



## Legislative Fiscal Bureau

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April 19, 2010

TO: Members  
Joint Committee on Finance

FROM: Bob Lang, Director

SUBJECT: 2009 Assembly Bill 843: Building Certifications

Assembly Bill 843 (AB 843), would: (a) establish Building Commission and Department of Administration (DOA) requirements for adherence privately-developed building standards for construction, expansion and remodeling of state facilities; (b) establish municipal government (including school districts) requirements for adherence privately-developed building standards for construction, expansion and remodeling of state facilities; and (c) requiring the Department of Commerce to promulgate rules for public building construction and designs.

Assembly Bill 843 was introduced on March 11, 2010, and referred to the Assembly Committee on Jobs, the Economy and Small Business. On March 31, 2010, Assembly Amendment 1 (AA 1 to AB 843) was introduced; the Committee adopted the amendment (12-0); and the Committee recommended passage of the bill as amended on a vote of 7 to 5. The bill was referred to the Joint Committee on Finance on March 31, 2010. Assembly Amendment 2 (AA 2 to AB 843) was introduced on April 13, 2010.

### **SUMMARY OF BILL**

#### **Requirements Relating to the Building Commission and State Facilities**

Subject to specified certifications by the Department of Administration (DOA), the bill would prohibit the Building Commission, regardless of funding source, from approving the design or construction of any project for: (a) the construction of any building, structure or facility for a board, agency, officer, department, commission, or body corporate, if the building, structure, or facility after construction will contain at least 10,000 gross square feet of conditioned space; or (b) the repair, renewal, renovation, or expansion for any of those entities of any existing building, structure, or facility containing at least 10,000 gross square feet of conditioned space if the project affects more than 50% of the existing of the gross square feet of conditioned space.

This prohibition would not apply if DOA verifies and certifies to the Commission, after reviewing the plans and specifications, all of the following:

a. that the project conforms at a minimum to the Leadership in Energy and Environmental Design (LEED) silver certification requirements;

b. that the energy performance for the project is at least 30% better than the performance standard prescribed by the Department of Commerce;

c. that at least 75% of any unused construction materials and any demolition materials are recycled in the project or transferred to a third party for recycling as part of another construction project for a state agency or a local governmental unit;

d. that the ventilation components conform with standards prescribed by the Department of Commerce, and the chief engineer for the project certifies in writing that no exemptions to conformity have been authorized;

e. that the project has an indoor quality management plan, consistent with standards promulgated by the Department of Commerce, that addresses adherence to the heating, ventilation, and air conditioning performance standards for the project, source control that ensures use of low emission materials and finishes, pathway interruption to prevent migrations of contaminants during the construction process, housekeeping procedures to prevent the spread and growth of contaminants during the construction process, and construction activity scheduling to prevent cross contamination of materials used in the project during the construction process; and

f. that the project upon completion will attain a level of interior water use no greater than 30% below the baseline, as determined by DOA in accordance with the LEED Green Building rating system, assuming that 100% of the indoor plumbing fixtures are in compliance with standards promulgated by the Department of Commerce, based upon the strictest applicable standard under the Uniform Plumbing Codes -- 2006 as promulgated by the International Association of Plumbing and Mechanical Officials or the International Plumbing Codes -- 2006 fixture and fitting performance requirements promulgated by the international Code Council.

The bill would specify that these same requirements would apply to any agreement, regardless of funding source, for the purchase of or for the lease of, or renewal of a lease of, with option to purchase, any building, structure, or facility that is: (a) constructed for occupancy by any of those entities, if the facility will contain at least 10,000 gross square feet of conditioned space; or (b) to be repaired, renewed, renovated, or expanded for any of those entities if the building, structure, or facility contains at least 10,000 gross square feet of conditioned space and the project affects more than 50% of the existing of the gross square feet of conditioned space. In addition, the Commission would have to obtain certification by the U.S. Green Building Council that the building, structure, or facility conforms at a minimum to the requirements for certification at the LEED silver level.

