



CT High Performance Building Regulations

November 17, 2009

American Institute of Architects

Legislative Action



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- PA 06-187 sec. 70(a) and (b)
 - LEED Silver or 2 Green Globes, Certain exclusions
- PA 07-213
 - Clarification as to when the requirements apply
- PA 07-242 sec. 10
 - Removed excluded buildings, added public schools, and added requirement that energy efficiency of building must exceed ASHRAE 90.1-2004 by at least 20%
- PA 07-249
 - Minor tweaks regarding exemption process

Agencies Statutorily Involved in the Development/Implementation of the Regulations



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- Department of Public Safety
- Department of Environmental Protection
- Department of Public Works
- Office of Policy and Management
- Institute for Sustainable Energy

Other Agencies and Organizations Consulted



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- CT State University System
- University of Connecticut
- CT Community College System
- Department of Public Health
- State Department of Education
- Northeast Energy Efficiency Partnership

Applicable Buildings-State Buildings



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- “New construction of a state facility that is projected to cost five million dollars or more and for which all budgeted project bond funds are allocated by the State Bond Commission on or after 1/1/08;
- Renovation of a state facility that is projected to cost two million dollars or more, if which two million dollars or more is state funding, approved and funded after 1/1/08”

Applicable Buildings- Schools



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- New construction of a facility that is projected to cost five million dollars or more of which \$2 million is state funding and is authorized by the General Assembly pursuant to Chapter 173 on or after 1/1/09
- Renovation of a public school facility as defined in subsection (18) of section 10-282 that is projected to cost \$2 million or more, of which \$2 million or more is state funding and is authorized by the General Assembly pursuant to Chapter 173 on or after 1/1/09

Renovations



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- “State facility renovation” means an undertaking whereby the designer manipulates the building envelope, electrical systems, mechanical systems, and efficiency of equipment for modification of performance, when costs are two million dollars or more. This includes entire buildings as well as isolated portions of the building;
- “School renovation” means “renovation” as defined in section 10-282 of the Connecticut General Statutes

Regulation Basics



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- Regulation for state facilities closely follows LEED-NC Version 2.2
- “Mandatory Requirements” primarily includes existing mandated requirements from CGS, Executive Orders, or are mandatory in LEED-NC Version 2.2
- (Public schools have additional mandatory requirements-spelled out in Sect. 16a-38k-5; from LEED for Schools, NE CHPS)

Mandatory Requirements (all buildings)



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- Enhanced building commissioning
- Integrated design process
- Minimum energy performance
- Energy Star products
- Air quality management plan during construction
- Low-flow water fixtures
- Collection areas for recyclables

Mandatory Requirements (continued)



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- Erosion and sediment control
- No smoking
- Integrated pest management
- CFC elimination (or phase-out in renovations)
- Minimum ventilation requirements

Mandatory Requirements-Schools



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- Acoustical requirements
- Locating outside air intakes
- Electronic ignitions for all gas appliances
- Low VOC material requirements
- Phase 1 environmental site assessment; Phase 2 required if contamination is suspected. Any contamination of site must be remedied
- HEPA vacuuming of carpeting and soft surfaces prior to occupancy; for phase or occupied renovation, carpeted areas must be vacuumed daily

Additional Strategies-Options



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- Must implement 26 of 60 strategies for state buildings and 28 of 59 for schools under six categories:
 - Energy Efficiency and Renewable Energy (1)
 - Indoor Environment (2)
 - Water Efficiency (1)
 - Recycling, Reuse, and Sustainability (2)
 - Site Selection and Development (2)
 - Operations and Procedures/Innovation (0)

Alternate Strategies



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- LEED Silver certification
- 2 Globe rating with the Green Globe certification system
- Northeast Collaborative for High Performance Schools (NE-CHPS)-schools only
- **HOWEVER**, regardless of what system chosen, the mandatory measures must still be implemented 16a-38k-3 (plus 16a-38k-5 for schools) and reporting be provided to DPW/OPM or SDE/OPM

Reporting Requirements to DPW & OPM or to SDE



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- After award of design contract, letter indicating:
 1. Project timeline
 2. Members of design team
 3. Indication that they understand the requirements of 16a-38k-1 through 9
- After design development completion, report indicating:
 1. How the agency is complying with mandatory measures
 2. Which of the optional measures are planned
 3. If alternative strategy is used, documentation of how the design team intends to meet the alternative compliance path

Reporting Requirements to DPW & OPM or to SDE



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- At end of construction document phase: Report of energy modeling of current CT bldg. code vs. proposed project, including cost differentials and operational savings
- During construction: any requested changes to the optional requirements proposed must be submitted in writing and approved by DPW & OPM or to SDE.
- A pre-occupancy commissioning report with seal of PE

Reporting Requirements to DPW & OPM or to SDE



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- Post occupancy commissioning report: Due from the agency responsible for ongoing care, operation and maintenance of the facility. Due 180 days after one year of occupancy.

Exemptions



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- Exemption requests are to be submitted to OPM and shall include:
 1. A description of the project
 2. Documentation of costs to minimally meet provisions of the regulation
 3. What efforts are being made to comply with the regulation
 4. Health and safety impacts to building occupants
 5. Reasons an exemption is necessary

Exemptions



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- OPM, in consultation with the Institute for Sustainable Energy, has 45 days to make a determination
- OPM may exempt a facility if the cost of compliance significantly outweighs its benefits

Questions?

- Compliance Manual available on OPM website:
http://www.ct.gov/opm/lib/opm/pdpc_energyc/high_perf_handbk-final.pdf
- john.ruckes@ct.gov

