

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street
Sacramento, California 95814

Main website: www.energy.ca.gov



Notice of Staff Workshop on Obstacles to and Incentives for Furthering Green Private Sector Commercial Building Projects

The California Energy Commission (Energy Commission) staff will conduct a workshop to receive input on obstacles to and possible incentives for increasing energy- and resource-efficient (green) building projects in the private commercial sector.

TUESDAY, SEPTEMBER 25, 2007
10 a.m.
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
First Floor, Hearing Room A
Sacramento, California
(Wheelchair Accessible)

Audio for this meeting will be broadcast over the Internet.

For details, please go to
[www.energy.ca.gov/webcast]

To participate in the meeting by phone,
please call 888-849-8916
Passcode: HEARING
Call Leader: Ms. Elaine Hebert

Purpose

In September 2006, California Governor Arnold Schwarzenegger signed into law Assembly Bill (AB) 2160 (Lieu). AB 2160 directs the Energy Commission to consult with the state's Department of General Services, the Treasurer's office, and "representatives from the commercial building construction industry," to "identify obstacles to private sector commercial building energy and resource efficient projects" and "identify and recommend financial or other incentives to facilitate private sector commercial building energy and resource efficient projects." The Energy Commission is to include the results of these research efforts in a report to the Green Action Team that was established in the Governor's Executive Order S-20-04 (December 2004). The report is due January 1, 2008.

The purpose of this workshop is to receive comments from the parties identified in AB 2160 and from any other interested parties on obstacles to and incentives for

furthering green building in private sector commercial buildings. Draft lists of obstacles and incentives are attached to this notice as a starting point for discussion. The Energy Commission is seeking additions, clarifications, refinements, and other comments on the draft lists. Energy Commission staff will take comments and compile final lists for inclusion in the report to the Green Action Team.

Background

In December 2004, Governor Schwarzenegger signed Executive Order S-20-04 which, together with an accompanying document called the Green Building Action Plan, became known as the state's Green Building Initiative. The Green Building Initiative established the Green Action Team, comprised of specified agency heads, a commissioner from the Public Utilities Commission, and a real estate industry representative. The Green Building Initiative set forth a number of mandates for "greening" state buildings and strongly encouraged the private sector to follow the state's lead. In September 2006, the Governor signed AB 2160 requiring a report to his Green Action Team on the status of several aspects of the Green Building Initiative. These include the topics of the September 25 workshop.

Executive Order S-20-04 and the Green Building Action Plan can be accessed through the Energy Commission's website: www.energy.ca.gov/greenbuilding/index.html.

Written Comments

For interested parties who are not able to attend the workshop, the Energy Commission invites written comments on the workshop topics. Please submit written comments by 5:00 p.m. on October 2, 2007 by post, email, or hand-delivery to the Energy Commission and address to:

Elaine Hebert
California Energy Commission
1516 Ninth Street, MS-42
Sacramento, CA 95814-5512
ehebert@energy.state.ca.us

Please include your name, organization's name, and contact information. Those submitting comments by electronic mail should provide them in either Microsoft Word format or as a Portable Document (PDF). Comments and other information related to the AB 2160 report will be posted to www.energy.ca.gov/greenbuilding/ab2160 or, for those without internet access, will be made available by request.

Public Participation

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission activities. For more information on how to participate in this forum, please contact the Public Adviser's Office at (916) 654-4489 or toll free at (800) 822-6228, by FAX at (916) 654-4493, or by e-mail at

[pao@energy.state.ca.us]. If you have a disability and require assistance to participate, please contact Lou Quiroz at (916) 654-5146 at least five days in advance.

Please direct all news media inquiries to Claudia Chandler, Assistant Executive Director, at (916) 654-4989, or by e-mail at [mediaoffice@energy.state.ca.us].

For technical questions on the subject matter, please contact Elaine Hebert at (916) 654-4800, or by e-mail at [ehebert@energy.state.ca.us].

Note: The California Energy Commission's formal name is State Energy Resources Conservation and Development Commission.