The bill would require the Building Commission to apply all moneys available for its use under the authorized state building program to achieve certification as of January 1, 2015, by the U.S. Green Building Council for not less than 15% of the total gross square footage of conditioned space in buildings, structures, and facilities that are owned or leased by agencies on that date, as determined by DOA, as conforming at a minimum to LEED performance requirements for the operation of existing buildings. The Commission would be further required to apply all moneys available for its use under the authorized state building program to achieve such certification of the percentages of gross square footages and by the dates specified by DOA by rule.

Under the bill, DOA would be required to assess the feasibility of achieving certification by the U.S. Green Building Council (LEED performance requirements) for greater than 15% of the total gross square footage of conditioned space owned or leased by state agencies, (as determined using the agency inventory list that would be required under this bill). The Department would be allowed to specify, by rule, increased levels of certification and the dates in which those increased levels would be achieved. This authority would be allowed between January 1, 2015, and January 1, 2030. The Department, by March 1 of each year, would have to report to the Governor and the Building Commission on percentage level adherence to these certification requirements.

The bill would prohibit the Building Commission from approving the leasing of, or renewal or extension of any lease for, property for use by the state, unless DOA certifies that the energy use intensity for the total property and the annual energy usage for the total property conform to standards promulgated by the Department of Commerce. The bill would require the Commission to require other agencies that have the authority to lease property to certify to the Commission that the property conform to the same standards.

The provisions relating to the Building Commission projects and leases would first apply to projects approved, and to leases that are entered into, renewed, or extended on the bill's effective date.

The bill would require DOA, by March 1 of each year, to report to the Governor and the Building Commission on the level of adherence to each of the Building Commission requirements that became effective in the preceding calendar year.

### **Department of Administration Requirements**

Under current law, DOA is responsible for the operation, maintenance, and repairs at state facilities, including the state capitol building, the executive residence, the light, heat and power plant, the state office buildings and their power plants and all of their connected grounds. The Department, subject to approval by the Governor, is also responsible for the leasing, acquisition, allocation and utilization of all real property by the state, except where such responsibility is otherwise provided by the statutes. The Department must, with the Governor's approval, require physical consolidation of office space used by executive branch agencies with fewer than 50 authorized full-time equivalent (FTE) positions, whenever feasible. The Department must lease or acquire office space for legislative offices or legislative service agencies at the direction of the

Joint Committee on Legislative Organization.

The bill would require DOA, prior to entering, renewing, or extending a lease, to acquire from the prospective lessor a statement on the following: (a) energy use intensity for the total property, measured on a square foot basis and an annual; and (b) annual energy usage for the total property, calculated in accordance with standards promulgated by the Department of Commerce based on Energy Star standards that are consistent with minimum LEED performance requirements for the operation and maintenance of existing buildings. Under the bill, DOA would have to verify this information with the Building Commission before entering, renewing or extending a lease. This provision would apply to contracts that are entered into, renewed, or extended after the effective date of the bill.

Under current law, with some exceptions, DOA must take charge of and supervise all engineering or architectural services or construction work, performed by, or for, state agencies. This does not include engineering, architectural, and construction work of the Department of Transportation or engineering, architectural, and construction work that is performed for non-state agencies (such as Public Service Commission review of power plant siting). The Department must assist agencies in contracting for authorized engineering or architectural services. Currently, DOA must approve the appointment of a chief operating engineer for each state-owned or operated heating, cooling or power plant and pumping station, and ensure that that person applies the proper methods of operating these facilities, including the filing of required reports.

Under the bill, DOA would be required to appoint or approve the appointment of a chief engineer for each major construction project that had to meet energy and environmental design standards specified under this bill.

The bill would define American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standard as standards promulgated by the Department of Commerce based upon American Society of Heating, Refrigerating and Air Conditioning Engineers or its current equivalent as determined by the Department of Commerce. The Society is a nonprofit organization who's stated goal is to "influence the direction of heating, ventilation, air-conditioning and refrigeration (HVAC&R) technology by creating industry standards and recommended procedures and guidelines, developing research and writing technical information."

Under the bill, conditioned space would be defined as space that is designed to have controlled environmental conditions.

