

Appendix L

Esource Office Sector Snapshot

fallen by 50 percent in some places—are also recovering slowly as well.² However, energy efficiency is a critical green practice that helps make properties more appealing and financially competitive in the troubled commercial real estate marketplace. Reaching the relevant building owners and property managers with actionable advice, incentives, and financing can have significant effects on energy consumption as well as a meaningful impact on load management.

Fast Facts

- Offices in the U.S. occupy more than 12 billion square feet (ft²) and 824,000 buildings, representing 19 percent of all commercial floor space and more than 17 percent of commercial buildings.
- Offices in the U.S. account for 22 percent of the energy usage for all commercial buildings.
- The utility bill is often the largest operating expense for office spaces in the United States. This expense historically constituted 29 percent of operating costs, but has been declining in recent years.
- Lighting accounts for the largest portion of electrical-energy end use (39 percent), and HVAC makes up 28 percent of electrical use.
- Space heating accounts for 86 percent of natural gas usage in offices.
- Green commercial properties that invest in energy efficiency have better financial performance; lessors are seeking greener office space, as shown by fewer vacancies in these buildings.
- Energy intensity is dropping, now averaging between \$2.25 and \$2.37/ft², depending on whether the location is suburban or urban.
- Depending on the type of business, the cost of a building automation system (BAS) can range from \$1.50 to \$7.00 per building ft². BASs for office buildings costs are normally in the range of \$2.00 to \$4.00/ft².
- The top 50 property management firms control nearly half of U.S. commercial office lease space. This concentration of ownership and management means that utilities can work with relatively few players to manage the energy consumption of a large amount

of office building space.

- Cultivating strong relationships with property managers of office buildings establishes the utility as a trusted resource and can help embed energy efficiency in their decision-making processes.

Sector Overview

The office buildings sector is relatively energy intensive, particularly in the use of electricity. Overall, it is responsible for more than one-fifth of all energy consumed by commercial buildings. Nearly 30 percent of office buildings' operating expenses are devoted to energy bills.

In the mid-2000s, nearly 29 percent of a typical U.S. office building's operating expenses went toward utilities, mostly for electricity and natural gas.³ Some recent surveys show that as a result of investments in energy efficiency and economic pressures to reduce operating costs, office buildings have reduced their energy expenses by up to 10 percent, and that the diligent efforts of property managers and asset owners to invest in energy efficiency will have a payoff beyond the current economic downturn: The 2010 Building Owners and Managers Association International (BOMA) *Experience Exchange Report* results found that in 2009, utility expenses in suburban buildings dropped by 9.6 percent (from \$2.49 to \$2.25/ft²) and by 4.4 percent in downtown buildings (from \$2.48 to \$2.37/ft²).⁴

Offices in the U.S. occupy more than 12 billion ft² and 824,000 buildings—that's nearly 19 percent of all commercial floorspace and more than 17 percent of commercial buildings. Annually, U.S. office space consumes 2,439 trillion Btu of energy, accounting for 22 percent of the energy use of all commercial buildings. Offices have higher energy expenditures than any other type of commercial building sector, at a total of \$19.2 billion annually.

Energy Consumption and End Uses

Office buildings in the U.S. use an annual average of 17 kilowatt-hours (kWh) of electricity and 32 cubic feet of natural gas per ft². In a typical office building, lighting, heating, and cooling represent about 65 percent of total usage (**Figure 1**), making those systems the