



Opportunities for State Action: Green Buildings Tax Credit

One of a Series of ACEEE Fact Sheets

Context

Green Building is a field that uses environmentally sustainable materials to build buildings that conserve resources and provide healthy living or working space. Barriers to increased market share for green buildings include high first cost in materials and higher design costs since many practitioners are not yet familiar with the appropriate techniques. When energy-efficient materials and techniques become common practice, green building will be more common and economically attractive. In order to encourage these trends, some states have started tax incentives for green buildings.

Why Tax Credits?

Green building tax credits are designed to encourage sustainable building practice. This should decrease natural resource depletion for both construction and the energy bills of the structure. Advocates claim that better materials also result in a healthier workforce. Credits allow early adopters in the market to overcome the early price barriers to new technologies and practices while increasing the market share of green buildings and technologies. Equally as important, tax credits validate green building practices through the state's visible endorsement. As the market share for green buildings increases, the barriers to these practices will decrease and the credits will no longer be needed. Tax credits enacted to date have an explicit cost ceiling allowing their fiscal cost to be accurately estimated. Green building tax credits work with the market to form a lasting change.

Which States Are Implementing Tax Incentives for Green Building?

New York was the first state to pass green building legislation, which has been refined and modified by Maryland and Massachusetts. Implementation of the New York and Maryland credits begins in 2002. The Massachusetts bill was introduced to the 2000–2002 legislative session and is moving through the legislative process. Other states are considering this program, including Pennsylvania and Rhode Island.

What Are the Criteria?

In all three states, the regulations are loosely based on the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Guidelines, but since the LEED Guidelines are not written in regulatory language and each state has its own needs, each opted to write its own interpretation. Generally an advisory committee knowledgeable about the buildings industry drafts the regulations. In New York, this process took 6 months. In these regulations, insulation, windows, building materials, air quality, and many other factors are covered. The three states have also included special rules that negate the credit if you build in an environmentally sensitive area as defined by the state. For example, builders in Maryland cannot qualify for the credit if they violate any of Maryland's Smart Growth regulations.

Cost/Benefit Analysis

New York performed a cost analysis and fiscal impact for its green buildings legislation, determining that the fiscal cost of approximately 12.7 million dollars a year over 10 years. Massachusetts performed a cost/benefit analysis on its legislation for both the public and private sectors. The costs in the public sector include the lost tax revenues from the credit and reduced revenues from utility taxes. Public benefits included increased employment, increased construction spending, reduced health costs, and reduced environmental costs. In Massachusetts, the public benefit payback period was estimated to be 6 years, with a public profit from the credit of over 6 million dollars after 10 years. In the private sector, costs include increased construction costs for green building features, and the benefits include reduced utility costs, higher productivity, and reduced operating and maintenance costs. The private sector payback is projected at 2 years. The Massachusetts report can be found at <http://www.gbreb.com/greenbuildings/main.htm>.

This information is drawn from the upcoming ACEEE report: ***Opportunities for State Action: Tax Credits for Energy Efficiency in the Private Sector***. For more information, please contact

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Green Building Tax Credit Model Legislative Language

[Note: This language is based on bills enacted in New York and Maryland and now pending in Massachusetts. We have drafted this bill to have a single implementing agency. However, in some states, this responsibility is split between a Revenue Administration (for tax issues) and an Energy Office (for technical issues).]

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Definitions

(A) In this section the following words have the meanings indicated.

- (1) "Commissioner" means the Commissioner of the [IMPLEMENTING AGENCY]
- (2)(I) "Allowable Costs" means amounts properly chargeable to capital account, other than for land, that are paid or incurred on or after [DATE OF IMPLEMENTATION] for:
 1. Construction or rehabilitation;
 2. Commissioning costs;
 3. Interest paid or incurred during the construction or rehabilitation period;
 4. Architectural, engineering, and other professional fees allocable to construction or rehabilitation;
 5. Closing costs for construction, rehabilitation, or mortgage loans;
 6. Recording taxes and filing fees incurred with respect to construction or rehabilitation; and
 7. Finishes and furnishings consistent with the regulations adopted by the Commissioner under this section, lighting, plumbing, electrical wiring, and ventilation.
- (II) "Allowable Costs" does not include:
 1. The cost of telephone systems and computers other than electrical wiring costs;
 2. Legal fees allocable to construction or rehabilitation;
 3. Site costs, including temporary electric wiring, scaffolding, demolition costs, and fencing and security facilities;