The bill would define International Energy Conservation Code (*IECC standards*) as energy efficiency design standards promulgated by the Department of Commerce based on national energy efficiency design standards of the International Energy Conservation Code or their current equivalents.

Under the bill, *LEED Green Building Rating System (USGBC)* would mean the green building rating system of the U.S. Green Building Council designed as the leadership in energy and environmental design system or its current equivalent.

*LEED silver level* would be defined as the performance level designed as the silver level under the LEED Green Building Rating System or its equivalent as determined by the Department of Commerce.

*Minimum LEED performance requirements for the operation and maintenance of existing buildings* would be defined as performance requirements so designated under the LEED Green Building Rating System as prescribed by the U.S. Green Building Council or its equivalent as determined by the Department of Commerce.

The U.S. Green Building Council is a private 501(c)(3) non-profit organization based in Washington D.C.. The Council is intended "to transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life."

The bill would define *major construction project* as a construction project of a state building, structure, or facility that, when completed, will contain at least 10,000 gross square feet of conditioned space. A major construction project would also include expansion, repair, renovation or renewal of an existing building, structure, or facility that contains at least 10,000 gross square feet of conditioned space that affects more than 50% of the existing gross square footage.

The bill would define *zero net energy* as an energy consumption level under which a building, structure, or facility produces as much energy for electricity, heating, and cooling from renewable resources in a calendar year as it consumes during the same period.

Effective with projects in which the design is commenced on the effective date of the bill, DOA would be required to ensure that the plans and specifications for each major construction project conform with LEED silver level certification requirements. Upon completion of a major construction project, DOA would be required to seek LEED silver level certification of by the U.S. Green Building Council. The Department would also be required to ensure that energy performance, recycling of construction and demolition materials, ventilation components, indoor air quality performance, and water usage level for each major construction project conforms to standards established for the Building Commission under the bill.

The bill would require DOA to maintain a current inventory of the location and square footage of the conditioned space in all building, structures, and facilities that are owned or leased for state agency use. The Department would be required to maintain records on whether the building, structures, or facility (or portion thereof) is certified, or eligible for certification under the U.S. Green Building Commission minimum LEED performance standards for the operation and maintenance of existing buildings.

Except for enclosed laboratory space in which ventilation requirements would not permit compliance, the bill would require DOA to ensure each major construction project conforms to the appropriate performance standard, based on the year of the project, as follows:

- For projects that begin on or after the first day of the 7th month after publication but before January 1, 2015, the energy performance shall be at least 30% better than the energy performance under the ASHRAE standard or the IECC standards, whichever is more stringent.
- For projects that begin on or after January 1, 2015, but before January 1, 2020, the performance shall be at least 70% better than the energy performance under the ASHRAE standard or the IECC standards, whichever is more stringent.
- For projects that begin on or after January 1, 2020, but before January 1, 2025, the performance shall be at least 80% better than the energy performance under the ASHRAE standard or the IECC standards, whichever is more stringent.
- For projects that begin on or after January 1, 2025, but before January 1, 2030, the performance shall be at least 90% better than the energy performance under the ASHRAE standard or the IECC standards, whichever is more stringent.
- For projects that begin on or after January 1, 2030, the performance shall be at least 100% better than the energy performance under the ASHRAE standard or the IECC standards, whichever is more stringent and the facility shall consume zero net energy.

## **Commerce**

*General Building and Design Requirements.* Currently, the Department of Commerce (Commerce) is required to promulgate administrative rules for the construction, repair and maintenance of places of employment and public buildings to render such places safe (the state building code). Commerce has promulgated various building codes such as for commercial and multifamily buildings, one- and two-family dwellings, electrical, plumbing, heating, ventilation and air conditioning, and energy conservation.

The bill would authorize Commerce to promulgate rules that establish building and design requirements for public buildings and places of employment that are based upon standard 189.1-2009 developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers in conjunction with the U.S. Green Building Council and the Illuminating Engineering Society or that are based upon the current equivalent of that standard. The Department would be required to review the rules whenever a revision of the standard, or its current equivalent, is published. Commerce would be required to submit to the Legislature proposed rules changing the requirements no later than 18 months after the revision of the standard is published.

