

MAKING YOUR OFFICE SMARTER

18%

whole-building energy savings

Why offices? As technology lets employees work remotely, more office space is only partially occupied. This presents one of the many opportunities for offices to save energy with smart technologies.

Top smart technologies available to offices¹

Technology	Cost	Energy savings
Smart/learning thermostats	Medium	High
Advanced rooftop unit controls	Medium	High
Networked tenant submeters	Medium	Medium
Smart lighting systems	High	Medium
Energy mgmt and info systems	Varies	High
CO ₂ demand control ventilation	Medium	Medium
Tier 1 advanced power strips	Low	Medium
Tier 2 advanced power strips	Medium	High

Expected energy savings

The average office can save 18% of its annual whole-building energy consumption by installing smart technologies. The largest savings come from reducing heating, cooling, and ventilation in unoccupied office and conference spaces. Smart lighting controls and plug loads can also save substantial office energy.

Other benefits

As smart HVAC controls optimize temperature and outside air ventilation, employee productivity increases by 0.6–7.4%.² Lighting color also improves productivity. Smart technologies may add value to commercial properties, both in terms of higher rents and building selling prices.

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: 0.8–9.99%, Medium: 10–39.99%, High: 40% or greater.

2. V. Loftness, V. Hartkopf, B. Gurtekin, D. Hansen, and R. Hitchcock, *Linking Energy to Health and Productivity in the Built Environment*, USGBC Green-build Conference, 2003.