

BUILDING STANDARDS COMMISSION

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TO: Green Building Committee

FROM: David Walls, Executive Director

DATE: 5-15-07

SUBJECT: Green Building Standards

Summary

Since he has been in office, Governor Schwarzenegger has issued two executive orders relating to the efficiency of buildings in California. In 2004, Executive Order S-20-04 created the “Green Building Action Team” to establish efficiency measures for state buildings. In 2005, Executive Order S-03-05 established the “Climate Action Team” and called for an overall reduction in green house gas emissions in California. Under the guidance of the Green Building Action Team, the Department of General Services established green building policies and recommendations for the maintenance and use of existing state buildings as well as construction standards for new state buildings.

For many buildings, Title 24 already has many efficiency standards that, if developed today, would be considered green building standards. With these standards California has been able to reduce energy usage significantly since 1980. However, reports show that buildings continue to be a large source of energy consumption and they emit large amounts of CO₂ into the environment. These statistics emphasize the impact inefficient buildings have on the environment and the need to design and construct buildings more efficiently. In addition to new construction, the standards must include measures to improve the efficient use of existing buildings. The development of improved building standards within California’s Title 24 building code is essential in the efforts to reduce greenhouse gas emissions.

California Building Standards Commission (CBSC) has several options available for the development of green building standards that will address building efficiency from initial design and construction to the deconstruction or removal of the structure. The standards developed must include items that have typically not been addressed within Title 24. Examples of these standards includes the design of building irrigation systems, the use of recycled construction material and construction material with low volatile organic compounds (VOC), and methods for the deconstruction and recycling of the material.

CBSC has the opportunity, along with other state agencies, to develop building standards that will establish California as a leader in the efforts to reduce green house gas emissions from structures. Implementation of these standards will assist in the efforts to meet the Governors reduction targets established in Executive Order S-03-05.

Discussion

Green Building Standards

Green building, which may also be known as sustainable building or environmental building, is the practice of increasing the efficiency with which buildings and their sites use energy, water, and materials, and reducing building impacts on human health and the environment. Efficiency is accomplished through better siting, design, construction, operation, maintenance, and removal – the complete building life cycle.

Generally, there are five accepted principles of green (sustainable) buildings. These are site selection, resource efficiency, energy conservation, water conservation, indoor environmental quality. Of these five principles, energy and water conservation have been the primary focus of current Title 24 standards.

The development of green building standards in California will lead to substantial environmental benefits through a reduction in the use of less energy and water, improved public and building occupant health due to improved indoor air quality, and overall reduced environmental impacts. A reduction in energy and water usage will also benefit both businesses and homeowners in reduced monthly operating costs.

Following is a list of several organizations that have published guidelines on green buildings:

- (1) The United States Green Building Council's Leadership in Energy and Environmental Design (LEED) for Homes rating system.
- (2) The 2005 Build It Green "New Home Construction Green Building Guidelines" and "Multifamily Green Building Guidelines."
- (3) The EarthCraft House program of Atlanta, Georgia.
- (4) The Built Green program of the Seattle Master Builders.
- (5) The Model Green Home Building Guidelines of the National Association of Home Builders (NAHB).
- (6) California Green Builder Program of the California Building Industry Association (CBIA)

Statistics

In 2005, California had approximately 12.9 million existing housing units and over 211,000 new units were constructed. In 2003, construction investment in California for new residential housing totaled \$34 billion. While residential housing is a significant economic force, the construction of a 2,000 square foot home generates approximately 3 tons of waste, California residences cumulatively use 5.6 million acre-feet of applied water annually, and the residential sector accounts for roughly 31% of the electricity consumed in the state.

The commercial building sector in California is responsible for 48 percent of all energy consumption and greenhouse gas emissions in the state annually; globally, the percentage is greater. Green building practices would benefit the state in reduced energy and resource use and reduced green house gas emissions. These practices also benefit property owners with reduced long-term costs for operating their buildings. If California is resolute to achieving the environmental benefits of green buildings, it is imperative that something change about the way in which commercial buildings are designed and constructed in this state.