*Energy Conservation Code.* Currently, Commerce is required to promulgate administrative rules for an energy conservation code that sets design requirements for construction and equipment for the purpose of energy conservation in public buildings and places of employment. Commerce must consider incorporating into the energy conservation code design requirements from the most current national energy efficiency design standards, including the IECC or another energy efficiency code that is generally accepted and used by engineers and the construction industry.

Commerce is required to review the code whenever a revision of the IECC is published, and submit proposed changes to the Legislature within 18 months after the IECC revision is published, or review the code when three years have passed since the Department last submitted proposed changes to the Legislature, and update the code accordingly.

The bill would require Commerce to incorporate into the energy conservation code a standard that is based upon standard 90.1-2007, or its current equivalent, of ASHRAE and eliminates the requirement to use the IECC or generally accepted standard specified under current law. As with the revision requirements under current law, the bill would require Commerce to update the code whenever the ASHRAE standard is revised, and to submit to the Legislature proposed rule changes no later than 18 months after the date the revised ASHRAE standard is published.

*Ventilation System Code.* Commerce is also currently required to promulgate rules for ventilation systems in public buildings and places of employment. The current requirement does not reference a specific standard. The bill would require Commerce to incorporate a specific ASHRAE standard (standard 62.1-2007, or its current equivalent) into those rules and to update the rules when the standard is revised. Commerce would be required to submit to the Legislature proposed rule changes no later than 18 months after the date the revised ASHRAE standard is published.

*Energy and Design Standards for Certain Buildings.* The bill would require Commerce to promulgate administrative rules for energy performance and design standards in buildings, structures, and facilities which would apply to facilities specified by the bill under the jurisdiction of the Building Commission, DOA, other state agencies, political subdivisions, and school districts.

The Commerce rules would be based on the following specified standards or their current equivalents: (a) LEED silver level for new building construction; (b) minimum LEED performance requirements for the operation and maintenance of existing buildings; (c) Energy Star standards; (d) energy performance standard 90.1-2007 of the American Society of Heating, Refrigerating, and Air Conditioning Engineers; (e) standard 62.1-2004 of the American Society of Heating, Refrigerating, and Air Conditioning Engineers; (f) national energy efficiency design standards of the International Energy Conservation Code adopted the International Code Council -- 2006; (g) the Uniform Plumbing Codes -- 2006 promulgated by the International Association of Plumbing and Mechanical Officials; (h) indoor air quality guidelines for occupied buildings promulgated by the Sheet Metal and Air Conditioning Contractors' National Association, 2nd edition, 2007; (i) the International Plumbing Codes -- 2006 fixture and fitting performance requirements promulgated by the International Code Council.

The bill would include the following definitions related to the standards: (a) "Energy Star Standards" would mean the standards prescribed by the U.S. Environmental Protection Agency for energy use in buildings; (b) "LEED Green Building Rating System" would mean the green building rating system of the U.S. Green Building Council designated as the leadership in energy

and environmental design system or its current equivalent as determined by the Department; (c) “LEED silver level” would mean the performance level designated as the silver level under the LEED Green Building Rating System or its current equivalent as determined by Commerce; (d) “Minimum LEED performance requirements for the operation and maintenance of existing buildings” would mean the performance requirements so designated under the LEED Green Building Rating System, as prescribed by the U.S. Green Building Council, or its current equivalent as determined by the Department; (e) “U.S. Green Building Council” means the United States Green Building Council or any successor organization that is substantially the same organization, as determined by Commerce.

Commerce would be required to review a rule promulgated under this provision whenever a standard upon which the rule is based is revised. The Department would have to complete its review and submit to the Legislature proposed rule changes no later than 18 months after the revision of the referenced standard is published.

