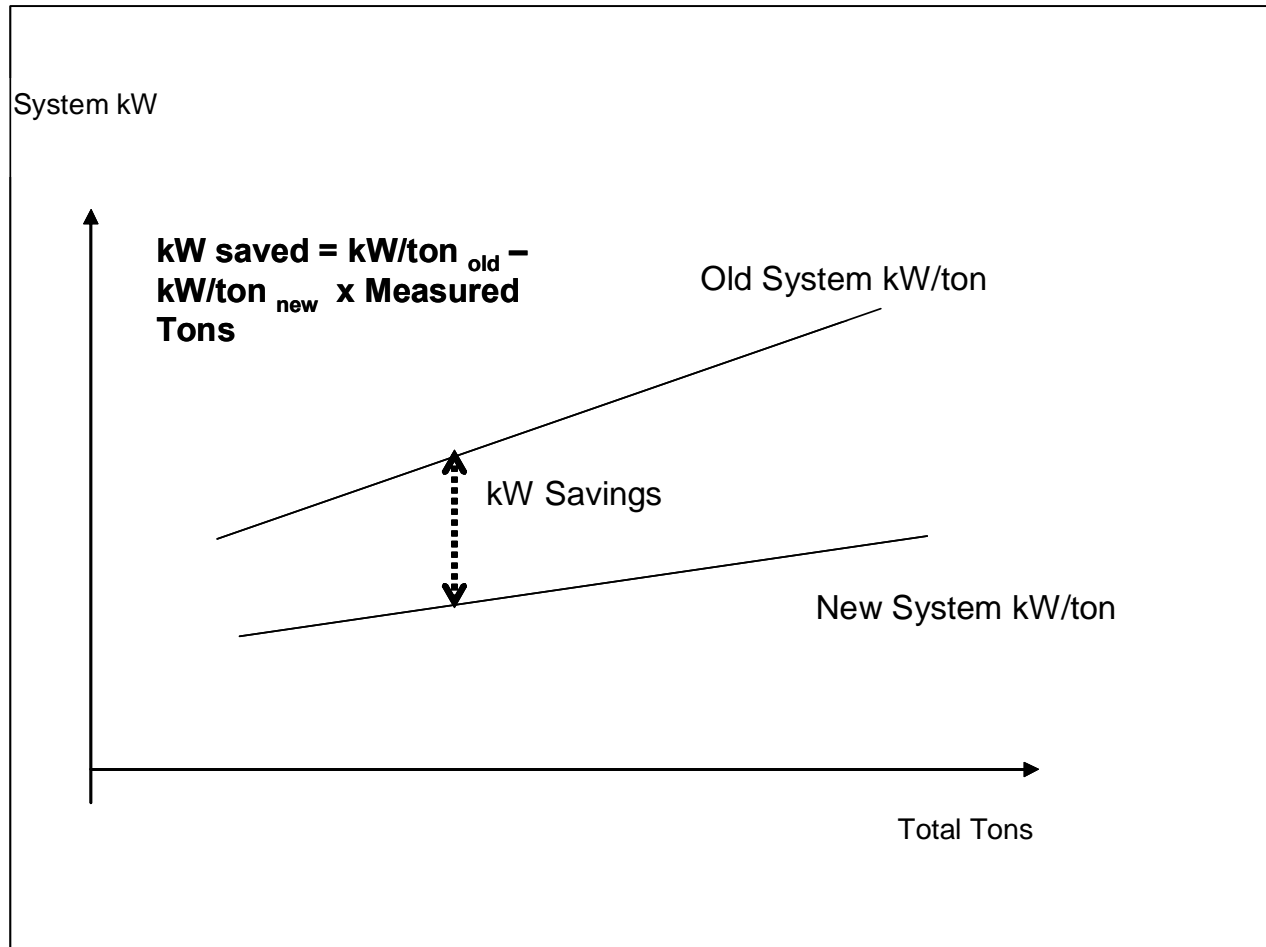


Results from Monitoring cont

- From Data, the result should be:
 - Indexes
 - kW/ton
 - CFM/ton
 - Room: %RH and Temperature
 - USgpm(flow)/ton



BASELINE – BEFORE & AFTER



Index provides a concise and clear picture of the performance of a system. Indexes can actually show the performance of a system before and after retrofits.



Doing it Right!

- Good Stable and Accurate Sensors are critical to successful monitoring
- Measuring at the right places is important
 - Flow measurements require long pipe runs
 - Temperature measurements require good mixed of water or airflow
 - Room Temperature sensors need to be fixed at potential hot spots

THANK YOU

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