



BETTERBRICKS
Bottom line thinking on energy.

WHAT IS ENHANCED OPERATIONS & MAINTENANCE?

The following is a brief overview of how conventional O&M compares with “enhanced” O&M for hospitals. The Building Operations portion of the BetterBricks website has in-depth information and great tools.

Conventional O&M	Enhanced O&M
Energy use is often not well-understood, tracked, or optimized.	Facilities are benchmarked to establish baseline energy use; energy use is optimized through efficient practices; energy use and savings are tracked and regularly reported.
Conventional O&M practices are usually fairly “routine,” focusing on keeping the building running rather than on optimizing performance, including energy efficiency. O&M routines may remain relatively unchanged from those established when the building was first built.	Equipment and systems are regularly assessed to find and address equipment and O&M issues affecting building performance, including energy efficiency. Improvements are sustained with both routine and preventative O&M practices that anticipate and proactively address issues. Results: <ul style="list-style-type: none">• Minimized Total Cost of Ownership (TCO)• Reduced maintenance requirements• Reduced utility costs• Improved reliability• Creation of “new” capacity
O&M staff often consumed with fire fighting and work orders. O&M staff rarely have opportunity to improve long-term practices. They also may not be clear on energy efficiency goals and their role in achieving them.	O&M staff: <ul style="list-style-type: none">• Have the time and the motivation to proactively identify and implement improvement opportunities.• Are clear on goals and roles for energy efficiency.• Are motivated by regular, tangible feedback on building performance (e.g. information on energy use), and by recognition and rewards for their contributions.• Have planned time for training and peer exchange.
“As-Built” documents may be inaccurate or unavailable. Control logics, setpoints, sequences of operation, scheduling, and O&M routines not well-documented.	Drawings and documentation are inventoried and kept up to date on a regular basis.

<p>Original control logics, setpoints, sequences of operation, and scheduling are likely still in use, are often not optimal, and seldom result in the lowest TCO.</p>	<p>Control logics, setpoints, sequences of operation, and scheduling are continually improved to optimize operation and accommodate changes in facility use.</p>
<p>Control systems are often not set up, or not capable, of monitoring, tracking, and reporting Key Performance Indicators for system function and efficiency.</p>	<p>Key Performance Indicators for equipment, systems (e.g. boiler or chiller plant), and even an entire building or campus are developed and displayed on accessible and easy-to-read screens. O&M staff is immediately aware of efficiency and other problems long before occupant complaints or unusually high utility bills occur. Key Performance Indicators also established for O&M practices such as preventative maintenance.</p>
<p>Tendency to focus on individual equipment or components rather than on the broader system issues including poor design.</p>	<p>Systems approach to diagnosing and resolving problems such as:</p> <ul style="list-style-type: none"> • Inadequate capacity • Equipment breakdowns • Occupant complaints • Design issues
<p>Equipment may be replaced to “fix” problems that can be better and more cost-effectively addressed with improved O&M. Also, tendency may be to replace equipment “in kind,” not with the best equipment for the prevailing need.</p>	<p>Equipment replacement decisions are based on knowledge gained through regular equipment and system assessment, and through routine and preventative O&M. Decisions are analyzed using life-cycle cost analysis.</p>
<p>Replacement decisions are often based on lowest first cost rather than lowest Total Cost of Ownership (TCO).</p>	<p>Parts and equipment are purchased based on lowest TCO. (Lowest TCO is often achieved with parts and equipment that have a higher first cost but lower O&M costs over their lifetime).</p>
<p>In-house maintenance stores are commonly full of obsolete parts.</p>	<p>Maintenance stores are stocked with new parts; obsolete parts are removed resulting in perhaps a 50% reduction in inventory space required.</p>

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