Statistics for Buildings and Climate Change in U.S.: (Source USGBC)

- Buildings Account for 38% of CO2 emissions in the United States —more than either the transportation or industrial sectors
- Over the next 25 years, CO2 emissions from buildings are projected to grow faster than any other sector, with emissions from commercial buildings projected to grow the fastest—1.8% a year through 2030
- Buildings consume 70% of the electricity load in the U.S.
- Buildings have a lifespan of 50-100 years during which they continually consume energy and produce CO2 emissions. If half of new commercial buildings were built to use 50% less energy, it would save over 6 million metric tons of CO2 annually for the life of the buildings—the equivalent of taking more than 1 million cars off the road every year
- The U.S. population and economy are projected to grow significantly over the coming decades, increasing the need for new buildings - to meet this demand, approximately 15 million new buildings are projected to be constructed by 2015
- Building green is one of the best strategies for meeting the challenge of climate change because the technology to make substantial reductions in energy and CO2 emissions already exists.
- Modest investments in energy-saving and other climate-friendly technologies can yield buildings and communities that are environmentally responsible, profitable and healthier places to live and work, and that contribute to reducing CO2 emissions

Current Law

The Building Standards Law, Health and Safety Code (HSC) Section 18901 et. al., establishes the authority for the Building Standards Commission (CBSC) to develop and adopt building standards for certain occupancies, to adopt standards developed and proposed to CBSC by several other agencies, and to approve building standards adopted by several other agencies. All building standards must be adopted and/or approved in accordance with HSC, Section 18930, also known as the 9-point criteria.

With few exceptions, the Building Standards Law requires all building standards to be submitted to the CBSC. Building standards and the exceptions are defined in HSC 18909. Because “Green building standards” are not specifically defined or listed in the Building Standards Law, they fall into the following definition published in HSC, Section 18909.

18909. (a) *"Building standard" means any rule, regulation, order, or other requirement, including any amendment or repeal of that requirement, that specifically regulates, requires, or forbids the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building, structure, factory-built housing, or other improvement to real property, including fixtures therein, and as determined by the commission.*

(b) *Except as provided in subdivision (d), "building standard" includes architectural and design functions of a building or structure, including, but not limited to, number and location of doors, windows, and other openings, stress or loading characteristics of materials, and methods of fabrication, clearances, and other functions.*

(c) *"Building standard" includes a regulation or rule relating to the implementation or enforcement of a building standard not otherwise governed*

by statute, but does not include the adoption of procedural ordinances by a city or other public agency relating to civil, administrative, or criminal procedures and remedies available for enforcing code violations.

For the publication of the codes, the Building Standards Law, HSC Section 18931(b), requires the CBSC to publish all of the building standards into one code.

18931. (b) *Codify, including publish, all building standards of adopting agencies or state agencies that propose the building standards and statutes defining building standards into one California Building Standards Code.*

Options For Consideration

In the Governor Schwarzenegger's veto message of AB 1337 (Ruskin, Lieu/2006), the Governor stated that the Building Standards Commission is the appropriate agency to develop green building standards. With the recent adoption of the 2007 California Building Standards Codes, the California Building Standards Commission and other agencies have the opportunity to establish green building efficiency standards for the life-cycle of buildings that will reduce the emissions of greenhouse gases. Development of green building standards and a Green Building Standards Code will help further the Governor's initiative for California to be the leader in the efforts to reduce greenhouse gases.

The publication requirements in statute leave few options under current law. The building standards must be published within the California Building Standards Code. This does not permit a separate publication apart from Title 24.

The following is a list of possible options available for the development and publication of green building standards.

Option 1:

- **CBSC establish a "Green Building Standards Code" utilizing Part 11 of Title 24, which is currently vacant.**
- **The Commission to direct CBSC staff, to the extent feasible, to develop green building standards for new construction of buildings under its authority and submit these standards for adoption during the 2007 annual code adoption cycle, slated to begin September 28. CBSC staff to develop green building standards for existing buildings and submit them for adoption in the next annual code adoption cycle following the 2007 cycle.**
- **CBSC to establish a focus group to assist in the development of the green building standards.**
- **Utilize existing green building standards, best practices, guidelines, or other published material in the development of the green building standards for California.**
- **The green building standards shall be voluntary or mandatory, however, due to time availability; the green building standards developed for the 2007 code adoption cycle shall primarily be voluntary.**
- **CBSC request and encourage the Department of Housing and Community Development (HCD), the Division of State Architect (DSA), and the Office of Statewide Health Planning and Development (OSHPD), to develop green building standards for new construction of buildings under their respective**

authority and submit these standards for adoption during the 2007 annual code adoption cycle, slated to begin September 28.