Obstacles to and Incentives for Furthering Energy- and Resource-Efficient (Green) Private Sector Commercial Building Projects

Draft Lists for Discussion and Comment

Please note that instead of creating a list of obstacles and a list of incentives for **green** building projects, Energy Commission staff has separated the lists into obstacles and incentives for energy-efficient building projects and resource-efficient building projects. Staff believes that because of several decades of energy efficiency regulations (Title 24) in California, these issues were better understood than those for green design and construction, a relatively new concept.

Obstacles to Energy-Efficient Private Sector Commercial Building Projects

- 1) **Lack of sufficiently compelling value proposition or business case for building owners/managers**
 - Case studies of energy efficiency success are difficult to obtain or understand
 - Metrics of “success” are not well understood (occupant comfort, environmental benefits, reduced callbacks for heating and air conditioning systems, better control of energy expenses) or metrics are inconsistent or disjointed
 - Payback on individual energy efficiency measures may be too long for owner’s preferred rate of return (financial drivers not well understood)
- 2) **Perceived or real higher first costs and a financial disconnect between first costs (of energy efficiency design, construction, and/or equipment) and long-term operating costs**
- 3) **Perception of “too difficult”**
 - Too many choices in possible efficiency measures or incentive programs
 - Extra effort needed to identify and evaluate options, develop a project, and schedule it
 - Competes with other (higher?) priorities
 - Human nature – resistant to change/easy to be habitual
- 4) **In multi-tenant buildings with one meter, inability to submeter tenant spaces**
 - Utility bills are divided among tenants based on square footage of leased space regardless of actual energy use per tenant
 - Creates disconnect between tenant energy consumption and tenant costs
 - (May be resolved soon via Public Utilities Commission ruling)

- 5) **In multi-tenant buildings with individual utility meters, a disconnect between those who control/manage energy features and tenants who pay energy bills**
 - Tenants have no control over choice and maintenance of HVAC equipment, condition of air ducts, types of lighting fixtures, etc.
- 6) **Insufficient technical knowledge among building operations staff**
 - Staff not knowledgeable about selecting, maintaining, and operating energy-related equipment for efficiency
 - Staff not aware about how much their actions related to maintenance and operations impact energy use in their buildings
 - Job goals not structured around energy efficiency performance
 - Staff not knowledgeable about building components functioning as a system
- 7) **Complexity of utility programs**
 - Utility incentive programs may be difficult to understand for all but the most sophisticated customers
 - Same for utility rate structures and utility bills
- 8) **Utility communications with the private sector**
 - Anecdotal evidence of “utility-speak” differing from “real estate speak” (e.g., utilities speak 'demand response' while real estate professionals need to understand financial drivers and more basic energy efficiency)
 - Business customer experiences reveal difficulty maneuvering through phone systems when calling utilities for information on energy efficiency incentive programs
- 9) **Bigger picture issues**
 - Private sector real estate industry may lack understanding about California’s energy crisis (especially peak demand) and about climate change/emissions issues related to energy production and building energy use
- 10) **Lack of a champion for energy efficiency at individual companies** to set energy policy for the company or urge employees to conserve
- 11) **Lack of an agency or other entity with authority to mandate beyond-code energy efficiency in new construction or to address energy efficiency in existing buildings not scheduled for renovations**
- 12) **Enforcement of existing energy code is inconsistent across the state**

13) **Building contractors and subcontractors sometimes ignore energy code**

**Obstacles to Resource-Efficient Private Sector
Commercial Building Projects**

- 1) **Lack of sufficiently compelling value proposition or business case for building owners/managers**
 - Case studies of green building successes may be difficult to obtain
 - Metrics of successful green buildings may be inconsistent
 - Benefits of building green may not be well understood (increased market value, occupant comfort, tenant retention, lower employee absentee rates in tenant businesses, increased indoor environmental quality, outdoor environmental benefits, risk mitigation, better control of expenses, etc.)
 - Payback on individual measures may be too long for owner's preferred rate of return
- 2) **Perceived or real higher first costs and a financial disconnect between first costs and long-term operating costs**
 - Because green buildings represent a change in business-as-usual, it is perceived to add cost
 - Certification and documentation of green buildings, e.g., through US Green Building Council, add cost and effort
- 3) **Perception of "too difficult"**
 - Peers/consultants not experienced in green building
 - Difficult to know where to start
 - Human nature – resistant to change/easy to be habitual
- 4) **Perception that green building is "new-age" or for liberals or the environmental fringe only**
- 5) **Lack of subsidies, incentives, or mandates**
- 6) **Lack of consistent green building standards across jurisdictions**
- 7) **Bigger picture issues**
 - Private sector real estate industry may lack understanding about how all aspects of building siting, design, construction, maintenance, operations, etc. affect indoor and outdoor environmental quality (including climate change impacts) and why these are important