4. Finishes or furnishings that are not consistent with the regulations adopted by the Commissioner under this section; or
 5. The cost of purchasing or installing fuel cells.
- (4) "Applicable energy efficiency standards" means ASHRAE/IESNA Standard 90.1-1999, Energy Standard for Buildings Except Low-Rise Residential Buildings, published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers.
- (5) "Base building" means all areas of a building not intended for occupancy by a tenant or owner, including the structural components of the building, exterior walls, floors, windows, roofs, foundations, chimneys and stacks, parking areas, mechanical rooms and mechanical systems, and owner-controlled or operated service spaces, sidewalks, main lobby, shafts and vertical transportation mechanisms, stairways, and corridors.
- (6) "Commissioning" means:
- (I) the testing and fine-tuning of heat, ventilating, and air-conditioning systems and other systems to assure proper functioning and adherence to design criteria; and
 - (II) the preparation of system operation manuals and instruction of maintenance personnel.
- (7) "Credit allowance year" means the later of:
- (I) the taxable year during which:
 1. The property, construction, completion, or rehabilitation on which the credit allowed under this section is based is originally placed in service; or
 2. A fuel cell, wind turbine, or photovoltaic module constitutes a qualifying alternate energy source and is fully operational; or
 - (II) the earliest taxable year for which the credit may be claimed under the initial credit certificate issued under subsection [CERTIFICATION] of this section.
- (8) "Eligible building" means a building located in the state that:
- (I)
 1. Is a building used primarily for nonresidential purposes if the building contains at least 20,000 square feet of interior space;
 2. Is a residential multifamily building with at least 12 dwelling units that contains at least 20,000 square feet of interior space; or
 3. Is any combination of buildings described in item 1 or 2 of this item;
 - (II) in the case of a newly constructed building for which a certificate of occupancy was not issued before [DATE OF IMPLEMENTATION]
 1. Is located on a qualified brownfields site, as defined by the state; or
 - 2.

- a. Is located in a priority funding area as defined by the state; and
 - b. Is not located on wetlands, the alteration of which requires a permit under § 404 of the federal clean water act, 33 U.S.C. § 1344; And
- (III) in the case of the rehabilitation of a building:
 - 1. Is located in a priority funding area as defined by the state or on a qualified brownfields site as defined by the state; or
 - 2. Is not an increase of more than 25% in the square footage of the building.
- (9) "Fuel cell" means a device that produces electricity directly from hydrogen or hydrocarbon fuel through a noncombustive electrochemical process.
- (10) "Green base building" means a base building that is part of an eligible building and meets the requirements set out in subsection (i) of this section.
- (11) "Green whole building" means a building for which the base building is a green base building and all tenant space is green tenant space.
- (12) "Green tenant space" means tenant space in a building if the building is an eligible building and the tenant space meets the requirements of subsection (j) of this section.
- (13) "Incremental cost of building-integrated photovoltaic modules" means:
 - (I) the cost of building-integrated photovoltaic modules and any associated inverter, additional wiring or other electrical equipment for the photovoltaic modules, or additional mounting or structural materials, less the cost of spandrel glass or other building material that would have been used if building-integrated photovoltaic modules were not installed;
 - (II) incremental labor costs properly allocable to on-site preparation, assembly, and original installation of photovoltaic modules; and
- (14) "Qualifying alternate energy sources" means building-integrated and non building-integrated photovoltaic modules, wind turbines, and fuel cells installed to serve the base building or tenant space that:
 - (i) have the capability to monitor their actual power output;
 - (ii) are fully commissioned upon installation, and annually thereafter, to ensure that the systems meet their design specifications; and
 - (iii) in the case of wind turbines, meet any applicable noise and bird protection ordinances.
- (15) "Tenant improvements" means improvements that are necessary or appropriate to support or conduct the business of a tenant or occupying owner.
- (16) "Tenant space" means the portion of a building intended for occupancy by a tenant or occupying owner.
- (17) "economic development area" means an area as defined by the state
- (18) "energy code" means any and all chapters within the State Building Code that cover in whole or in part energy or energy-related issues

Credit Components:

- (A) Green building credit. A taxpayer subject to income tax is eligible for a green building credit against such tax, pursuant to the provisions referenced in subdivision (f) of this section. Provided, however, no credit shall be allowed under this section unless the taxpayer has complied with the applicable requirements of paragraph two of subdivision (d) of this section (relating to reports to [IMPLEMENTING AGENCY]). The amount of the credit shall be the sum of the credit components specified in paragraphs one through seven of this subdivision. Provided, however, the amount of each such credit component shall not exceed the limit set forth in the initial credit component certificate obtained pursuant to subdivision (c) of this section. In the determination of such credit components, no cost paid or incurred by the taxpayer shall be the basis for more than one such component.
 - (B) Credit to successor owner. If a credit is allowed to a building owner pursuant to this subdivision with respect to property, and such property (or an interest therein) is sold, the credit for the period after the sale which would have been allowable under this subdivision to the prior owner had the property not been sold shall be allowable to the new owner. Credit for the year of sale shall be allocated between the parties on the basis of the number of days during such year that the property or interest was held by each.
 - (C) Credit to successor tenant. If a credit is allowed to a tenant pursuant to this subdivision with respect to property, and if such tenancy is terminated but such property remains in use in the building by a successor tenant, the credit for the period after such termination which would have been allowable under this subdivision to the prior tenant had the tenancy not been terminated shall be allowable to the successor tenant. Credit for the year of termination shall be allocated between the parties on the basis of the number of days during such year that the property was used by each.
 - (D) Notwithstanding any other provision of law to the contrary, in the case of allowance of credit under this section to a successor owner or tenant, as provided in subparagraph (B) or (C) of this paragraph, the commissioner shall have the authority to reveal to the successor owner or tenant any information, with respect to the credit of the prior owner or tenant, which is the basis for the denial in whole or in part of the credit claimed by such successor owner or tenant.
- (1) Green whole-building credit component. The green whole-building credit component shall be equal to the applicable percentage of the allowable costs paid or incurred by the taxpayer (whether owner or tenant), for either the construction of a green building or the rehabilitation of a building which is not a green building to be a green building. Provided, however, the credit component shall not exceed the maximum amount specified in the initial credit component certificate. The applicable percentage shall be 1.4 percent,

except that if the building is located in an economic development area, the applicable percentage shall be 1.6 percent. The credit component amount so determined shall be allowed for the credit allowance year, but only if

- (A) the taxpayer has obtained and filed both an initial credit component certificate and an eligibility certificate issued pursuant to subdivision (c) of this section,
- (B) a certificate of occupancy for the building has been issued and (C) where the credit allowance year is a year described in subparagraph (B) of paragraph two-a of subdivision (b) of this section, the green building or rehabilitation remains in service during such year.

Such credit component amount shall be allowed also for each of the next four succeeding taxable years with respect to which the taxpayer has obtained and filed an eligibility certificate pursuant to subdivision [CERTIFICATION] of this section. Provided, further, the allowable costs may not exceed, in the aggregate, one hundred fifty dollars per square foot with respect to the portion of the building which comprises the base building and seventy-five dollars per square foot with respect to the portion of the building which comprises the tenant space.

- (2) Green base building credit component. The green base building credit component shall be equal to the applicable percentage of the allowable costs paid or incurred by the taxpayer, if the owner, for either the construction of a green base building or for the rehabilitation of a base building which is not a green base building to be a green base building. Provided, however, the credit component shall not exceed the maximum amount specified in the initial credit component certificate. The applicable percentage shall be one percent, except that if the building is located in an economic development area, the applicable percentage shall be 1.2 percent. The credit component amount so determined shall be allowed for the credit allowance year, but only if

- (A) the taxpayer has obtained and filed both an initial credit component certificate and an eligibility certificate issued pursuant to subdivision [CERTIFICATION] of this section,
- (B) a certificate of occupancy for the building has been issued and
- (C) where the credit allowance year is a year described in subparagraph (B) of paragraph two-a of subdivision (b) of this section, the green base building or rehabilitation of a base building remains in service during such year.

Such credit component amount shall be allowed also for each of the next four succeeding taxable years with respect to which the taxpayer has obtained and filed an eligibility certificate pursuant to subdivision [CERTIFICATION] of this section. Provided, further, the allowable costs for the base building may not exceed, in the aggregate, one hundred fifty dollars per square foot.

- (3) Green tenant space credit component. The green tenant space credit component shall be equal to the applicable percentage of allowable costs for tenant improvements paid or incurred by the taxpayer (whether owner or tenant) in constructing (including completing) tenant space, or rehabilitating tenant space which is not green tenant space to be green tenant space.

Provided, however, the credit component shall not exceed the maximum amount specified in the initial credit component certificate. The applicable percentage shall be one percent, except that if the building is located in an economic development area the applicable percentage shall be 1.2 percent. Provided, however, that the owner, or a tenant who occupies fewer than ten thousand square feet, shall qualify for such green tenant space credit component only in the event that the base building is a green base building. The credit component amount so determined shall be allowed for the credit allowance year, but only if

- (A) the taxpayer has obtained and filed an initial credit component certificate and an eligibility certificate issued pursuant to subdivision [CERTIFICATION] of this section and
- (B) where the credit allowance year is a year described in subparagraph (B) of paragraph two- a of subdivision (b) of this section, the construction, completion or rehabilitation remains in service during such year.