- Request agencies that are unable to complete green building standards by the submittal deadline of the 2007 code adoption cycle to submit them in the following code adoption cycle.
- Publish the adopted green building standards in Part 11.

Pro:

- This option establishes green building standards for new construction with an effective date on or before January 2009.
- This option would establish a “Code” dedicated to green building standards.
- This option would save time and resources by utilizing existing publications in the development of the California standards.
- Part 11 could be published online, which would increase the availability to the public.

Con

- This option would require agencies to dedicate a significant amount of resources to develop the green building standards in the 2007 code adoption cycle.
- The initial submittals in the 2007 cycle would only apply to new construction.
- Currently CBSC does not have a publication contract in place for Part 11.

Option 2:

- **CBSC establish an appendix titled “Green Building Standards” utilizing Part 2 of Title 24, which is currently the California Building Code.**
- **The Commission to direct CBSC staff, to the extent feasible, to develop green building standards for new construction of buildings under its authority and submit these standards for adoption during the 2007 annual code adoption cycle, slated to begin September 28. CBSC staff to develop green building standards for existing buildings and submit them for adoption in the next annual code adoption cycle following the 2007 cycle.**
- **CBSC to establish a focus group to assist in the development of the green building standards.**
- **Utilize existing green building standards, best practices, guidelines, or other published material in the development of the green building standards for California.**
- **The green building standards shall be voluntary or mandatory, however, due to time availability; the green building standards developed for the 2007 code adoption cycle shall primarily be voluntary.**
- **CBSC to request and encourage the Department of Housing and Community Development (HCD), the Division of State Architect (DSA), and the Office of Statewide Health Planning and Development (OSHPD), to develop green building standards for new construction of buildings under their respective authorities and submit these standards for adoption during the 2007 annual code adoption cycle, slated to begin September 28.**

- **Request agencies that are unable to complete green building standards by the submittal deadline of the 2007 code adoption cycle to submit them in the next annual code adoption cycle.**
- **Publish the adopted building standards in the new appendix within Part 2.**

Pro:

- This option would have green building standards effective by January 2009.
- This option would establish an appendix chapter dedicated to green building standards and add it to the building code making it available to owners of the building code.
- This option would save resources and time by utilizing existing publications in the development of the California standards.
- CBSC will not have to negotiate a new publication contract.

Con

- This option would require agencies to dedicate a significant amount of resources to develop the green building standards in the 2007 code adoption cycle.
- The initial submittals in the 2007 cycle would only apply to new construction.
- An appendix chapter dedicated to green building standards within the building code could be difficult to locate in an already large code.

Option 3:

- **The Commission directs CBSC staff to develop green building standards for new construction and existing buildings and submit them for adoption during the next annual code adoption cycle following the 2007 cycle.**
- **CBSC to request and encourage the HCD, DSA, OSHPD, to develop green building standards for new construction and existing buildings for structures under their respective authorities and submit these standards for adoption during the next annual code adoption cycle following the 2007 cycle.**
- **CBSC to establish location for the placement of the standards within Title 24 at a later date.**

Pro:

- This option would allow for a more time and resources to develop standards for new and existing structures that would be effective at the same time.
- This option would most likely coordinate the green building standards with the adoption of the 2010 California Codes.

Con

- This option would delay the initial application of green building standards to certain new buildings constructed in California.
- A delay in the adoption of these standards would permit the construction of a significant amount of less efficient structures

Effect

If option 1 or 2 is chosen, the green building standards will be developed and proposed for adoption in September. The development of the regulations will take place at the same time the proposed legislative Bills (AB 1058, AB 888, and AB 35) are being considered for approval by the legislature. Each of these proposed bills, as currently amended, would establish the authority for the development and adoption of green building standards by agencies other than CBSC.