The bill would specify that, except for rules promulgated under the energy and design standards promulgated by Commerce under the bill, the current exemption from building codes promulgated by Commerce would continue to apply to buildings located on research or laboratory farms of public universities or other state institutions and used primarily for housing livestock or other agricultural purposes. The bill would also specify that, except for rules promulgated under the energy and design standards, the current exemption from standards, rules, codes or regulations of Commerce would continue to apply to construction undertaken by the state for the purpose of renovation of the State Capitol building.

*One- and Two-Family Dwelling Code.* Currently, Commerce is required to promulgate rules for a one- and two-family dwelling code. A city, village, town, or county may exercise jurisdiction over the construction of new dwellings by passing an ordinance, provided that the ordinance meets the requirements of the state one- and two-family dwelling code.

The bill would authorize a local ordinance to exceed the requirements of the state energy conservation code as they relate to the construction of new one- and two-family dwellings. This provision would be deleted by Assembly Amendment 1 to AB 843.

*Graywater Systems.* The bill would require Commerce to promulgate rules that establish standards for the installation of graywater and rainwater systems and that authorize the reuse of graywater and rainwater within the building, or on the property surrounding the building, from which the graywater or rainwater was generated. The bill would define graywater as wastewater generated from the use of a clothes washer, sink, shower, or bathtub. A graywater system would mean a system for the collection and use of graywater. A rainwater system would mean a system for the collection and reuse of rainwater generated from building roofs.

### **School District and Local Government Facilities**

The bill would require each school board and any city, village, town, or county, to ensure



that the plans and specifications for each major construction project conform at a minimum to the requirements for certification at the LEED silver level. Each school board or political subdivision would be required at project completion to obtain certification from the U.S Green Building Council that the project conforms to that level. The bill would specify that for each major construction project, each school board or political subdivision would have to comply with the energy performance, use and disposal of construction and demolition materials, ventilation components, indoor air quality performance, and water usage level standards that would be established under the bill for Building Commission projects. This provision would first apply to school district projects for which design is commenced on the bill's effective date, and to political subdivision projects for which a request for proposal is issued on the bill's effective date.

The bill would establish a sum sufficient appropriation under the Department of Public Instruction (DPI) as a categorical aid for school districts. The bill would require DPI to pay necessary LEED registration and certification fees for a major construction project on behalf of a school district.

### **Assembly Amendment 1**

*Administration.* Under the bill, certain construction projects would have to meet LEED's silver level rating or its current equivalent as determined by the Department of Commerce. The amendment would add, "or an equivalent performance level under an equivalent rating system." The amendment would specify, in defining the silver rating system, that DOA must recognize the use of wood-based materials and products certified by the Forest Stewardship Council, American Tree Farm System, or Sustainable Forest Initiative programs.

*School District and Local Government Facilities.* Assembly Amendment 1 would specify that the proposed requirements under the bill would not apply to repair or renewal of an existing building for school districts and political subdivisions. In addition, AA 1 would provide that a building expansion by those entities would be subject to the proposed requirements under the bill only if it adds conditioned space equal in size to at least 50% of the gross square feet of the existing building, rather than adding at least 10,000 gross square feet as under the original bill. Finally, AA 1 would delete the proposed requirement that these entities obtain certification that the project conforms to the LEED silver standard. The plans and specifications would still have to conform with those requirements, but the completed project would not have to be certified under AA 1.

*DPI Categorical Aid.* Assembly Amendment 1 would delete the sum sufficient appropriation and relating statutory provisions for aid to school districts to pay necessary LEED registration and certification fees.

*Commerce.* Assembly Amendment 1 would specify that when Commerce promulgates rules for energy performance and environmental design standards for certain public buildings, it must recognize the use of wood-based materials and products certified by the Forest Stewardship Council, American Tree Farm System, or Sustainable Forest Initiative programs.

The Amendment would delete the AB 843 authority of local dwelling code ordinances to exceed the requirements of the state one- and two-family dwelling code that relate to energy conservation in the construction of new dwellings.

