

MAKING YOUR HOSPITAL SMARTER

14%

whole-building energy savings

Why hospitals? Hospitals are the most energy-intensive type of commercial building. Smart technologies give hospital administrators new ways to save energy without adversely affecting patient health.

Top smart technologies available to hospitals¹

Technology	Cost	Energy savings
Networked submeters	Low	High
Smart lighting systems	High	Medium
Energy mgmt and info systems	Varies	High
Wireless steam trap monitoring	Medium	High
Distributed smart energy inverters	High	Medium
Wireless pneumatic thermostats	High	Medium
Upgrade from pneumatic to electronic controls	High	High

Expected energy savings

The average hospital could save 14% of its annual whole-building energy consumption by installing smart technologies. Optimized HVAC controls and operations represent the greatest area of opportunity, followed by water heating, and then lighting.² Smart technologies can also increase savings from distributed energy resources like renewables and cogeneration plants.

Other benefits

A hospital's top priority is ensuring patient health and safety. Smart sensors and ventilation controls can reduce the spread of airborne diseases. Hospital patients sleep better with lighting that cycles with daylight to match a 24-hour circadian rhythm.³

1. Energy savings assumptions (% of estimated whole-building energy consumption): Low: 0.6–2.99%, Medium: 3–5.99%, High: 6% or greater. Cost assumptions (% of estimated annual energy budget): Low: 0.8–2.99%, Medium: 3–6.99%, High: 7% or greater.
2. Assumes the hospital uses steam for space and water heating.
3. M. Engwall, I. Fridh, L. Johansson, I. Bergbom, and B. Lindahl, "Lighting, Sleep and Circadian Rhythm: An Intervention Study in the Intensive Care Unit," *Intensive and Critical Care Nursing* 2015, 325–335.