



CODES & STANDARDS

DEVELOPMENT OF NEXT-GENERATION FEDERAL COMMERCIAL BUILDING ENERGY STANDARD (FEDCOM II)

Buildings for the 21st Century

Buildings that are more energy-efficient, comfortable, and affordable...that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with State and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to States and communities for deployment of energy-efficient technologies and practices



The existing Federal Commercial Building Energy Standard (FEDCOM) (10 CFR 435 Subpart A – “Voluntary Performance Standards for New Commercial and Multi-Family High Rise Residential Buildings”) is mandatory for Federal buildings. The U.S. Department of Energy (DOE) has updated 10 CFR 435 to reflect the codified version of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc./ Illuminating Engineering Society of North America (ASHRAE/IESNA) Standard 90.1-1989 to be closer to the existing voluntary sector code. Once this update is approved, the commercial requirements will be removed from 10 CFR 435 and placed in a new section, 10 CFR 434 (“Energy Code for New Federal Commercial and Multi-Family High Rise Residential Buildings”). DOE is now developing a more progressive commercial building energy standard called the “Next-Generation FEDCOM.”

Scope of the Next-Generation FEDCOM

The current Federal Standard (10 CFR 435, soon to be replaced with 10 CFR 434) covers building envelope; heating, cooling, ventilating and service water heating equipment; and lighting requirements for all new Federal commercial buildings. Plug loads are not covered, leaving a substantial gap

in the potential coverage and energy savings potential associated with building energy standards and codes.

The Next-Generation FEDCOM establishes energy efficiency requirements for all Federal buildings (new and existing) except low-rise residential buildings (three stories or less). It covers major renovations, alterations, and repairs to existing buildings as well.

Building Types Covered by FEDCOM

Four federal agencies account for most of the buildings owned by the Federal Government. The U.S. Department of Defense (DOD), the General Services Administration (GSA), the Veteran's Administration (VA), and the U.S. Postal Service (USPS) account for roughly 87% of the U.S. Federal building stock, with DOD alone representing roughly 74% of the total stock. Using total Federal floor space data, the predominate existing Federal building types are

- ✓ Housing: 23%
- ✓ Office: 22%
- ✓ Storage: 17%
- ✓ Services: 16%.

For more information about the DOE Office of Building Technology, State and Community Programs, contact:

Energy Efficiency and Renewable Energy Clearinghouse (EREC)
1-800-DOE-3732
www.eren.doe.gov/buildings

Codes and Standards Home Page:
www.energycodes.org

For more information on Federal Commercial Codes contact:

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1-800-270-CODE (2633)

Housing is mostly covered by DOE's Federal Residential Building Energy Standard (FEDRES) and is, therefore, outside the scope of FEDCOM. Excluding the housing category, the remaining building stock is:

- ✓ Office: 29%
- ✓ Storage: 22%
- ✓ Services: 21%
- ✓ Hospital: 7%
- ✓ Other: 21%.

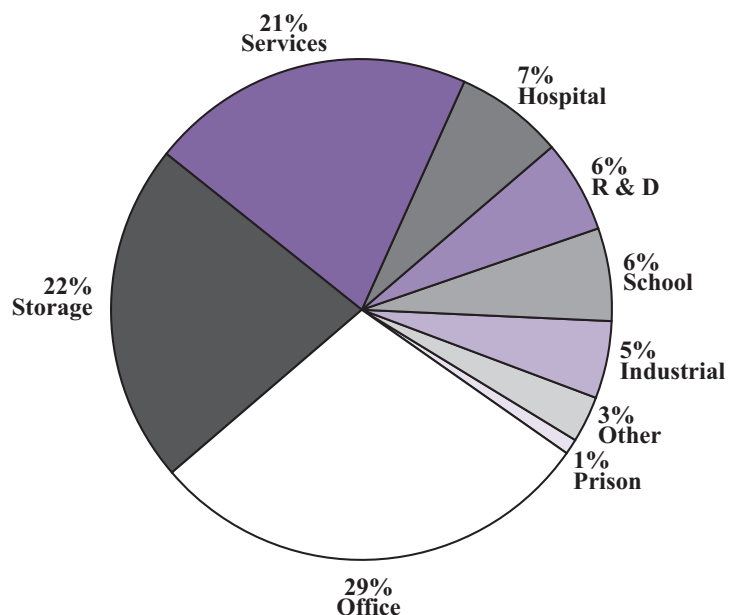
Next-Generation FEDCOM Objectives

The Next-Generation FEDCOM:

- ✓ Targets the goal of 30% energy savings over 1985 building practice and consumption (the goal was not fully met when Federal sector life-cycle cost analyses and economic assumptions were applied to traditional code development)
- ✓ Meets minimum life-cycle cost criteria
- ✓ Can serve as a model code for use by states and local jurisdictions
- ✓ Is easy to use, is enforceable, and will help Federal agencies meet Executive Order 12902 requirements.

The Next-Generation FEDCOM is scheduled for publication as a Proposed Rule in the fall of 1999 and as a Final Rule in the summer of 2000.

Existing Nonresidential Federal Building Stock by Type



Printed with renewable – source ink on paper containing at least 50% wastepaper, including 20% post consumer waste.