If these Bills become chaptered, the work completed by the CBSC would be available to the other agencies to use if they choose to do so. However, each of these bills places the effective date of these standards in January 2012/2013.

Background

Executive Order D-16-00

In Executive Order D-16-00, adopted in August of 2000, the Governor directed state agencies to improve energy efficiency in all State buildings. Further, it directs the Secretary for State and Consumer Services Agency to include sustainable building practices into plans for all new state building projects. They include measures to improve the energy efficiency of lighting, windows, and heating and cooling systems.

Executive Order S-20-04

In Executive Order S-20-04, adopted in July of 2004, the Governor committed the state to actively reducing the state's energy usage by constructing, retrofitting, and operating state buildings in an energy-efficient manner, including implementing the measures identified in the Green Building Action Plan. The Action Plan established the Green Action Team to oversee and direct progress toward the goals of the Executive Order.

The Action Plan describes the actions that support the Executive Order including recommendations for any additional actions, mandates or legislation that may be warranted to reduce grid-based energy purchases. As an expert in materials and waste diversion, the California Integrated Waste Management Board supports the Cal/EPA Secretary who is a member of the Green Action Team. Early in the state's green building journey, the California Integrated Waste Management Board acted to fill the leadership role in green building because there were no other viable entities.

Executive Order S-3-05

The Governor acknowledged climate change as a threat to the environment and committed the state to taking action to address this issue in signing Executive Order S-3-05. The order calls for a reduction of greenhouse gas emissions to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050.

The Governor also established the Climate Action Team, headed by the Secretary for Environmental Protection, to implement global warming emission reduction programs and to report on the progress made toward meeting the statewide greenhouse gas targets that were established in the order. The Climate Action Team's draft report, Climate Action Team Report to the Governor and the Legislature, identifies strategies to reduce greenhouse gas

emissions, which include continued implementation of the Green Building Initiative and energy efficiency standards for state buildings.

State of the State Address

Governor Schwarzenegger's comments from the State of the State Address in January 2007:

"Now, in addition to addressing our infrastructure last year, the legislature joined with me in passing the historic global warming measure that caps greenhouse gas emissions.

We hear so much about climate change. One area where we definitely need the climate to change is the national government's attitude about global warming. It would not act so California did. California has taken the leadership in moving the entire country beyond debate and denial... to action. As California goes, so goes the rest of the nation.

So, I ask you to appropriate the funds to implement this global warming legislation, so that we can become part of the world market that is already trading credits for the reduction of greenhouse gases.

I also ask you to work with me on another environmental first. I propose that California be the first in the world to develop a low carbon fuel standard that leads us away from fossil fuels. And let us use the freedom and the flexibility of the market to accomplish it. Let us blaze the way, for the U.S. and for China and for the rest of the world. Our cars have been running on dirty fuel for too long. Our country has been dependent on foreign oil for too long.

So, I ask you to set to motion the means to free ourselves from oil and from OPEC.

I ask you to encourage the free market to overthrow the old order.

California has the muscle to bring about such change. I say use it."

Legislative History

In 1991, Assembly Member Speier introduced AB 1723 (Stats. 1991, c. 962), which required all public buildings which began construction after January 1, 1993, to be models of energy efficiency. The Department of General Services, Division of the State Architect is directed to consult with the California Energy Commission to determine which energy efficiency measures, materials, and devices are feasible and cost-effective over the life of the building; to date, the California Energy Commission has not been contacted regarding this mandate.

Also, in 1991, Senator Russell introduced SB 1206 (Stats. 1991, c. 1121), which required the Department of General Services to develop a multi-year plan with the goal of exploring all practicable and cost-effective, energy efficiency measures in state facilities. The plan was to be developed in consultation with the California Energy Commission and other state agencies, and updated biennially. To date, the Department of General Services has not developed this plan. This bill also required the Department of General Services, or each state agency having jurisdiction, to ensure that all new state buildings are designed and constructed to meet at least the minimum energy efficiencies specified in standards adopted by the Energy Commission. Because there was no accountability mechanism in this requirement, there is no means of verifying that new state buildings satisfy the minimum

requirements of the energy efficiency standards adopted by the California Energy Commission and incorporated in the California Building Standards Code.