Such credit component amount shall be allowed also for each of the next four succeeding taxable years with respect to which the taxpayer has obtained and filed an eligibility certificate pursuant to subdivision [CERTIFICATION] of this section. Provided, however, the allowable costs for tenant space shall not exceed, in the aggregate, seventy-five dollars per square foot. In the event that both an owner and tenant incur such costs for tenant space with respect to the same tenant space and such costs in the aggregate exceed seventy five dollars per square foot, the owner shall have priority as to costs constituting the basis for the green tenant space credit component.

- (4) Fuel cell credit component. A fuel cell credit component shall be allowed for the installation of a fuel cell which is a qualifying alternate energy source, installed to serve a green building, green base building or green tenant space. The amount of the credit component shall be six percent of the sum of the capitalized costs paid or incurred by the taxpayer with respect to each fuel cell installed to serve such building or space, including the cost of the foundation or platform and the labor cost associated with installation, such capitalized costs not to exceed one thousand dollars per kilowatt of installed DC rated capacity. Provided, however, the credit component shall not exceed the maximum amount specified in the initial credit component certificate. The fuel cell credit component amount so determined shall be allowed for the credit allowance year, but only if
 - (A) the taxpayer has obtained and filed an initial credit component certificate and an eligibility certificate issued pursuant to subdivision [CERTIFICATION] of this section and
 - (B) where the credit allowance year is a year described in subparagraph (B) of paragraph two- a of subdivision (b) of this section, the fuel cell remains in service during such year.

Such credit component amount shall be allowed also with respect to each of the four taxable years next following during which the fuel cell remains in service. Provided, however, that the amount of any federal, state or local grant

received by the taxpayer and used for the purchase and/or installation of such fuel cell and which was not included in the federal gross income of the taxpayer shall be subtracted from the amount of such cost.

- (5) Photovoltaic module credit component. A photovoltaic module credit component shall be allowed for the installation of photovoltaic modules which constitute a qualifying alternate energy source installed to serve a green building, green base building or green tenant space. The amount of the credit component shall be twenty percent of the incremental cost paid or incurred by the taxpayer for building-integrated photovoltaic modules and five percent of the cost of non-building-integrated photovoltaic modules, in either case such cost not to exceed the product of (i) three dollars and (ii) the number of watts included in the DC rated capacity of the photovoltaic modules. Provided, however, the credit component shall not exceed the maximum amount specified in the initial credit component certificate. The credit component amount so determined shall be allowed for the credit allowance year, but only if
 - (A) the taxpayer has obtained and filed an initial credit component certificate and an eligibility certificate issued pursuant to subdivision (c) of this section and
 - (B) where the credit allowance year is a year described in subparagraph (B) of paragraph two-a of subdivision (b) of this section, the modules remain in service during such year. Such credit amount shall be allowed also for the four taxable years next following during which the modules remain in service. Provided, however, that the amount of any federal, state or local grant received by the taxpayer and used for the purchase and/or installation of such photovoltaic equipment and which was not included in the federal gross income of the taxpayer shall be subtracted from the amount of such cost.
- (6) For the taxable year that is the credit allowance year, an owner or tenant may claim a credit in the amount determined under paragraph (2) of this subsection for the installation of a wind turbine that is a qualifying alternative energy source and is installed to serve a green whole building, green base building, or green tenant space. The amount of the credit allowed under this subsection is 25% of the sum of the capitalized costs paid or incurred by an owner or tenant with respect to each wind turbine installed, including the cost of the foundation or platform and the labor costs associated with installation.

Implementing Regulations

- (A)(1) By regulation, the commissioner shall adopt standards for a building to qualify as a green base building eligible for the tax credits under this section that are consistent with the criteria for green base buildings set forth by the united states green building council or other similar criteria.
- (2) The regulations adopted under this subsection shall provide that the energy use shall be no more than 65% for new construction of a base building, or 75% in the case of rehabilitation of a base building, of the energy use attributable to a

reference building which meets the requirements of applicable energy efficiency standards.

- (B) (1) by regulation, the commissioner shall adopt standards for tenant space to qualify as green tenant space eligible for the tax credits under this section that are consistent with the criteria for green tenant space set forth by the united states green building council or other similar criteria.
- (2) The regulations adopted under this subsection shall provide that the energy use shall be no more than 65% for new construction, or 75% in the case of rehabilitation, of the energy use attributable to a reference building which meets the requirements of applicable energy efficiency standards.