Possible Incentives for Energy-Efficient Private Sector Commercial Building Projects

	Obstacles	Suggested Incentives
1	<p>Lack of sufficiently compelling value proposition or business case for building owners/managers</p> <ul style="list-style-type: none"> - Case studies unavailable - Metrics inconsistent or not well understood - Payback too long 	<ul style="list-style-type: none"> - Make clear, understandable case studies more available (work with real estate industry on appropriate venues) - Develop consistent methodology and approach for measurement and verification of results - Develop a list of qualified contractors to assist in documenting energy savings, applying the approved methodology for payment of incentives or other assistance (possibly include further benefits such as greenhouse gas emissions reductions) - Based on lower risks, offer lower insurance rates - Create community recognition programs for exemplary buildings - Guarantee faster plan check/permitting for energy-efficient buildings going x percent beyond Title 24, Part 6 (energy code) - Exempt energy-efficient buildings that are x percent beyond Title 24 from power outages during rolling blackouts
2	<p>Perceived or real higher first costs and financial disconnect between first costs and long-term operating costs</p>	<ul style="list-style-type: none"> - “Frontload” incentives to minimize initial cash outlays <ul style="list-style-type: none"> • Option to frontload incentives to offset initial cash outlays/capital investment OR performance-based incentives over the life of the measure (let customers choose what best meets their needs) • Flexibility to offer incentives to whichever party (owner, manager, tenant) makes the investment • Ability to compensate investing party’s initial investment AND have investing party share in future benefits - Subsidize higher efficiency air conditioning equipment - Offer low-interest financing (e.g., Energy Commission’s Energy Efficiency Partnership Program, but for private entities) - Offer tax credits - Allow carbon trading/selling of emissions credits

3	<p>Perception of “too difficult”</p> <ul style="list-style-type: none"> - Too many choices - Extra effort - Competes with other priorities - Human resistance to change 	<ul style="list-style-type: none"> - Create ESCO-like services (one-stop shopping for analyses and packaging of projects; structure payments to be virtually invisible) - Fine-tune "Savings by Design" programs to focus on packaging total solutions that provide full design, financing, and implementation - Provide case studies (see #1 above) - Identify real estate industry peers to help educate/persuade - Subsidize infrared photography services to show heat loss through building envelopes, air ducts, HVAC equipment, etc.
4	<p>In multi-tenant buildings with one meter, inability to submeter tenant spaces</p>	<ul style="list-style-type: none"> - Allow submetering (this is in process through the CPUC) - Have appropriate checks and balances so tenants are treated fairly - Tailor incentive programs for submetered tenants and building owners
5	<p>In multi-tenant buildings with individual utility meters, a disconnect between those who control/manage energy features and tenants who pay energy bills</p>	<ul style="list-style-type: none"> - Realign incentive programs to reward party(s) that take action/make energy efficiency investment(s)
6	<p>Insufficient technical knowledge among building operations staff</p> <ul style="list-style-type: none"> - On choosing and maintaining equipment and systems for efficiency - On impacts of operations staff on building energy use - On building components functioning as a system 	<ul style="list-style-type: none"> - Provide affordable, convenient, practical education and information from credible sources <ul style="list-style-type: none"> • Include ongoing technical support to building operations staff (hotlines, on-site visits by trained outside technical staff, etc)
7	<p>Complexity of utility programs</p>	<ul style="list-style-type: none"> - Create utility/real estate industry collaboration to address this
8	<p>Utility communications with the private sector</p>	<ul style="list-style-type: none"> - Create utility/real estate industry collaboration to address this
9	<p>Bigger picture issues</p> <ul style="list-style-type: none"> - Effects of building energy use on peak demand and on climate change 	<ul style="list-style-type: none"> - Provide affordable, convenient, practical education and information from credible sources, including from real estate industry peers
10	<p>Lack of a champion for energy efficiency at individual companies to set corporate energy policy or urge employees to conserve</p>	<ul style="list-style-type: none"> - Make clear, understandable case studies more available (work with real estate industry on appropriate venues and examples)