Senator Bowen introduced AB 2432 (1998), SB 280 (1999), and SB 1815 (2004) that, with the exception of a few minor technical provisions, contained almost identical energy efficiency and green building standards language. Governor Wilson vetoed AB 2432 stating the bill was overly prescriptive and would attempt to drive the state in an emerging market. The veto message read as follows:

AB 2432 would require all new State public building for which design and construction begins after January 1, 2000, except publicly-funded schools, colleges, and universities, to exceed the minimum building energy-efficiency standards mandated by the California Building Code. This bill would require all State office buildings for which construction begins after June 30, 2000, that are used in whole or in part as State offices, to follow "green" building standards and would require the California Integrated Waste Management Board to create regulations for these buildings by January 1, 2000. This bill would also require that all current State buildings, except for public school, college, and university buildings, when renovated or remodeled to be retrofitted with all energy-efficiency measures, materials, and devices that are feasible and cost-effective.

In 1994, I issued Executive Order W-83-94, which addressed energy-efficiency issues. I directed State agencies to incorporate practices and technologies in public construction and building retrofitting in order to reduce the long-term energy costs of public works projects. In accordance with this executive order, State agencies now incorporate energy-efficient technologies along with environmentally-friendly practices in construction and renovation when it is feasible, cost effective, and consistent with good design. Enactment of these standards has already led to substantial energy saving, benefiting both the taxpayer and the environment.

This Administration offered to assist the author in creating a bill that would augment the current Administration practice of designing and building State offices that are models of energy efficiency. Unfortunately, the proposed amendments were rejected by the author. This bill is overly prescriptive and attempts to have the State drive an emerging market. Governments have failed, on many occasions, to identify and incorporate, much less prescribe, the correct state-of-the-art technologies. If energy-efficient technology and know-how warrants more attention, market forces in the private sector are more likely to successfully identify and develop them; government fiat is unlikely to do so.

Governor Davis vetoed SB 280 stating that since he issued Executive Order D-16-00, which directs state agencies to improve energy efficiency in all state buildings, the bill was unnecessary. The veto message read as follows:

This bill would require State buildings to exceed existing minimum energy efficiency standards, and direct the Integrated Waste Management Board to

adopt more comprehensive "green" building standards that would apply to State buildings constructed after July 1, 2003.

This bill is unnecessary. In early August, I issued Executive Order D-16-00 that directs the Secretary of State and Consumer Services Agency to include sustainable building practices into the plans for all new State buildings. The order establishes the goal that State buildings become the model of energy, water, and materials efficiency while providing healthy, productive and comfortable indoor environments and long term benefits to Californians.

Governor Schwarzenegger vetoed SB 1851 stating that he already had appointed a working group on green buildings and the bill was similar to an executive order passed in the prior Administration, which directed all state agencies to improve energy efficiency in all state buildings. The veto message read as follows:

This bill requires new state buildings to exceed current energy efficiency standards and be constructed and/or renovated to incorporate green building elements that are cost-effective.

Early in my Administration, I directed Secretary Tamminen to establish a working group to develop green building bank initiatives for both public and private buildings. Members of the working group include public sector decision makers, commercial real estate business owners and managers, energy experts and financial managers. The group is currently developing recommendations for a comprehensive program to dramatically advance energy conservation as well as incorporate other green building principles into commercial buildings.

Additionally, this bill is similar to the executive order passed in the prior administration which directed all state agencies to improve energy efficiency in all state buildings. This order has not been rescinded and is still in effect. Since this bill would codify much of an existing executive order, it would not improve upon existing efforts to increase adoption of sustainable building practices in California.

In 2005, Assembly Member Ruskin introduced AB 1337, which was virtually the identical bill to AB 35 introduced by Assembly Member Ruskin this session. The bill was vetoed by the Governor, stating the following:

This bill requires the Integrated Waste Management Board to develop regulations for green building standards for the construction and renovation of state buildings. The bill also mandates that all state buildings be designed and operated in accordance with the regulations.

