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***Automatic Receptacle Controls to Meet
Energy-Efficiency Requirements in Codes and Standards
IECC, ASHRAE 90.1, and California Title 24***

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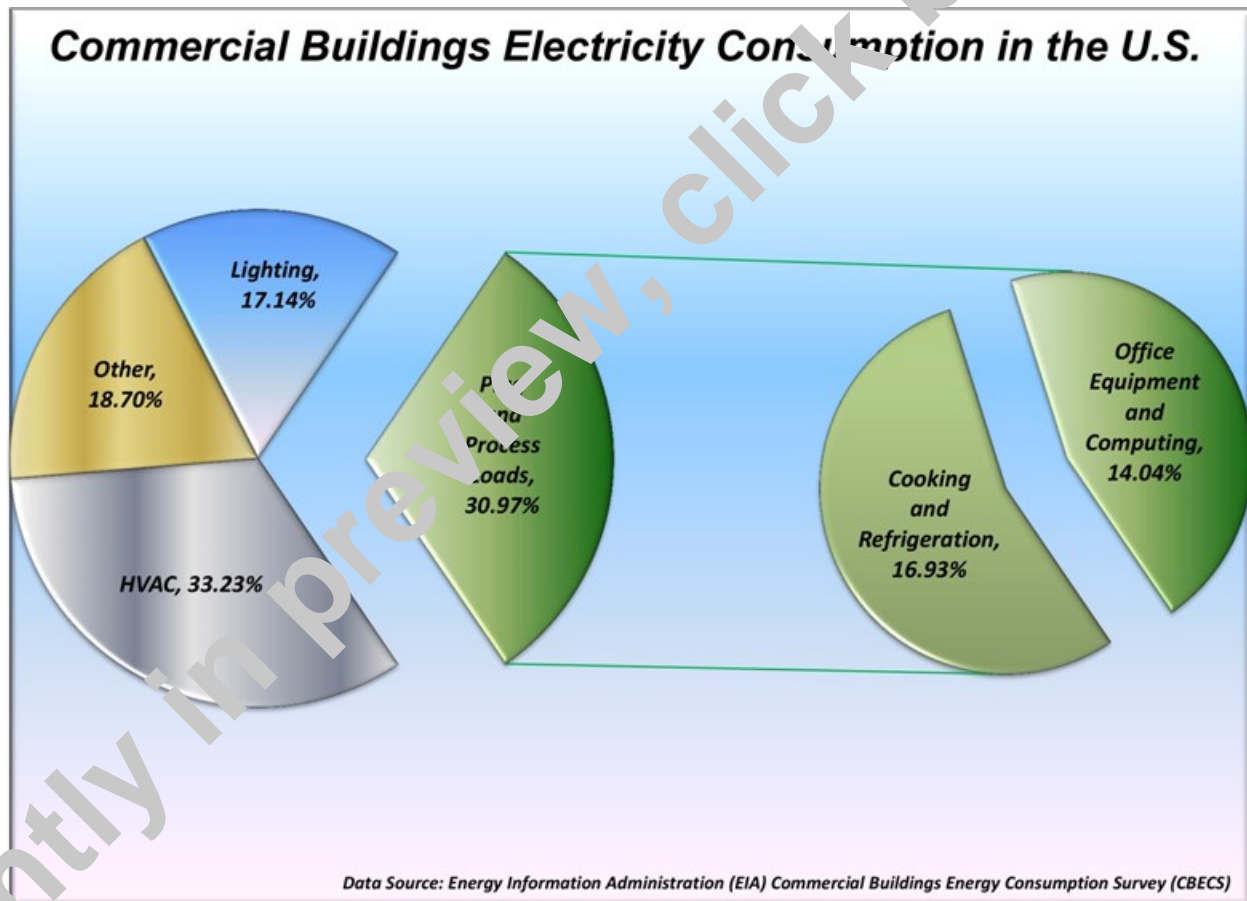
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Automatic Receptacle Control to Meet Energy-Efficiency Requirements in Codes and Standards IECC, ASHRAE 90.1, and California Title 24

Advances in building construction methodology and product technology have allowed for greater energy efficiency in building design than ever before. In the recent past, HVAC, building envelope, and lighting presented the greatest opportunities to reduce power consumption and conserve energy. Designers and manufacturers have been implementing solutions targeting these systems for decades.

Although appliance standards and programs such as ENERGY STAR® have increased the energy efficiency of office equipment, appliances, and plug-in lighting loads, they have remained a largely unmanaged group of energy-consuming loads in a building. Today, much of what is plugged into a convenience receptacle is uncontrolled. Based on data from the Energy Information Administration Commercial Buildings Energy Consumption Survey of 2012, approximately 30% of the energy used in buildings is by loads that are plugged in. A pilot study by the Pacific Northwest National Laboratory estimates that plug loads can account for as much as 50% of the energy consumed in new construction that uses energy-efficient HVAC and lighting. The DoE data shows that implementing automatic receptacle controls can reduce energy use by 20-50%. The DoE forecasts that overall energy consumption in a commercial environment will increase 24% by 2030 and plug loads will increase twice as much, to 49%.



ASHRAE 90.1, the International Energy Conservation Code (IECC), and the California Energy Efficiency Standard Title 24 have identified receptacles as a category requiring energy management. They target specific spaces in a building and require that half (50%) of the receptacles and circuits, including modular