11	Lack of an agency or other entity with authority to mandate beyond-code energy efficiency in new construction or to address energy efficiency in existing buildings not scheduled for renovations	- Work to create legislation to address this
12	Enforcement of existing energy code is inconsistent across the state	- Energy Commission to continue efforts to work with and educate building departments and to make energy code more understandable to enforcers
13	Building contractors and subcontractors ignore energy code	- Energy Commission to continue efforts to work with Contractor State License Board to educate contractors and create penalties for contractors for noncompliance with energy code

Possible Incentives for Resource-Efficient Private Sector Commercial Building Projects

	Obstacle	Suggested Incentives
1	Lack of sufficiently compelling value proposition or business case for building owners/managers <ul style="list-style-type: none"> - Case studies not available - Metrics not consistent - Benefits not well understood - Payback too long 	<ul style="list-style-type: none"> - Make clear, understandable case studies more available (work with real estate industry on appropriate venues) <ul style="list-style-type: none"> • Include benefits and added value of green building and payback - Develop consistent methodology and approach for measurement and verification of results - Subsidize the cost of green building consultants - Based on lower risks, offer lower insurance premiums - Create community recognition programs for exemplary green buildings - Guarantee faster plan check/permitting - Exempt green buildings from power outages during rolling blackouts
2	Perceived or real higher first costs	<ul style="list-style-type: none"> - Make available case studies of successful green building projects that cost little or no more than traditional buildings - include <ul style="list-style-type: none"> • Proof of added value and enhanced marketability; evidence of faster leasing/selling of green buildings or spaces • Proof of higher profits (while keeping lease rate per square foot below competitors) • Proof of fewer callbacks

		<ul style="list-style-type: none"> • Testimony from satisfied tenants in green buildings – longer tenancies, lower employee absentee rates, increased comfort, etc. - Guarantee faster plan check/permitting
3	Perception of “too difficult” <ul style="list-style-type: none"> - Peers and consultants not experienced in green building - Where to start - Resistance to change 	<ul style="list-style-type: none"> - Make clear, understandable case studies more available - Provide lists of consultants, architects, etc. with green building experience - Subsidize the cost of these green building professionals - Identify real estate industry peers to help educate - Create a primer on green building that includes ‘where to start’ - Create centralized sources of credible information - Identify jurisdictions that have passed green building ordinances - Publicize the intent of the California Building Standards Commission (CBSC) to mandate green building through the state building code in the cycle starting in 2010
4	Perception that green building is “new age” or for liberals or the environmental fringe only	<ul style="list-style-type: none"> - Identify peers to help educate - Provide case studies of successful green buildings from a variety of building owners - Offer evidence of added value/the business case for building green
5	Lack of subsidies, incentives, or mandates	<ul style="list-style-type: none"> - Identify and publicize all existing financial and other incentives for green building or green building components (e.g., lower insurance premiums for green buildings, rebates for solar PV systems, faster permitting in some jurisdictions, longer tenant stays, etc.) - Create new incentives (but note CBSC’s intent to green the state’s building code in the cycle starting in 2010)
6	Lack of consistent green building standards across jurisdictions	<ul style="list-style-type: none"> - Create consistent standards across jurisdictions (but note CBSC’s intent to green the state’s building code in the cycle starting in 2010) - (Build It Green, a nonprofit, and other entities have started promoting consistent green building guidelines across jurisdictions)
7	Bigger picture issues <ul style="list-style-type: none"> - Climate change, general environmental quality 	<ul style="list-style-type: none"> - Make information available in commonly read (by real estate industry) trade publications, local newspapers, other media, and at trade shows and conferences - Create centralized, credible sources of information