### **Assembly Amendment 2**

*Building Commission.* The bill would establish requirements for the Building Commission in approving building construction projects, including requirements that the project upon completion attain a level of interior water use no greater than 30% below the baseline, as determined by DOA in accordance with the LEED Green Building rating system, assuming that 100% of the indoor plumbing fixtures are in compliance with standards promulgated by the Department of Commerce, based upon the strictest applicable standard under the Uniform Plumbing Codes -- 2006 as promulgated by the International Association of Plumbing and Mechanical Officials or the International Plumbing Codes -- 2006 fixture and fitting performance requirements promulgated by the international Code Council. Assembly Amendment 2 would delete reference to specific standards of the International Association of Plumbing and Mechanical Officials and the International Code Council.

*Commerce.* Assembly Amendment 2 would specify that if Commerce promulgates rules that establish building and design requirements for public buildings and places of employment, the standards could be based on either the International Green Construction Code, Public Version 1.0, or the standards specified in the original bill (standard 189.1-2009 developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers in conjunction with the U.S. Green Building Council and the Illuminating Engineering Society, or the current equivalent of that standard), or could be based on either of their current equivalents. Assembly Amendment 2 would also specify that the rules could be based on the current equivalent of the code (in addition to standard). If the International Green Construction Code, Public Version 1.0, or its current equivalent, is revised, the review and updating requirements of the original bill would apply.

Assembly Amendment 2 would specify that, in addition to the requirement that when Commerce incorporates into the energy conservation code a standard based upon standard 90.1-2007, or its current equivalent of ASHRAE, it could instead base the code upon energy efficiency design requirements from IECC, or its current equivalent, whichever standard or design requirement is more stringent. If a revision to the IECC, or its current equivalent, is published, the same review and updating requirements of the original bill would apply.

### **FISCAL EFFECT**

#### **Administration**

The bill does not provide any new funding, but does authorize the Building Commission to apply "all moneys available" for achieving LEED performance standards.

Also, under current law, DOA has the authority to assess agencies for the costs of state-

owned and privately-owned facilities for agency use. To the extent that, in obtaining facilities for agency use (construction, renovation, expansion or private leasing), that least cost alternatives are rejected in order to meet the energy performance requirements of the bill there would be additional costs to state agencies. To the extent that meeting the requirements of this bill resulted in cost savings or was cost neutral, current law procedures could be used. This, however, assumes that accurate and detailed information is available prior to entering into a lease or constructing a facility.

For the design and construction costs of major construction projects, DOA states that the actual costs of meeting the LEED standards would vary depending on the additional work that would be required in meeting those standards. The Department also estimates that it would cost between \$100,000 and \$250,000 to document and obtain the actual certification, depending on the size and complexity of a project.

The Department of Administration maintains 550 leases for state agencies, which would become subject to the energy reporting requirements under the bill. The Department estimates that 75 of these leases and approximately 61% of the leased space, would additionally be subject to LEED silver certification standards. The Department states that, because of the bill's requirement that lessor's disclose of energy use and data needed for the LEED certification process, DOA would need 1.0 FTE, at a cost of \$76,100 annually, to collect information from prospective landlords about energy use, and prepare that information for the Building Commission. This position would also work on reports to the Governor and the Building Commission on progress being made in conforming to the requirements of this bill. The Department also states that there would be incremental costs to lessors in maintaining LEED silver certification, which would be reflected in additional agency rent costs. The Department indicates, however, that the amount of this incremental cost is indeterminate. Finally, the Department states that there would be indeterminate costs in relocating agency staff that are at facilities in which the landlord could not or would not chose to meet the LEED standards.

## **Commerce**

Commerce submitted a fiscal note indicating the Department anticipates it would absorb the costs of updating codes related to energy conservation, heating, ventilation and air conditioning, and reuse of graywater and rainwater. The Department anticipates the required review and updating of these rules would be incorporated into currently scheduled administrative rule reviews.

Commerce also estimated a workload of approximately 400 hours associated with the promulgation of rules regarding energy standards for state-owned or operated structures. Commerce estimated a one-time cost for this workload of \$29,700, which would be absorbed within existing revenues of the Department. Work on rule promulgation would be accomplished by the Safety and Buildings Division, which is funded from program revenues from a variety of plan review, permit and inspection fees.

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