In California, building standards are developed by the California Building Standards Commission. They prescribe how State building standards are written and promulgated in a public and participatory manner. The California Integrated Waste Management Board's expertise is in waste management and reduction and they have done excellent work in identifying new uses in building products for recycled material. However, the Board does not have the expertise in building standards, public safety, building design

and construction, fire codes and public process to ensure the standards are developed in an appropriate manner.

Also, in 2005, Assembly Member Hancock introduced AB 315, which would have required the State Allocation Board, by July 1, 2007, to adopt regulations to ensure that design standards for new school facilities or modernized projects built with state funds are in accordance with, among other requirements, the minimum design and construction criteria in the Collaborative for High Performance Schools Best Practices Manual. According to the author's office, this bill was dropped.

In 2006, Assembly Member Lieu introduced AB 2160 (Stats. 2006, c. 742), which requires the Sustainable Building Task Force and Technical Group, in consultation with the California Energy Commission, Department of General Services, and the Department of Finance, to define a life-cycle cost assessment methodology that shall be used to evaluate the cost effectiveness of state building design and construction decisions and their impact over the life of a building.

Also, in 2006, Assembly Member Lieu introduced AB 2880, which would have required the California Integrated Waste Management Board, by January 1, 2008, in consultation with the California Energy Commission and other relevant state agencies, to gather, analyze, and make available green buildings information available on the Internet. AB 2880 died in Senate Appropriations.

Additionally, in 2006, Assembly Member Laird introduced AB 2928, which would have directed the California Integrated Waste Management Board, on or before January 1, 2008, to (1) develop, adopt, and make available voluntary green building guidelines for residential home construction, (2) adopt and make available to local agencies information on promoting the use of the guidelines, and (3) authorize the Board to provide technical assistance and training to local agencies. AB 2928 died in the Senate.

VETO

In the prior session, Governor Schwarzenegger vetoed AB 1337 (Ruskin, Lieu), (this bill is very similar to AB 35, 2007), which would have had the California Integrated Waste Management Board, which is in the Environmental Protection Agency, adopting regulations for green building standards after consulting with appropriate state agencies, the building construction industry, recognized environmental advocacy groups, the League of California Cities, the California State Association of Counties, and other interested organizations and the public. The veto message stated, "...The California Integrated Waste Management Board's expertise is in waste management and reduction The Board does not have the expertise in building standards, public safety, building design and construction, fire codes and public processes to ensure that the standards are developed in an appropriate manner." This message clearly indicates the Administration's point of view, which is that green building measures should come from the California Building Standards Commission.

Existing Law

Existing law, under the California Integrated Waste Management Act of 1989, contains requirements for recycling certain types of materials, provides programs for recycling at certain types of facilities, and requires model ordinances for certain matters such as adequate areas for collection and loading of recyclable materials.

California Integrated Waste Management Board

The California Integrated Waste Management Board's Green Building program began with construction and demolition waste diversion. Construction and demolition waste diversion has been a priority of the Board since the first Market Development Plan was developed in 1993. The Green Building program was a natural progression from these Construction and demolition activities.

The program was established in April 1999 when the Board approved a conceptual plan on its role in Sustainable Building activities. In September 1999, the Board approved an implementation plan. These efforts were formalized in 2000 by Governor Davis' Executive Order D-16-00, which established the state's sustainable building goal "to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive, and comfortable indoor environments and long-term benefits to Californians."

In December 2004, Governor Schwarzenegger established green building as a priority for his administration with Executive Order S-20-04. Schwarzenegger's Green Building Executive Order requires state-owned facilities to be designed, constructed, operated, and renovated as "LEED Silver" or higher certified buildings. LEED is a rating system developed by the U.S. Green Building Council that stands for Leadership in Energy and Environmental Design.

The Executive Order created a cabinet-level Green Action Team, led by the State and Consumer Services Agency, to champion and monitor progress. Since the Department of General Services is the lead agency responsible for siting, designing, constructing, leasing, operating and maintaining state buildings, the Department of General Services implements the Executive Order into state-owned facilities. The Board provides technical assistance in the area of materials and resources.