[To the extent that the state already has an updated energy code, another model would be to base the regulations directly on improvements beyond the state energy code. States that have used this model include Massachusetts and New York. Legislation for these states can be found, respectively, at: <http://www.gbreb.com/greenbuildings/Docs/HouseBill.pdf> and <http://www.dec.state.ny.us/website/dar/ood/a11006.pdf>.]

Certification

- (1) INITIAL CREDIT COMPONENT CERTIFICATE. Upon application by a taxpayer, the Commissioner shall issue an initial credit component certificate where the taxpayer has made a showing that the taxpayer is likely within a reasonable time to place in service property which would warrant the allowance of a credit under this section. Such certificate shall state the first taxable year for which the credit may be claimed and an expiration date, and shall apply only to property placed in service by such expiration date. Such expiration date may be extended at the discretion of the Commissioner, in order to avoid unwarranted hardship. Such certificates may be issued in the first four years of implementation. Such certificates shall state the maximum amount of credit component allowable for each of the five taxable years for which the credit component is allowed, under paragraphs two through seven of subdivision (a) of this section.
- (2) INITIAL CREDIT CERTIFICATE shall state the maximum amount of credit allowable in the aggregate for all credits allowed under this section.
- (3) The Commissioner may not issue initial credit certificates, in the aggregate for more than \$25,000,000 worth of credits over the life of the legislation.
- (4) ELIGIBILITY CERTIFICATE. For each taxable year for which a taxpayer claims a credit under this section with respect to a green building, green base building or green tenant space, a fuel cell, or photovoltaic modules, the taxpayer shall obtain from an architect or professional engineer licensed to practice in this state an eligibility certificate. Such certificate shall consist of a certification, under the seal of such architect or engineer, that the building, base building or tenant space with respect to which the credit is claimed is a green building, green base building or green tenant space, respectively, that the fuel cell or photovoltaic modules constitute qualifying

alternate energy sources and remains in service. Such certification shall be made in accordance with the standards and guidelines in effect at the time the property which is the basis for the credit was placed in service. Such certification shall set forth the specific findings upon which the certification was based. The taxpayer shall file such certificate, and the associated initial credit component certificate, with the claim for credit and shall file duplicate copies with [IMPLEMENTING AGENCY]. Such certificate shall include sufficient information to identify each building or space, and such other information as the Commissioner shall prescribe.

- (5) **WRONGFUL CERTIFICATION.** If [IMPLEMENTING AGENCY] has reason to believe that an architect or professional engineer, in making any certification under this subdivision, engaged in professional misconduct, then the Implementing Agency shall report to the [STATE ARCHITECTURAL BOARD]

Record Keeping and Reporting

(1) **Report.** On or before three quarters of completion of the program the Commissioner shall submit a written report regarding the number of certifications and taxpayers claiming the credit provided for under this section; the amount of the credits claimed, the geographical distribution of the credits claimed; and any other such available information the Commissioner may deem meaningful and appropriate. A preliminary version of such report shall be so issued by halfway through implementation. The Commissioner shall ensure that the information is presented and/or classified in a manner consistent with the secrecy requirements of this chapter. The Commissioner shall also make recommendations regarding the establishment of a permanent green building tax credit program. Recommendations may include methods to enhance the effectiveness, simplicity or other aspects of the program. The report shall be submitted to the Governor, the President of the Senate, the Speaker of the Assembly, the Chairman of the Senate Finance Committee and the Chairman of the Assembly Ways and Means Committee.

(2) **RECORD KEEPING.** Each taxpayer shall, for any taxable year for which the green building credit provided for under this section is claimed, maintain records of the following information: (a) annual energy consumption for building, base building or tenant space; (b) annual results of air monitoring; (c) annual confirmation that the building, base building or tenant space continues to meet requirements regarding smoking areas, if provided; (d) tenant guidelines referred to in subparagraph (i) of paragraph nine of subdivision (B) of this section, if applicable; (e) all written notification of tenants and requests to remedy any indoor air quality problems; (f) initial and annual results of validation of performance of photovoltaic modules and fuel cells; and (g) certifications as to off-gassing and other contamination, as prescribed in subclause (iii) of clause (ii) of subparagraph (b) of paragraph nine of subdivision (B) of this section, where applicable.

(3) **FUNDING FOR REGULATIONS AND EDUCATION.** Funding for 2.0 full-time staff positions will be made available to [IMPLEMENTING AGENCY] for completion of the regulations required under this section and for administration of this section. Additional funding of \$150,000 will be made available for statewide educational seminars and other education programs to assist developers, tenants, and any others who may participate in the green building tax credit program.