The Board has identified sustainability as a goal, and its Sustainable Building program has been working to implement that goal into the built environment. This includes:

- The Sustainable Building program has developed and provided sustainable building trainings for state agencies.
- The California Integrated Waste Management Board funded a *Building Materials Emission Study* to identify the chemical emissions from recycled content and standard building materials.
- The Board has offered various grants, contracts, and interagency agreements with various entities, including several state agencies to fund many sustainable building initiatives, from program development to product placement.
- The Board's program delivers technical assistance to interested parties, including the Capitol East End Complex Block 225 that earned an LEED Gold rating.

Department of General Services

The Department of General Services is working to incorporate energy efficiency provisions outlined under existing law into new and retrofitted building projects to achieve the highest level of energy efficiency and to realize cost savings, while mitigating the impacts of construction on the environment. The Department has also been working to incorporate

sustainable building measures that AB 1337 addresses, as evidenced by the recent LEED Silver certification of the Capitol East End Office complex and the Caltrans District 7 Office building. These accomplishments occurred without prescriptive legislation.

In 2004, Governor Schwarzenegger issued Executive Order S-20-04, which established state sustainable building goals. Since the signing of the Executive Order, the Department of General Services and other state agencies have been integrating sustainable design practices into the construction of the state's facilities. For example:

- Thirteen capital outlay projects currently underway will receive LEED Silver certification;
- The California Energy Commission will produce an energy benchmarking methodology by the end of the year. In the meantime, the Department of General Services and other departments including the Department of Transportation, the Department of Corrections and Rehabilitation, and the Department of Mental Health have benchmarked their buildings using the U.S. Environmental Protection Agency's benchmarking tool;
- The Department of General Services and the Department of Finance have reached an agreement that all new Capital Outlay Budget Packages will include LEED Silver certification as part of their basic scope;
- Block 225, the Department of Education's Headquarters, has received LEED certification in its Existing Building program at the Platinum (highest) level. The Department of General Services is working on measures that will allow all of the buildings it owns or manages to receive Existing Building certification; and
- During 2006, 27 buildings will undergo retro-commissioning, an engineering analysis that maximizes a building's operations. An additional 25 buildings will receive retro-commissioning services during 2007.

Sustainable Building Task Force

The Sustainable Building Task Force was a partnership of more than 40 governmental agencies, led by the State and Consumer Services Agency. It was comprised of representatives from various state agencies with specific fiscal, construction, and environmental policy expertise. The Task Force was working to implement Executive Order D-16-00 (Governor Davis); however, it no longer meets. Although it was referenced in Executive Order S-20-04 (Governor Schwarzenegger), there are instead a series of working groups that meet on a regular basis and report to the Green Action Team, established by Executive Order S-20-04.

OTHER STATES' INFORMATION:

- Arkansas (HB 2445), Maryland (HB 196, SB 92), Nevada (AB 3), Washington (ESSB 5509): require that state buildings conform to specified green building standards.
- Colorado, Maine, Michigan, New Jersey, New York, Rhode Island have implemented Executive Orders requiring the use of the United States Green Building Council's Leadership in Energy and Environmental Design building standards for state and/or publicly funded buildings.
- Maryland, New York, Oregon, Pennsylvania have established tax credits to be awarded for compliance with green building standards and/or the development of new, innovative green building technologies.

- Minnesota passed the Energy Security and Reliability Act of 2001, which requires the Departments of Administration and Commerce to develop Sustainable Building Guidelines for all new state construction. Minnesota's consultant team has a lifecycle assessment of building products and lifecycle cost calculator under development.
- Iowa does not mandate green building activities. Iowa State Code requires public buildings to be designed and built using life cycle cost analysis guidelines.

Additional Information

Local government and private sector entities, including the cities of Santa Monica, San Diego, San Francisco, San Jose, Long Beach, Los Angeles, Seattle, and Portland; San Mateo County; The University of California; the Department of the Navy; and the federal General Services Administration have all adopted green building policies and clean energy standards. In addition, corporate entities, including Steelcase, Herman Miller, Johnson Controls, Interface, IBM, PNC Financial Services, Southern California Gas Company, Toyota, and Ford Motor Company, have constructed green buildings.